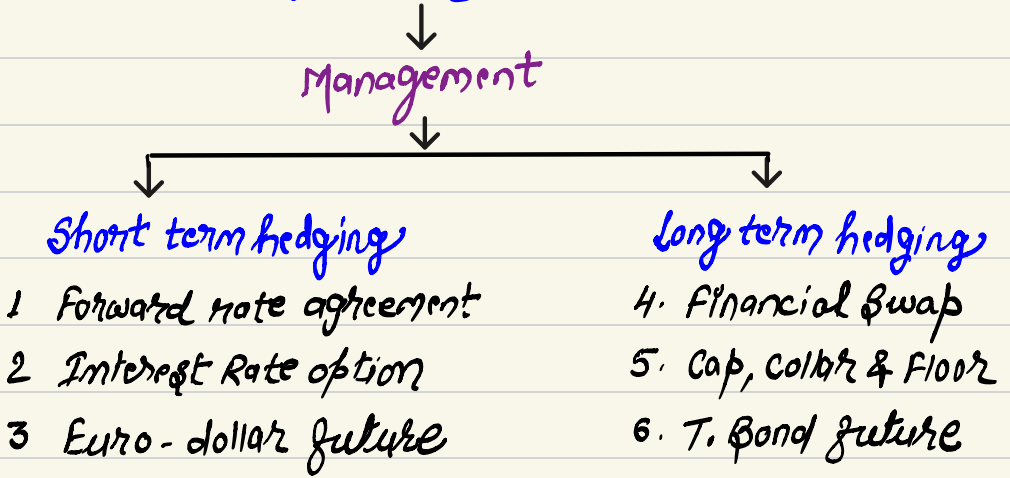


IRRM



IRRM

"Risk of Floating Rate of Interest"



👉 Floating rate of Interest means benchmark rate + spread.
Benchmark rate like LIBOR, MIBOR, SONIA, SOFR, MCLR

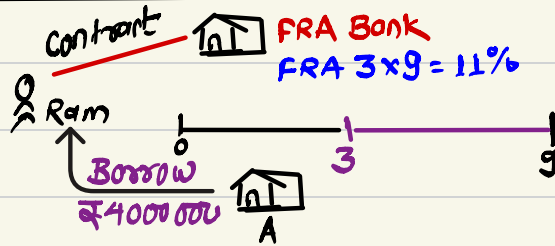
I FORWARD RATE AGREEMENT

1. FRA $3 \times 9 = 6\% / 8\%$ means

Contract to borrow after 3 months for 6 months
⑨ 8% p.a. (Buy FRA)

Contract to invest after 3 months for 6 months
⑦ 6% p.a. (sell FRA)

2. Net Settlement Amount



① Actual rate of interest 13%

$$\text{FRA Bank will pay} = \frac{4000000 \times (13 - 11)\% \times \frac{6}{12}}{[1 + (0.13 \times \frac{6}{12})]}$$

$$= ₹37559$$

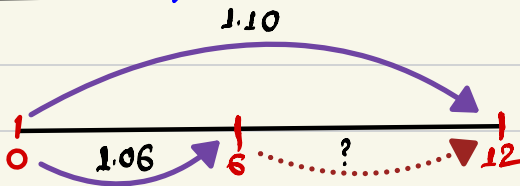
② Actual rate of interest = 8%

$$\text{Ram will pay to Bank} = \frac{4000000 \times (11 - 8)\% \times \frac{6}{12}}{[1 + (0.11 \times \frac{6}{12})]}$$

$$= ₹57692$$

👉 In any situation, effective rate of interest is 11%.

3 FRA arbitrage



6 months LIBOR = 12%

12 months LIBOR = 10% p.a.

Theoretical FRA

Alternative I

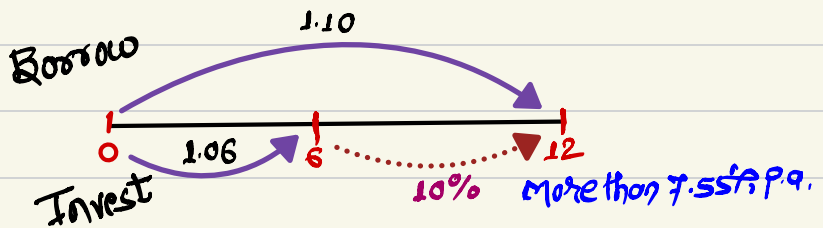
$$1.10 = (1.06)(1+r)$$

$$r = \left[\frac{1.10}{1.06} - 1 \right] \times 100 \times \frac{12}{6} = 7.55\% \text{ p.a.}$$

Alternative II

$$\begin{aligned} \text{Theoretical FRA} &= \frac{\text{Bigger factor}}{\text{Smaller factor}} \\ &= \left[\frac{1.10}{1.06} - 1 \right] \times 100 \times \frac{12}{6} = 7.55\% \text{ p.a.} \end{aligned}$$

Arbitrage ① If actual 6x12 FRA = 10%/11%



② If actual FRA 6x12 FRA = 5%/6%

