

## Forward Inflation Curve

Inflation indexed bonds, also called inflation linked bonds or real return bonds, are bonds where the principal is indexed to inflation or deflation on a daily basis in terms of a reference index, such as Consumer Price Index (CPI)

Inflation swaps are bilateral contracts that enable an investor or hedger to secure an inflation-protected return with respect to an inflation index. The inflation buyer (also called the inflation receiver) pays a predetermined fixed or floating rate (usually minus a spread). In return, the inflation buyer receives from the inflation seller (also called the inflation payer) inflation-linked payment(s).

The zero-coupon inflation swap has become the standard inflation derivative. For many, it is the basic building block of the inflation derivatives market. Its appeal is its simplicity and the fact that it offers investors and hedgers a wide range of possibilities that did not previously exist in the cash market. Other inflation swaps are typically portfolios of zero-coupon swaps in one way or the other. In some cases, convexity adjustment may be needed.

Inflation curve or inflation forward curve is also called Consumer Price Index (CPI) curve that is the term structures of CPI rates is defined as the relationship between CPI and different terms. The popular indices are Euro HICPxT, UK RPI, and US CPI.

Inflation curves are used to price inflation securities and inflation derivatives, such as inflation linked bonds, inflation swaps and inflation caps/floors.

Inflation products are used to hedge inflation risk. For example, real estate companies may want to shed their exposure to inflation risk, while pension funds may want to cover their natural liabilities which are exposed to inflation.

Both investors illustrated above care about real income rather than nominal income, preferring to invest in securities guaranteeing them a real return as opposed to nominal one. The real yield on bond can be decomposed into a nominal yield and breakeven inflation yield component. The breakeven inflation gives the inflation rate that makes an investor indifferent between nominal and inflation-linked investments.

Reference:

<https://finpricing.com/lib/EqRangeAccrual.html>