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SFM
STRATEGIC FINANCIAL
MANAGEMENT

INTEREST RATE RISK MANAGEMENT

By GAURAV JAINN

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AIR 1

Roll No. 130814

88 Marks

Nov. 2014



Anish Gupta

AIR 22

Roll No. 188172

68 Marks

Nov. 2015



Payal Bansal

AIR 27

Roll No. 137808

70 Marks

May 2014



Pravesh Khandelwal

AI 2nd Highest

Roll No. 125761

85 Marks

May 2017



Naman Jain

Roll No. 133759

94 Marks

Nov. 2013



Nishant Gupta

AIR 17

Roll No. 162871

77 Marks

Nov. 2014



Keshav Goel

AIR 18

Roll No. 132485

83 Marks

May 2016



Harsh Garg

AIR 17

Roll No. 408489

74 Marks

May 2016



Kunal Somani

AIR 14

Roll No. 438272

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May 2016



Prashu Goyal

AIR 36

Roll No. 480693

81 Marks

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Scoring **85** Marks in SFM



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Roll No. 429103
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Scoring **79** Marks in SFM



Vidhu Sah
Roll No. 496735
Scoring **78** Marks in SFM



Swati Mundra
Roll No. 438473
Scoring **77** Marks in SFM



Divy Sethi
Roll No. 496393
Scoring **77** Marks in SFM



Ayush Agarwal
Roll No. 432340
Scoring **77** Marks in SFM



Tarun Surekha
Roll No. 508367
Scoring **75** Marks in SFM



Taraana Talwar
Roll No. 425330
Scoring **75** Marks in SFM



Rocky Jangid
Roll No. 492274
Scoring **73** Marks in SFM



Priyanka Mittal
Roll No. 439304
Scoring **73** Marks in SFM



Mayank Chaudhary
Roll No. 443199
Scoring **73** Marks in SFM



Ankit Jain
Roll No. 434716
Scoring **73** Marks in SFM



Rashika Jain
Roll No. 506933
Scoring **72** Marks in SFM



Niklesh Agarwal
Roll No. 499326
Scoring **71** Marks in SFM



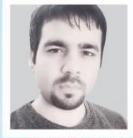
Sejal Goel
Roll No. 458947
Scoring **71** Marks in SFM



Anuskh Kapoor
Roll No. 437438
Scoring **71** Marks in SFM



Deepak Singh
Roll No. 438660
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Sameer Kapoor
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Madhu Pokharel
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Amit Kr. Keshwani
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Heena Mohla
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Manish Wahi
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Anish Munjal
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Mudit Goel
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Naman Jain
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Shweta Banger
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Asif
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Ayushi Agarwal
Roll No. 133383
Scoring **69** Marks in SFM



Nitin Singhal
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Kapil Manchanda
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Scoring **68** Marks in SFM



Arvind Kuliya
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Ankur Gulati
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Nishant Bhardwaj
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Hemant Mittal
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Ayushi Jain
Roll No. 128689
Scoring **67** Marks in SFM



Ankur Raheja
Roll No. 125015
Scoring **67** Marks in SFM



Markkshishir Matenja
Roll No. 118975
Scoring **66** Marks in SFM



Alisha Aggarwal
Roll No. 126822
Scoring **65** Marks in SFM



Pooja Gupta
Roll No. 120143
Scoring **64** Marks in SFM



Tarun Mehrotra
Roll No. 121080
Scoring **64** Marks in SFM



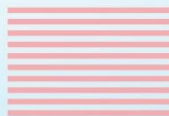
Anand Kankani
Roll No. 128791
Scoring **63** Marks in SFM



Ratan Bhaduria
Roll No. 126331
Scoring **63** Marks in SFM



Rohit Rathi
Roll No. 126331
Scoring **62** Marks in SFM



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Naman Jain
Roll No. 133759
Scoring **94** Marks in SFM

Many congratulations to my shining Star **Naman Jain**
for scoring **94** marks (Roll No. 133759 NRO 0336585) in **CA Final SFM**



Ashish Srivastava
Roll No. 139873
Scoring **87** Marks in SFM



Mandeep Sheoran
Roll No. 116856
Scoring **85** Marks in SFM



Priya Mittal
Roll No. 143857
Scoring **81** Marks in SFM



Vibhor Gupta
Roll No. 134496
Scoring **78** Marks in SFM



Aakash Gupta
Roll No. 129975
Scoring **78** Marks in SFM



Shubham Bansal
Roll No. 144692
Scoring **76** Marks in SFM



Shishir Agarwal
Roll No. 134713
Scoring **76** Marks in SFM



Rahul Kanojia
Roll No. 130808
Scoring **76** Marks in SFM



Ayush Rustagi
Roll No. 148226
Scoring **76** Marks in SFM



Vikalp Agarwal
Roll No. 182919
Scoring **75** Marks in SFM



Vaishali Gupta
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Arpit Singh Chaudhary
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Scoring **75** Marks in SFM



Saurabh Goswami
Roll No. 131998
Scoring **74** Marks in SFM



Navdeep Rastogi
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Scoring **74** Marks in SFM



Saurabh Gupta
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Scoring **73** Marks in SFM



Rohit Goel
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Scoring **73** Marks in SFM



Lokesh Garg
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Jyoti Goyal
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Suraj kumar
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Tarun Gulati
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Rahul Talwar
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Nitin Kumar
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Aakriti Jain
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Prachi Singh
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Scoring **68** Marks in SFM



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Scoring **67** Marks in SFM



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Bhuvi Ahuja
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Vishesh
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Mohit Aggarwal
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Scoring 79 Marks in SFM



Prateek Mittal
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Scoring 78 Marks in SFM



Bhumika Vohra
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Scoring 77 Marks in SFM



Praveen Goyal
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Himanshu Khurana
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Ashish Kr. Shukla
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Scoring 75 Marks in SFM



Neetu Rani
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Scoring 74 Marks in SFM



Deepak Sardana
Roll No. 443510
Scoring 74 Marks in SFM



Surmit Singh
Roll No. 0
Scoring 73 Marks in SFM



Kanika Garg
Roll No. 433227
Scoring 73 Marks in SFM



Samridhi Chanana
Roll No. 424331
Scoring 72 Marks in SFM



Rakesh Kr. Thakur
Roll No. 426946
Scoring 72 Marks in SFM



Himanshu Aggarwal
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Scoring 72 Marks in SFM



Ritu Sachdeva
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Scoring 71 Marks in SFM



Ritika Raheja
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Scoring 71 Marks in SFM



Mohd. M. J. Ansari
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Scoring 71 Marks in SFM



Aayush Kr. Jain
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Scoring 71 Marks in SFM



Yogita Jain
Roll No. 442986
Scoring 70 Marks in SFM



Nidhi Kansal
Roll No. 444601
Scoring 70 Marks in SFM



Harshita Monga
Roll No. 434152
Scoring 70 Marks in SFM



Nitesh Kumar
Roll No. 438153
Scoring 69 Marks in SFM



Zainab
Roll No. 437492
Scoring 66 Marks in SFM



Rohit Kumar
Roll No. 432384
Scoring 66 Marks in SFM



Pridhi Khanna
Roll No. 442997
Scoring 66 Marks in SFM



Monika Singh
Roll No. 425482
Scoring 66 Marks in SFM



Aditya
Roll No. 434127
Scoring 66 Marks in SFM



Aakash Agarwal
Roll No. 444427
Scoring 66 Marks in SFM



Pankaj Gaur
Roll No. 442669
Scoring 65 Marks in SFM



Tushar Agarwal
Roll No. 429795
Scoring 64 Marks in SFM



Kirti Goyal
Roll No. 433989
Scoring 64 Marks in SFM



Aadarsh Pratap
Roll No. 406363
Scoring 64 Marks in SFM



Pooja Garg
Roll No. 432401
Scoring 63 Marks in SFM



Varun Grover
Roll No. 439026
Scoring 63 Marks in SFM



Tanveer Akhtar
Roll No. 439038
Scoring 63 Marks in SFM



Harshit Gupta
Roll No. 433051
Scoring 63 Marks in SFM



Himanshu Garg
Roll No. 480402
Scoring 62 Marks in SFM



Aditi Dadhichi
Roll No. 495051
Scoring 62 Marks in SFM



Kimi Pawha
Roll No. 434021
Scoring 61 Marks in SFM



Yonish Kumar
Roll No. 432139
Scoring 61 Marks in SFM



Shivani Aggarwal
Roll No. 433594
Scoring 61 Marks in SFM



Prateek Joshi
Roll No. 419092
Scoring 61 Marks in SFM



Pallavi Singhal
Roll No. 424452
Scoring 61 Marks in SFM



Gaurav Chauhan
Roll No. 437530
Scoring 61 Marks in SFM



Anu Jain
Roll No. 436813
Scoring 61 Marks in SFM



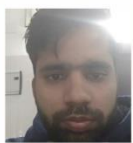
Yashank Garg
Roll No. 0
Scoring 60 Marks in SFM



Shivansh Garg
Roll No. 444199
Scoring 60 Marks in SFM



Nisha Gupta
Roll No. 442675
Scoring 60 Marks in SFM



Mohit Singh
Roll No. 438616
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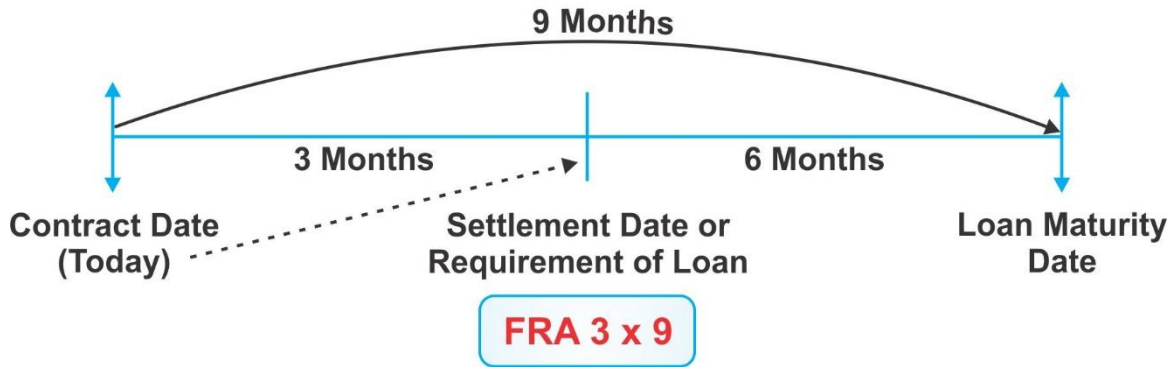
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Interest Rate Risk Management

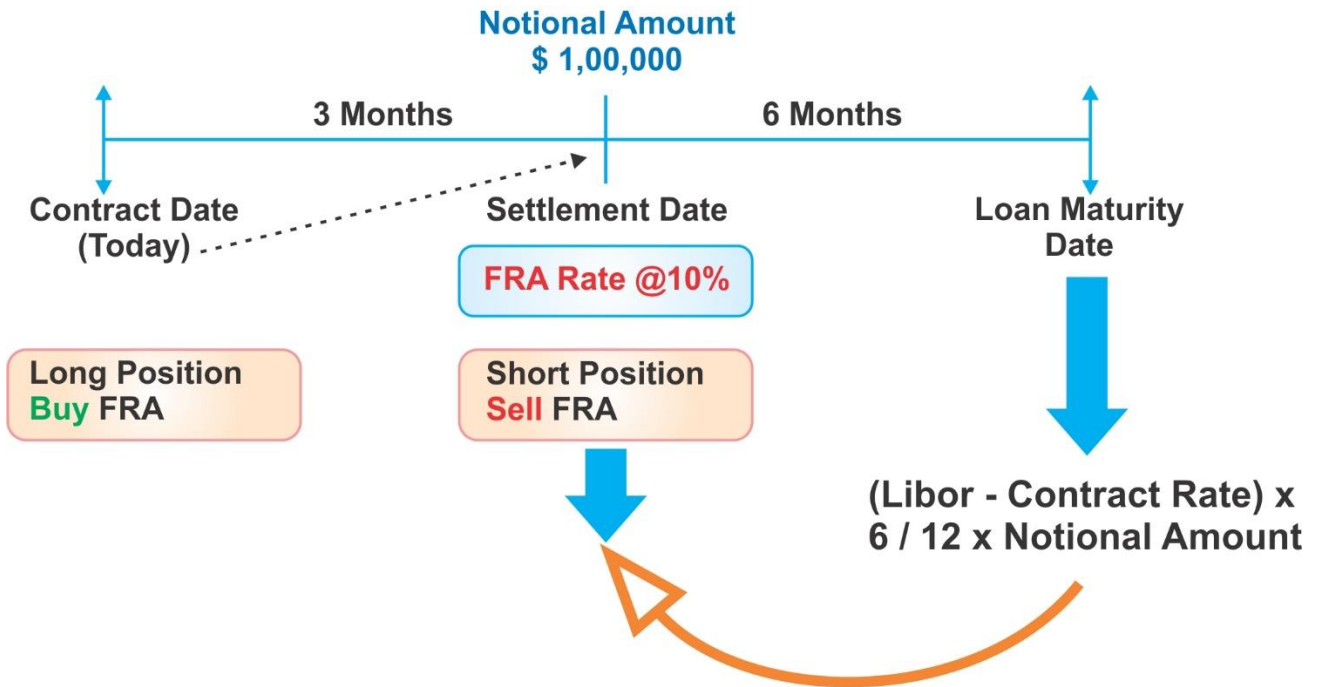
Study Session 9

LOS 1: Forward Rate Agreement (FRA)

I want to take loan after 3 months for 6 months contract a FRA



TYPE 1 : CASH SETTLEMENT



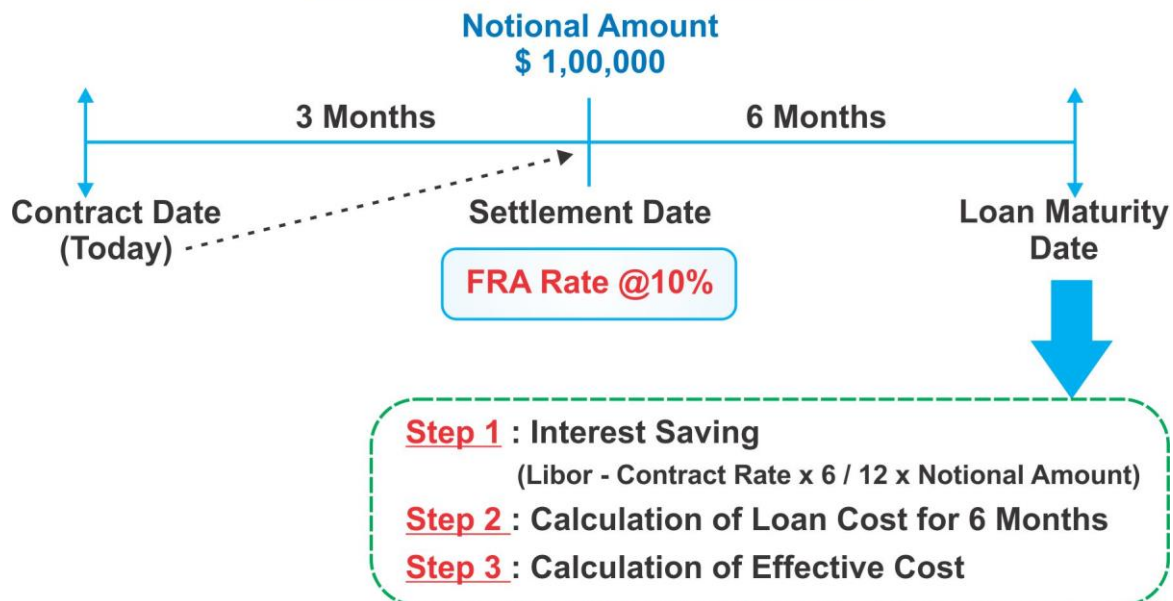
- ❖ A forward rate Agreement can be viewed as a forward contract to borrow/lend money at a certain rate at some future date.
- ❖ These Contracts settle in cash.
- ❖ The long position in an FRA is the party that would borrow the money. If the floating rate at contract expiration is above the rate specified in the forward agreement, the long position in the contract can be viewed as the right to borrow at below market rates & the long will receive a payment.

- ❖ If reference rate at the expiration date is below the contract rate, the short will receive a cash from the long.
- ❖ FRA helps borrower to eliminate interest rate risk associated with borrowing or investing funds.
- ❖ Adverse movement in the interest rates will not affect liability of the borrower.

Payment to the long at settlement is:

$$\text{Notional Principal} \times \frac{[\text{Floating (LIBOR)} - \text{Forward Rate}] \times \frac{\text{days}}{360}}{1 + \text{Floating rate (LIBOR)} \times \frac{\text{days}}{360}}$$

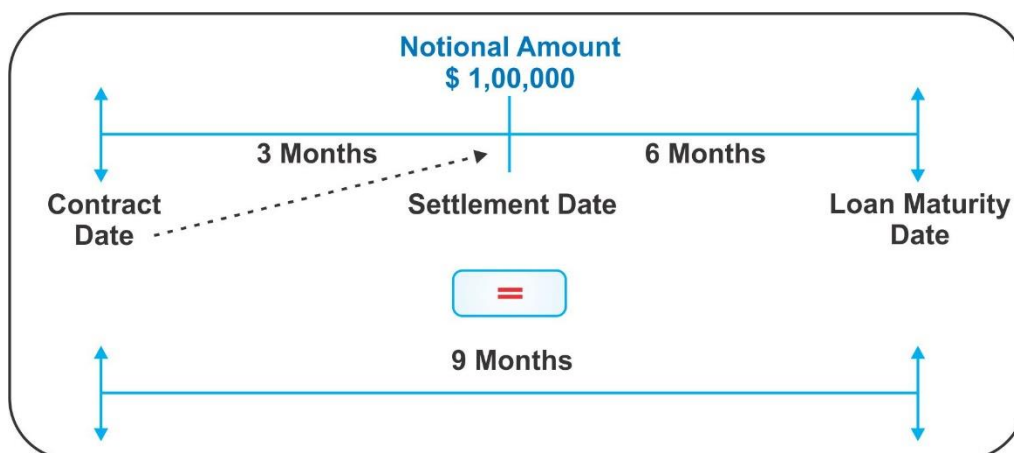
TYPE 2 : EFFECTIVE COST



FRA ARBITRAGE

Step 1 : Calculation of Fair Forward Rate

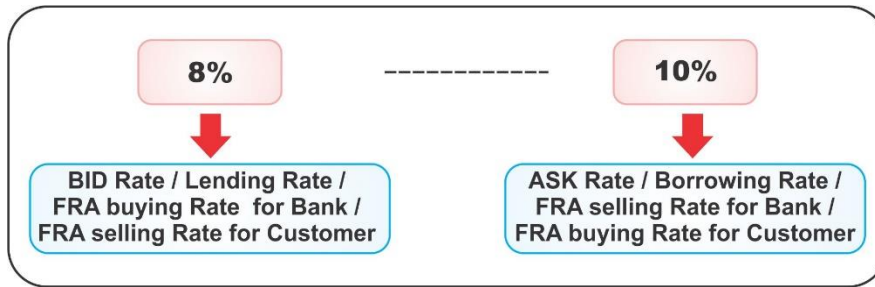
6 Months Forward rate 3 months from now



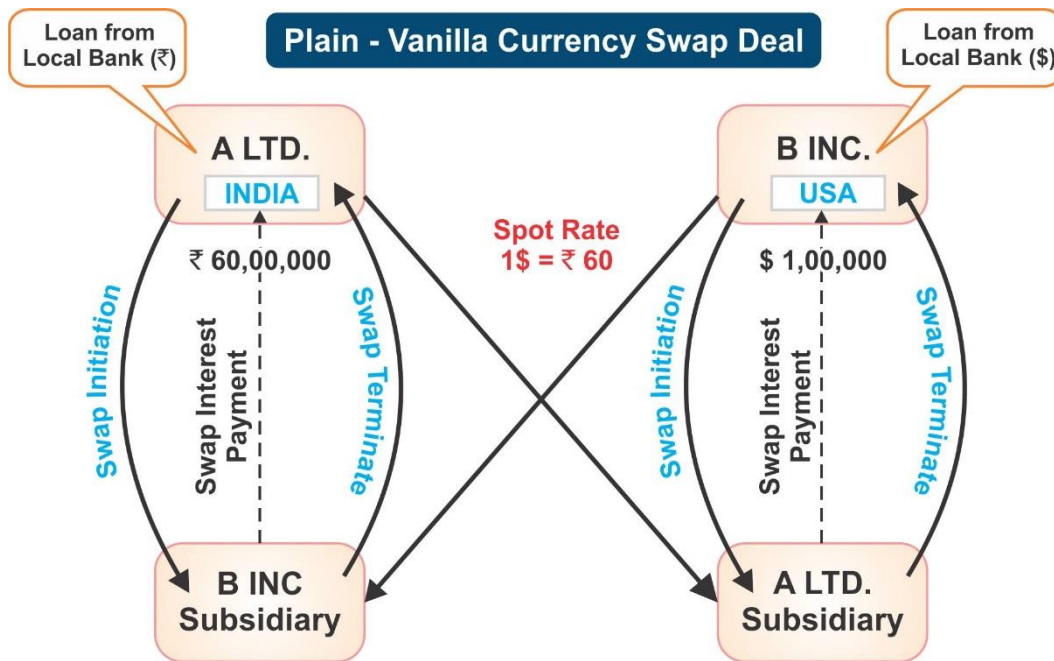
Step 2 : Decide from where we should borrow and where should we invest

Step 3 : Calculation of Arbitrage Profit

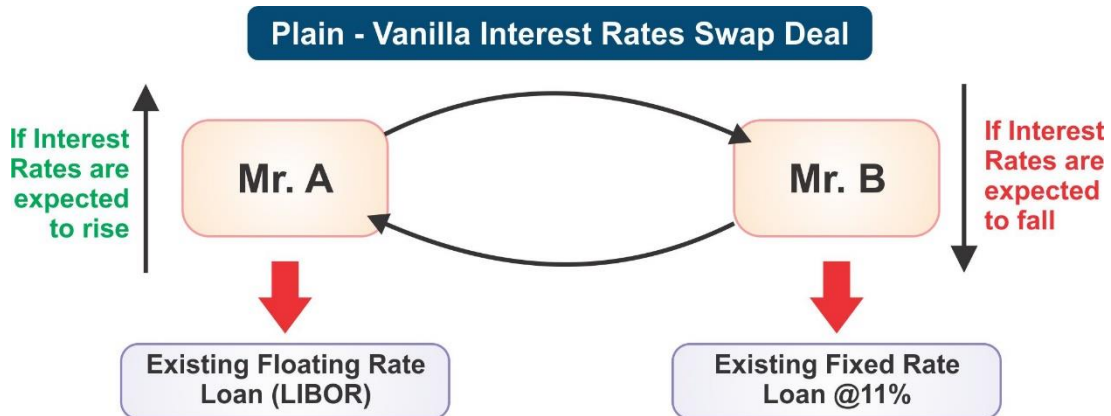
FRA Quotation: Suppose 3 × 9 FRA (Quoted by Bank)



LOS 2 : Currency SWAP



LOS 3 : Interest Rate Swap [Two Party]



Under SWAP Deal :
 Mr. A pays Fixed rate @11% → Fixed rate payer
 Mr. B pays Floating rate @ LIBOR → Floating rate payer

- ❖ Two parties exchange their interest rate obligation.
- ❖ The plain vanilla interest rate swap involves trading fixed interest rate payments for floating rate payments.
- ❖ The party who wants fixed-rate interest payments agrees to pay fixed-rate interest.
- ❖ The Counter party, who receives the fixed payments agrees to pay variable-rate interest/floating rate interest.
- ❖ The difference between the fixed rate payment and the floating rate payment is calculated and paid to the appropriate counterparty.
- ❖ Net interest is paid by the one who owes it.
- ❖ Swaps are zero-sum game. What one party gains, the other party losses.

The Net formulae for the Fixed-Rate payer, based on a 360-day year and a floating rate of LIBOR is:

$$(\text{Net Fixed Rate Payment})_t = [\text{Swap Fixed Rate} - \text{LIBOR}_{t-1}] \left[\frac{\text{No. of Days}}{360} \right] [\text{National Principal}]$$

Note:

- ❖ If this number is positive, fixed-rate payer pays a net payment to the floating-rate party.
- ❖ If this number is negative, then the fixed-rate payer receives a net flow from the floating rate payer

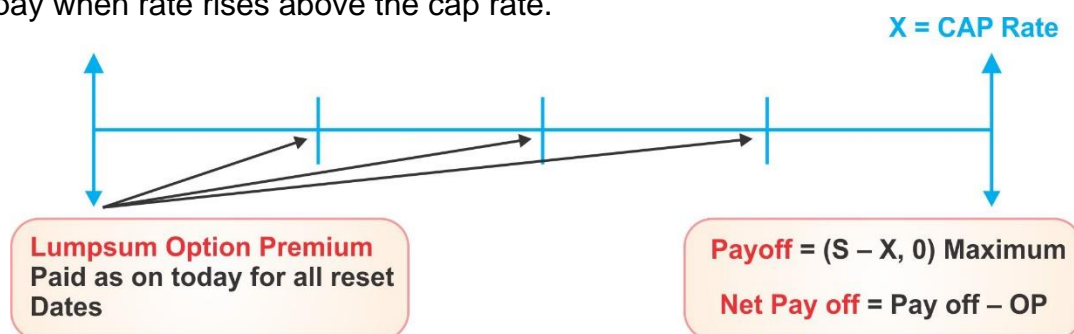
LOS 4 : Interest Rate Caps, Floor & Collar

CAP → Maximum Rate → Borrowings → Floating Rate
 FLOOR → Minimum Rate → Investments → Floating Rate

Interest Rate Cap : (Maximum Rate For Borrowing @ Floating)

If a firm borrows at floating rate, it is afraid of interest rate rising, to hedge against the same, it will buy an interest rate cap i.e. Long call at $X = \text{Cap rate}$

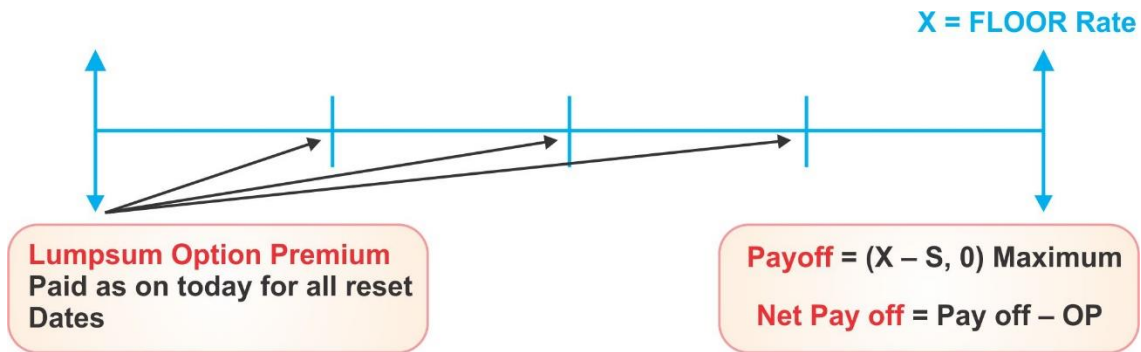
- ❖ It is a series/portfolio of interest rate Call option on interest rates.
- ❖ Each particular call option being called a CAPLET.
- ❖ Caps pay when rate rises above the cap rate.



Interest Rate Floor : (Minimum Rate For Investment @ Floating)

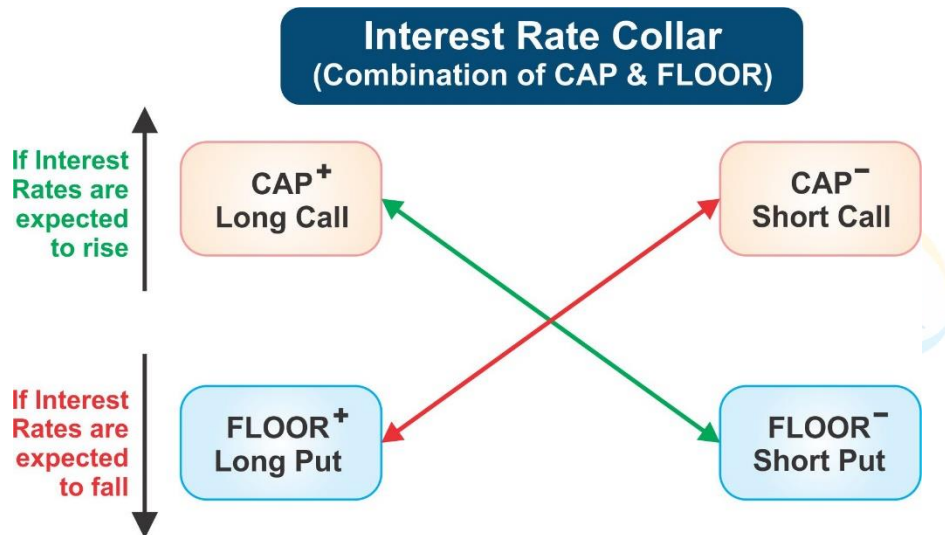
If a firm invest at floating rate, it is afraid of interest rate falling, to hedge against the same, it will buy an interest rate Floor i.e. Long put at $X = \text{Floor rate}$

- ❖ It is a series/portfolio of Interest rate put Option on interest rate. Such particular put option being called a FLOORLET
- ❖ Floor pays when rate falls below the Floor Rate.



Interest Rate Collar:

- ❖ It is a combination of a Cap and a Floor.
- ❖ Premium paid on one option would be compensated with the premium received on selling another option.
- ❖ If premium paid on caps is equal to the premium received on floor, then it would be called Zero Cost Collar.



- ❖ A floating rate borrower may buy a cap [C⁺] & simultaneously sells a floor i.e.[P⁻]. Initial outflow will reduce. (C⁺ = Long Call & P⁻ = Short Put)
- ❖ Similarly, a floating rate investor may buy a Floor (P⁺) & simultaneously sell a Cap (C⁻). Initial outflow will reduce. (P⁺ = Long Put & C⁻ = Short Call)