

Forward Rate Agreements

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What is it?

- ▶ Agreement between two parties to exchange interest payments
- ▶ OTC interest rate derivative
- ▶ "Equivalent" of STIR futures
- ▶ Used to fix interest rate on deposit/loan in the future
- ▶ Typically short maturity (≤ 2 years)

Settlement mechanism

- ▶ Notional amount N
- ▶ Reference rate r
- ▶ Fixing date (when the value of r is determined)
- ▶ FRA rate R
- ▶ Settlement date T_1
- ▶ Maturity date T_2

$$\text{Settlement} = N(r - R) \frac{T_2 - T_1}{360} \frac{1}{1 + r \frac{T_2 - T_1}{360}}$$

Example

Three months from now, our company will need a loan for $N = 10^6$ CZK for 3 months.

We can borrow at $3M \text{ PRIBOR} + 0.5\%$.

To protect ourselves from ČNB raising the interest rate again, we can enter into a fixed-paying position in a 3x6 FRA.

In 3 months, we will borrow the money at $r + 0.05$, and receive the settlement, whose future value in 6 months is

$$N(r - R)\frac{90}{360}$$

In 6 months, we will pay back

$$N(r + 0.05)\frac{90}{360}$$

The result is the same as if we had borrowed at $R + 0.05$ in three months.

Market statistics

- ▶ IR derivatives are the largest derivatives market
- ▶ FRAs make up about 16% of all IR derivative outstanding notional
- ▶ High liquidity in all major currencies
- ▶ BIS statistics link