

FIMMDA Cir: 2021-22/008

Date: 26th June 2021

Interest Rate Swaptions

Operational Guidelines

Reserve Bank of India has issued Rupee Interest Rate Derivatives (IRD) directions, vide notification No FMRD.DIRD.20/2019 dated 26th June 2019. As given in the Directions referred to herein above, for Interest Rate Derivatives in the OTC market, settlement basis and other Market conventions for IRD transactions shall be specified by FIMMDA in consultation with Market participants.

The direction permitted product of Interest Rate SWAPTION in Indian markets and provides inter alia as below (Relevant extracts):

Quote:

Para- 2. Definitions:

(vii) Interest Rate Derivative (IRD) is a financial derivative contract whose value is derived from one or more interest rates, prices of interest rate instruments, or interest rate indices.

(ix) Interest Rate Option (IRO) is an option contract whose value is based on Rupee interest rates or interest rate instruments.

(xv) An Interest Rate Swaption is an option on interest rate swaps. A swaption gives the buyer the right, but not the obligation, to enter into an interest rate swap.

(xxii) Overnight Indexed Swap (OIS) is an interest rate swap based on the Overnight Mumbai Interbank Outright Rate (MIBOR) benchmark published by Financial Benchmarks India Pvt. Ltd (FBIL).

Para- 6: Interest Rate Derivatives in the OTC Market –

IRD Transactions in the OTC market shall be subject to the following Directions:

- (a) Scheduled Banks. Primary Dealers (PDs) and All India Financial Institutions (AIFIs) are eligible to act as market makers for IRD products in the OTC market.
- (b) Market-makers may offer the following products to retail users:
 - i. Forward Rate Agreement (FRA),
 - ii. Interest Rate Swap (IRS), and
 - iii. European Interest Rate Options (IRO) including caps, floors, collars and reverse collars.
- (c) In addition to the products listed in (b) above, market-makers may offer swaptions and structured derivative products, excluding leveraged derivatives, only to non-retail users.

- (g) Any floating interest rate or price or index used in IRDs in the OTC market shall be a benchmark published by an FBA or approved by The Fixed Income Money Market and Derivatives Association of India (FIMMDA) for this purpose. FIMMDA shall ensure that the floating rate approved by them is determined transparently, objectively and in arm's length transactions.
- (h) IRD transactions shall be settled bilaterally or through any clearing arrangement approved by the Reserve Bank for the purpose.
- (i) Settlement basis and other market conventions for IRD transactions shall be specified by FIMMDA, in consultation with market participants.

Unquote:

Based on RBI directions the Operational Guidelines for Swaption product for OTC Market have been formulated by FIMMDA in consultation with Market Participants.

These Operational Guidelines are to be read with RBI Directions on Interest Rate Derivatives vide FMRD.DIRD.20/2019 dated 26th June 2019 and such other Directions as may be issued by RBI from time to time. Directions of RBI, issued subsequent to these Operational Guidelines and not included in these guidelines will have precedence over these Operational Guidelines.

Banks to ensure that all RBI relevant guidelines and Banks' internal policies are strictly adhered to for client transactions.

The operating guidelines are intended to bring in uniformity and standardization in the market and does not intend to restrict the freedom of the parties to bilaterally decide terms and conditions different from as suggested herein subject to such terms being not in contravention of any law/regulatory guidelines.

These Operational Guidelines would be effective from 17th August, 2021.

Market Participants are advised to have their respective Policies / internal approvals, System Infrastructure in place by that date.

G. Ravindranath
Chief Executive Officer

Interest Rate Swaptions

Operational Guidelines

1. Definitions:

- a. Interest Rate Derivative (IRD) is a financial derivative contract whose value is derived from one or more interest rates, prices of interest rate instruments, or interest rate indices.
- b. Interest Rate Swaption is an option on interest rate swaps. A swaption gives the buyer the right, but not the obligation, to enter into an interest rate swap.
- c. Interest Rate Option (IRO) is an option contract whose value is based on Rupee interest rates or interest rate instruments.
- d. Overnight Indexed Swap (OIS) is an interest rate swap based on the Overnight Mumbai Interbank Outright Rate (MIBOR) benchmark published by Financial Benchmarks India Pvt. Ltd (FBIL).

2. **Product Details:**

Only European swaptions on OIS are permitted.

a. **European OIS Swaption Contract**

An European Swaption contract between two parties gives the buyer of the swaption the right but not the obligation to enter into an INR OIS at the expiry of the Swaption at a predetermined strike rate.

The Strike Rate is the Fixed Rate of the underlying swap exchanged for an INR OIS.

- i. Payer Swaption: Gives the buyer the right but not the obligation to pay a fixed rate (strike rate) and receive floating Overnight MIBOR for the tenor of the swap, **if rate of the underlying OIS at expiry is greater than the strike rate**. The long party hence benefits from an upward movement in rates.
- ii. Receiver Swaption: Gives the buyer the right but not the obligation to receive a fixed rate (strike rate) and pay floating Overnight MIBOR for the tenor of the swap, **if the rate of the underlying OIS at expiry is less than the strike rate**. The buyer hence benefits from a downward movement in rates.

b. **Premium:**

Premium to be paid Upfront (T+1).

For client transactions, (for swaptions and swaption structures) premium may be paid by clients on a deferred basis. All such deferred premium transactions and premium paid thereof shall be in line with the guidance issued by RBI vide RBI/2012-13/535

DBOD.No.BP.BC.102/21.04.157/2012-13 dated June 18, 2013 or as amended from time to time.

c. Expiry Time:

11:30am IST

Expiry Process: The Strike Rate is compared to the prevailing rate for the corresponding tenor of OIS at the time of expiry and the Swaption is then either In-The-Money (“ITM”) or Out-of-the-Money (“OTM”). The Buyer of the swaption has to intimate the seller of the option at time of expiry whether the option is getting exercised or not.

Physical / Gross Settlement: Gross Settled on T+1 basis; If the buyer chooses to exercise the swaption, a Swap will be generated between the counterparties.

Cash / Net Settlement: If the swaption is cash/net settled, no swap will be written on the expiry. The net settlement of swaption will be as per the prevailing market price of the underlying swap at the time of expiry, as mutually agreed upon between the counterparties to the agreement.

3. Standard Tenors:

The standard Market Tenors are defined as 1M, 3M and 12M for Interest Rate Swaptions for OIS maturities 1Y, 2Y and 5Y. This will facilitate uniform data being available on the CCIL platform.

The interbank participants should endeavor to trade in standard tenors, however interbank participants can also trade on non-standard tenors as per requirement.

Interest Rate Swaption deals with customers can be for tenors as per customer’s requirements.

Unwind transactions: Banks may unwind transactions either with interbank counterparties or their clients on a mutually agreed basis.

4. Internal Policies

All Banks shall have internal policies / procedures duly approved by Board/ Equivalent Committee/ Equivalent Forum/ relevant Management Committee for dealing in Interest Rate Swaptions. These should cover policies / processes related to permitted products, risk limits, system capabilities, valuation, accounting, reporting, Client Suitability and Appropriateness etc.

Banks to ensure that all client transactions are conducted in consonance with the comprehensive derivative guidelines or its equivalent published by RBI with strong focus on client suitability & appropriateness and pricing transparency and disclosures.



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5. Reporting:

- All counterparties of Swaption deal to report the deal to CCIL, within 30mins of the execution of the trade, irrespective of being a member of CCIL clearing/settlement or otherwise.
- The Swap which will be generated at the time of expiry of swaption and must be reported to CCIL at historical rate mentioning identifier as SWAPTION. The same Swap will be excluded from for the calculation of for the day trades of OIS.
- Banks to decide individually regarding participation in Portfolio compression of OIS deals generated via swaption deals.
- Data dissemination would be done on ticket-by-ticket level (only for interbank deals) and not on consolidated level. The counterparties will not be disclosed but other parameters will be disclosed (only for interbank deals). The ticket-by-ticket data will help to generate more independent points for the market and the same may be used by banks to consume internally for creation of EOD valuation as per their internal policies.
- Data dissemination to include ATM vol which both the parties will agree for the trade.
- For customer deals, data dissemination will be done as per market standard as per Regulator's approval.

6. Settlement:

- **Physical / Gross or Cash/Net Settlements:**

The market participants may opt for:

- Physical / Gross settlements on T+1 basis.
- Cash / Net settlements as per mutual agreement between the counterparties. Rates to be decided bilaterally.
- When gross settled into a Swap, if both parties are guaranteed settlement members of OIS segment, CCIL to automatically clear that trade. **Such trades are not to be part of TR dissemination providing details of trades dealt in the day (as the swap rates can be different from ongoing market)/ to be disseminated differently.**

7. Valuation

Banks have to adopt their own method of valuation, as approved by their internal valuation or any other appropriate committee, based on externally available rates or internal models or any hybrid combination or trader marks etc suitably validated internally.

FIMMDA and market participants would work closely with FBIL to evolve an appropriate valuation methodology based on market volumes and for providing benchmark valuation by FBIL.

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Annexure I:

Illustration of the product and formula of premium calculation:

Banks to be allowed to negotiate trades with clients on mutually agreed basis

Example Receiver Swaption Trade:

Derivative: Receiver Swaption with expiry in **1 month**
Underlying: Vanilla INR OIS Swap with tenor of **5 years**
Strike Rate: 5.00% p.a. receivable semi annually
Notional: INR 100crores
Fixed Rate of Swap: Strike Rate
Floating Rate of Swap: FBIL INR overnight MIBOR
Party A: Long
Party B: Short

Premia Paid Upfront by Long Party to Short Party: A pays upfront premia to B.

Pay-off on expiry Date: If the rate at 11.30 a.m for underlying is < strike rate then Party A will exercise the Swaption resulting in a Vanilla INR OIS trade being booked between Party A (the Fixed Rate Receiver) and Party B (the Fixed Rate Payer) which will give an immediate MTM gain to Party A.

Example Payer Swaption Trade:

Derivative: Payer Swaption with expiry in **1 month**
Underlying: Vanilla INR OIS Swap with tenor of **5 years**
Strike Rate: 5.00% p.a. payable semi annually
Notional: INR 100crores
Fixed Rate of Swap: Strike Rate
Floating Rate of Swap: FBIL INR overnight MIBOR
Party A: Long
Party B: Short

Premia Paid Upfront by Long Party to Short Party: A pays upfront premia to B

Annexure II:

Illustrative Formula for calculating premium (Black’s Model) (Bilateral contracts can agree on mechanisms as per the calculation agent chosen methodology):

$$\text{ premia for payer swaption } = XA\{FN(d1) - SN(d2)\}$$

$$\text{ premia for receiver swaption } = XA\{SN(-d2) - FN(-d1)\}$$

Where

X: Underlying Swap Notional

$$A = \frac{1}{m} \sum_{i=1}^{mn} DF_{mn}$$

i. e. discount factors (DF) for "n" swap payments made "m" number of time in the year

F: Forward Swap Rate/Reference Rate

S: Strike Rate

$$d1 = \frac{\ln\left(\frac{F}{S}\right) + \sigma^2 T / 2}{\sigma \sqrt{T}}$$

$$d2 = \frac{\ln\left(\frac{F}{S}\right) - \sigma^2 T / 2}{\sigma \sqrt{T}}$$

σ: implied volatility of the Forward Swap/Reference Rate

T: Time to expiry (years)

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