Inflation Curve Introduction

FinPricing

Inflation Curve

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

Inflation curves can be bootstrapped from liquid inflation indexed bonds, zero coupon swaps, or inflation swaps. Research shows that the differences are relatively small for construction using different underlyings.

Breakeven inflation rates can be derived from government nominal zero rates and government-issued real return bond zero rates.

Inflation Curve

There is a small portion of inflation-linked bonds are issued by commercial financial institutions, that are usually treated as government-issued inflation-linked bonds.

When inflation-linked bonds mature, the greater of the original or adjusted principal is paid.

Inflation-linked bonds are bonds whose principal and/or coupons are indexed to inflation. The primary purpose of these bonds is the transfer of inflation risk.

Breakeven inflation zero rates are equivalent to breakeven inflation yield-to-maturities.

Inflation Curve

- 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.

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Breakeven inflation rates can be found by comparing the zero-yields on inflation-linked and nominal bonds with the same maturity. However, the breakeven yields found this may be affected by the liquidity premium embedded in the bond.

A zero-coupon inflation swap market exists in the US. In this market, zero-coupon inflation swap rates that are theoretically equivalent to breakeven inflation rates are traded in the market for different maturities.

Thank You

You can find more details at

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