

Basis Curve

The term structure of an interest rate basis curve is defined as the relationship between the basis zero rate and its maturity. Basis curves are used as the forecast curves for pricing interest rate products. The increase in basis spreads has resulted in large impacts on non-standard instruments.

The basis curve construction methodology is based on the most liquid market instruments. Normally a basis curve is divided into two parts. The short end of the term structure is determined using LIBOR rates and the remaining is derived using basis swaps.

The 3 month LIBOR curve is usually referred to as the base curve in the market. The increase in basis spreads has resulted in large impacts on non-standard instruments.

A basis swap is quoted on the spread of the basis leg as follows

$$r_t^{basis} = r_t^{base} + S_t$$

where

r_t^{basis} the zero rate of the basis curve at time t.

r_t^{base} the zero rate of the base curve at time t.

S_t the quoted spread of the basis swap at time t.

Reference

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