



# Product Disclosure

April 2022



# Cap Floor IR Swaps

# Interest Rate Cap



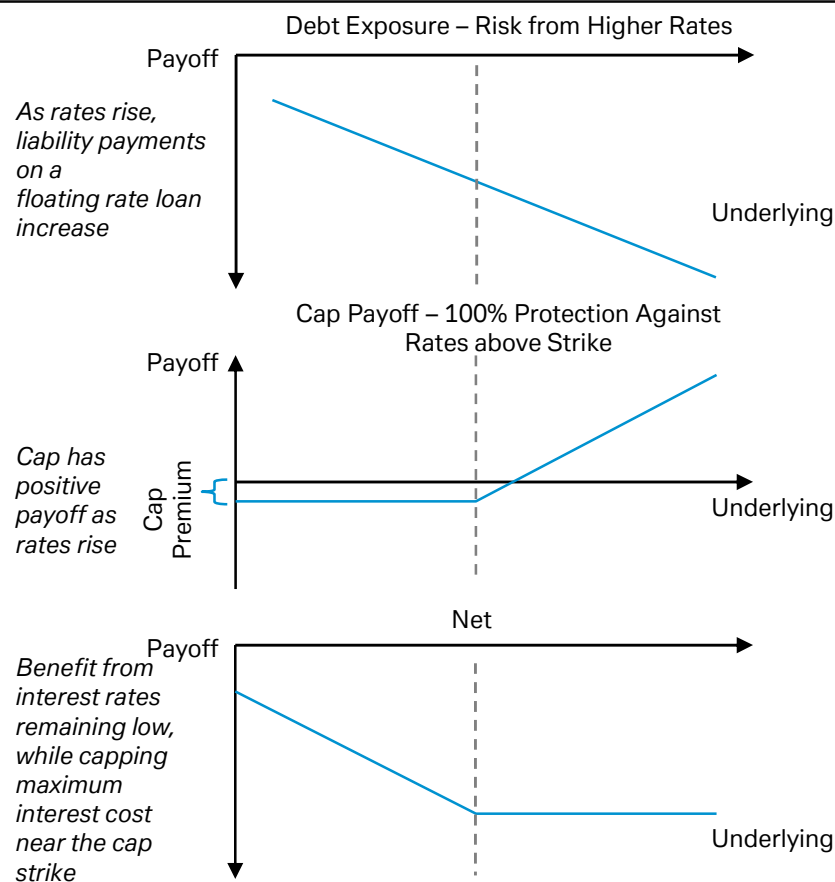
## Product Highlights

- The product enables **hedging floating interest rate liabilities/assets**
- A Cap allows borrowers to hedge against an increase in interest rates linked to a floating benchmark
- A Cap guarantees that the floating interest obligation will be at most the cap strike (+ cap cost)
- The buyer of protection receives an amount equivalent to (interest rate fixing-cap strike)
- Advantages:
  - Offers Protection against interest rate linked to a floating benchmark rising above the Cap Strike
  - Offers benefits in Increasing interest rate environment
  - Downside limited to premium payment
- Disadvantages:
  - Requires premium outlay to enter the hedge

## Components

- Interest rates linked to a floating rate benchmark
- Volatility in Interest Rates

## Payoff Illustration



This Scenario Analysis only represents the payoff at maturity. It does not take into consideration the premium paid. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# Interest Rate Cap



## Terms

Tenor	5 years
Notional	INR []
Receives	[] – Strike , Floored at 0%
Pays	X% p.a., ACT/365
Underlying	FBIL Overnight MIBOR rate

## Scenarios (At Payment Date) assuming Notional of 100,000,000

O/N MIBOR fixing	Strike	Payoff from cap
6	6.5	0
6.5	6.5	0
6.75	6.5	0.25% p.a.
7	6.5	0.50% p.a.
8	6.5	1.50% p.a.

User buys the cap and pays premium upfront on the effective date

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Option to Unwind and Early unwind date

An amount equal to Deutsche Bank's total costs or loss (which shall be a positive number) or gain (which shall be a negative number) in connection with terminating all payments and contingent payments that would otherwise have been made under this transaction in the period from but excluding the relevant Optional Termination Date up to and including the originally scheduled Termination date.

Deutsche Bank's total costs or loss shall include, without limitation, any loss of bargain, cost of funding, or loss or cost incurred as a result of Deutsche Bank terminating, liquidating, obtaining or re-establishing any hedge or related position.

Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

# Interest Rate Cap-Generic Risks



## Market Risk

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Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe “stop loss” and “stop limit” orders, market conditions may prevent us from executing any “stop loss” or “stop limit” orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.

# Interest Rate Floor



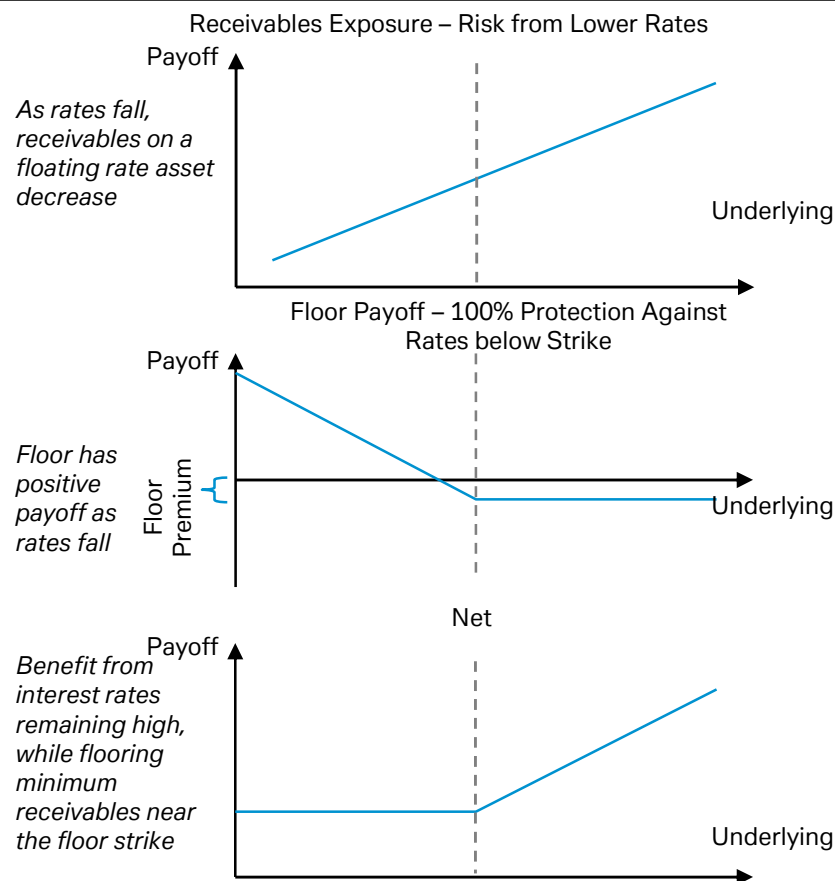
## Product Highlights

- The product enables **hedging floating interest rate receivables/payables**
- Offers hedge against interest rates linked to a floating benchmark decreasing
- A Floor guarantees that the floating interest receivables will be limited to at least the floor strike (- floor cost)
- The buyer of protection receives an amount equivalent to (Floor Strike – interest rate fixing)
- Advantages:
  - Protected against interest rates linked to a floating benchmark falling below the Floor Strike
  - Benefit from high interest rate environment
  - Downside limited to premium payment
- Disadvantages:
  - Requires premium outlay to enter the hedge

## Components

- Interest Rate linked to a floating benchmark
- Volatility in Interest Rates

## Payoff Illustration



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# Interest Rate Floor

Gain in a low rate environment and protection in a high rate environment



## Payoff

		Scenarios (At a payment date) for a notional of INR 10,000,000		
Tenor	5 years	O/N MIBOR	Strike	Payoff from floor
Notional	INR []	5	6.5	1.5% p.a.
Receives	[Strike – (), Floored at 0%] p.a., ACT/365	6	6.5	0.5% p.a.
Pays	X% p.a., 30/360	6.5	6.5	0
Underlying	INR Rates	7	6.5	0

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## Costs and Fees

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# Interest Rate Floor



## Market Risk

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## Credit Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

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## Currency Risk

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# Interest Rate Swap with Cap

Gain in a low rate environment and protection in a high rate environment



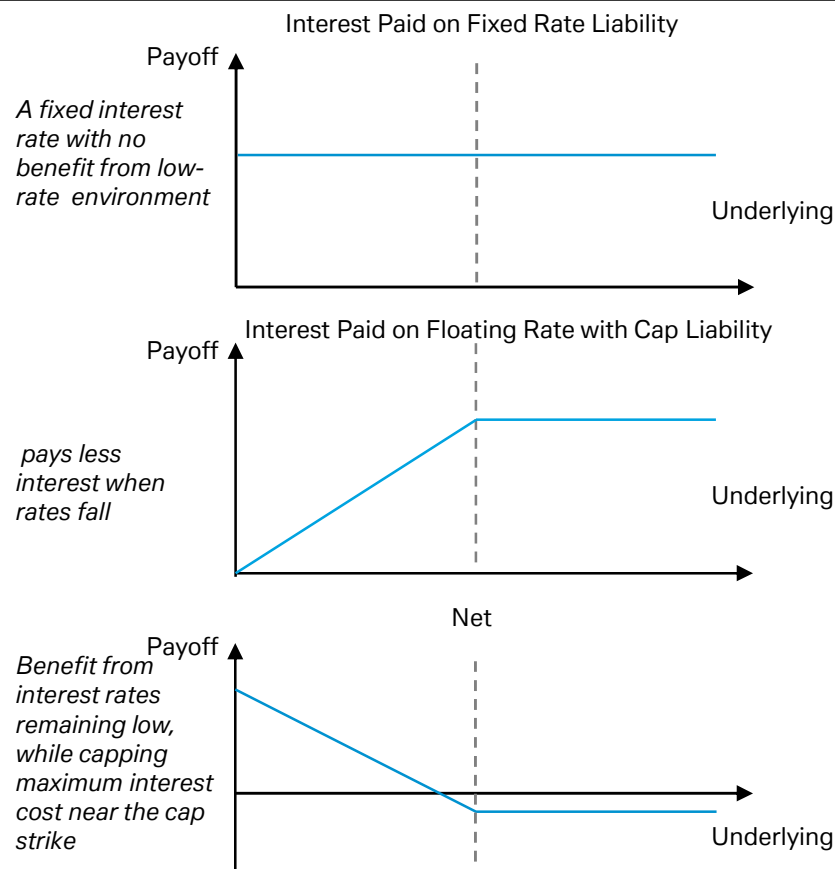
## Product Highlights

- Interest Rate swap with Cap enables **hedging floating interest rate liabilities/assets**
- Offers benefit from low interest rates linked to a floating benchmark, while giving protection against high rates whenever rates begin to increase
- It guarantees that the floating interest obligation will be limited to the Cap
- Advantages:
  - Offers Protection against interest rate rising above the Cap
  - Offers benefits in low interest rate environment
- Disadvantages:
  - If cap strike is higher than the fixed rate, might have to pay a higher interest

## Components

- Interest rates linked to a floating benchmark
- Interest rate (IR) volatility

## Payoff Illustration



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# Interest Rate Swap with Cap

Gain in a low rate environment and protection in a high rate environment



## Payoff

Tenor	5 years
Notional	INR []
Client Receives	X% p.a., Quarterly, ACT/360
Client Pays	INR Floating Rate, Capped at Strike Quarterly, ACT/360
Strike	Y%

The below scenarios indicate payoffs on one of the payment dates with strike at 6.5%

O/N MIBOR	Receive on Swap ( X%)	Payoff
5	6	1% p.a.
6	6	0
6.5	6	-0.5% p.a.
8	6	-0.5% p.a.

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## Costs and Fees

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# Interest Rate Swap with Floor

Gain in a high rate environment and protection in a low rate environment



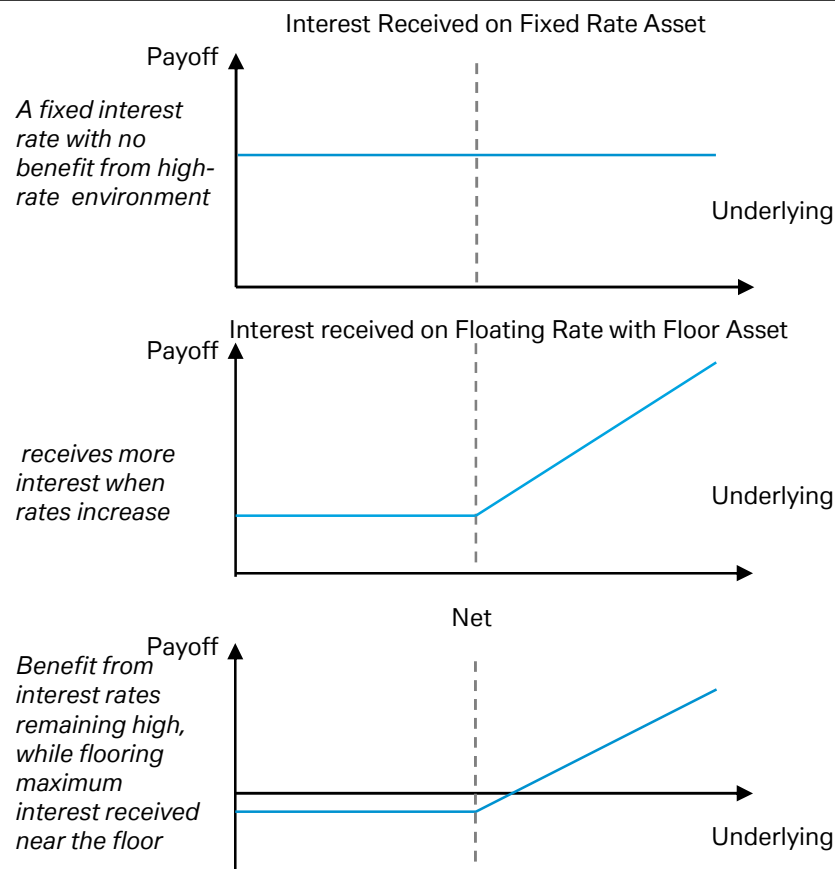
## Product Highlights

- Interest Rate swap with Floor enables **hedging floating interest rate liabilities/assets**
- An IRS with Floor allows benefit from high interest rates linked to a floating benchmark, while giving protection against low rates whenever rates begin to decrease
- It guarantees that the floating interest receivables will be limited to the Floor
- Advantages:
  - Allows full hedge against floating interest rates falling below the Floor
  - participates in the benefits from high interest rate environment
- Disadvantages:
  - If floor is below fixed IRS coupon, there is a possibility of receiving lower rate

## Components

- Interest Rate linked to a floating benchmark rate
- Interest rate (IR) volatility

## Payoff Illustration



\* Indicative Levels as on <> 2021. Please contact DB trading for refreshed levels. This Scenario Analysis is only for representation. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# Interest Rate Swap with floor

Gain in a High rate environment and protection in a low rate environment



## Payoff

Tenor	5 years
Notional	INR 10,000,000
Receives	INR Floating rate, Floored at Strike, Quarterly, ACT/360
Pays	X% p.a., Quarterly, ACT/360
Strike	Y%

The below scenarios indicate payoffs on one of the payment dates with strike at 5.5%

O/N MIBOR	Fixed Rate	Payoff
5.0	6	-0.5% p.a.
5.5	6	-0.5% p.a.
6.0	6	0
7.0	6	1.0% p.a.

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# Interest Rate Swap with floor



## Market Risk

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## Operational Risk

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## Currency Risk

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# European Cancellable Call Spread



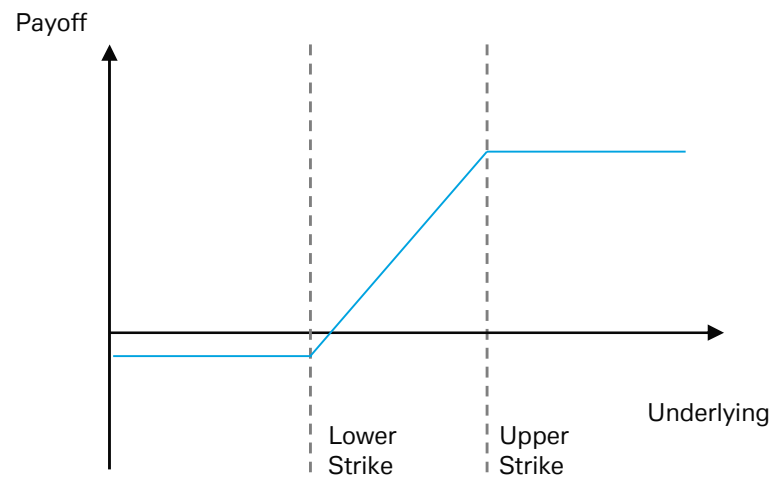
## Product Features

- The product enables hedging foreign currency (FCY) liabilities/payables
- The product is a combination of two vanilla call options- buys a call a lower strike and sells a call at a higher strike, along with an option to terminate the trade at no additional cost on pre-agreed dates

## Benefits

- Protects against FCY appreciation till sold call strike while allowing full participation in FCY depreciation below the bought call strike
- Downside limited to premium payment
- Allows to terminate the transaction at no additional cost on pre-agreed dates

## Payoff Illustration for USDINR assuming Cancel Option is not exercised



## Building Blocks and Primary Risks

- FX Volatility
- FX Spot
- Interest rates in both currencies

# European Cancellable Call Spread



## Scenario Analysis

Scenarios below indicate potential gain/loss in INR million on expiry at different USD/INR Spot Rates for USD 1 Million Buy Call at 75.00 and Sell Call at 80.00

Scenario	USD/INR Fix	Payoff
1	68.00	0.00
2	70.00	0.00
3	72.00	0.00
4	74.00	0.00
5	76.00	1.00
6	78.00	3.00
7	81.00	5.00
8	82.00	5.00

The above table illustrates possible scenarios of this Transaction and the resulting cash-flows assuming the Cancel Option is not exercised. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Unwind Cost

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# Generic Risk



## Market Risk

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## Liquidity Risk

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## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.



# Cancellable Swap

# Cancellable Interest Rate Swap

Hedge or gain interest rate exposure while retaining the option to cancel



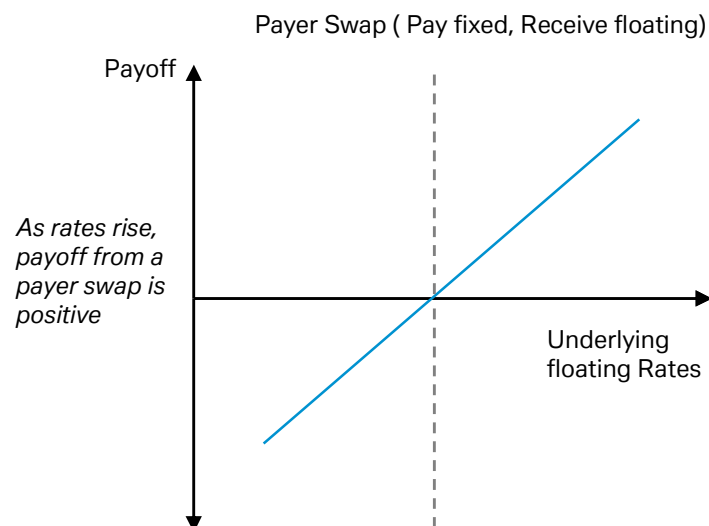
## Product Highlights

- The product can be used for **hedge interest rate exposure to floating rates** while retaining the option to cancel the trade (to potentially **re-hedge** and receive higher rates)
- The product can be used for **gain interest rate exposure to floating rates** while retaining the option to cancel the trade (to potentially **re-hedge** and pay lesser rates)
- Right to cancel the structure and terminate all future exchanges on any of the call dates
- Advantages:
  - Ability to re-hedge if there is a favorable movement in rates
- Disadvantages:
  - More expensive than vanilla IRS

## Components

- INR interest rate
- INR Interest Rate Volatility

## Payoff Illustration ( If not cancelled)



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# Cancellable Interest Rate Swap

Hedge or gain interest rate exposure while retaining the option to cancel



## Indicative Terms

Tenor	5 years
Notional	INR []
Receives	X% p.a., Quarterly
Pays	INR Rates, Quarterly
Non-call Period	[Y] months
Issuer Call	

## Scenario( for a 3 year semi annual payer swap entered on 22-Dec-21)

Payment dates	Cancel (Y/N)	Floating Rate (p.a.)	Fixed Rate (p.a.)	Payoff on payment date
22-Jun-22	N	6.50	6	0.5% p.a.
22-Dec-22	N	6.30	6	0.3% p.a.
22-Jun-23	N	6.10	6	0.1% p.a.
22-Dec-23	N	6.05	6	0.05% p.a.
22-Jun-24	Y	5	6	Cancelled
22-Dec-24	Cancelled	Cancelled	Cancelled	Cancelled

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# Cancellable Interest Rate Swap



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# IRSwaption

# Interest Rate Payer Swaption

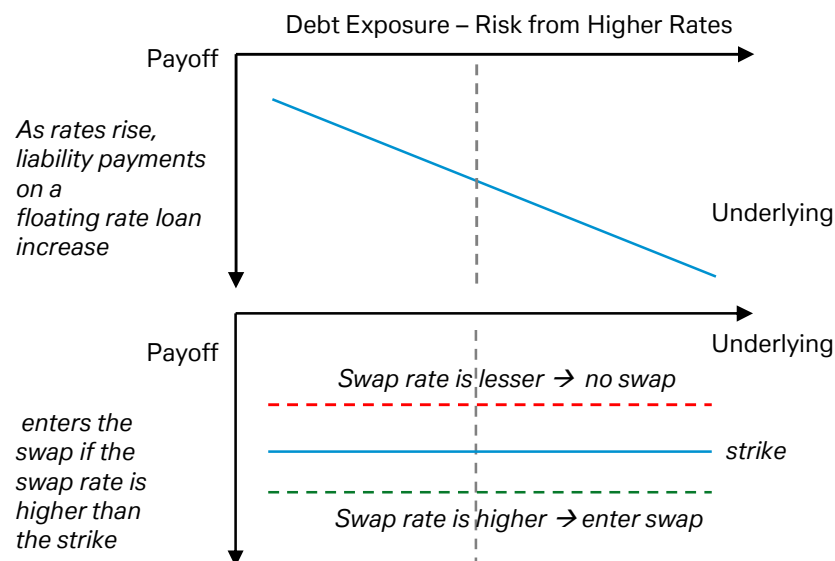
Gain in a low rate environment and protection in a high rate environment



## Product Highlights

- The product enables **hedging floating interest rate liabilities/assets**
- A swaption allows borrowers to benefit from low MIBOR-OIS interest rate, while giving protection against high rates whenever rates begin to increase
- A swaption gives the buyer the right to enter a swap and pay a fixed interest rate for the tenor of the swap and receive a floating rate that can be used to offset the floating interest obligation
- The buyer of protection pays an interest equivalent to swaption strike
- Advantages:
  - is hedged if the MIBOR-OIS is expected to rise (or remain at elevated levels) during the tenor of the swap
  - benefits from low interest rate environment
  - Downside limited to premium payment
- Disadvantages:
  - Requires Upfront premium

## Payoff Illustration



## Components

- Interest Rate
- Interest rate (IR) volatility

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# Interest Rate Payer Swaption

Gain in a low rate environment and protection in a high rate environment



## Indicative Terms

Swaption Tenor	2X5
Swap Tenor	5 years
Notional	INR 100,000,000
Receives	INR Rates, Semi Annually, ACT/360
Pays	X% p.a., Semi Annually, ACT/360
Strike	6.5%

Scenarios ( At Option Exercise date ) assuming premium of 300,000 and other swap terms as mentioned above

Swap Rate	Strike	Swaption Exercise?	Indicative Net P&L
5	6.5	No	(300,000)
6	6.5	No	(300,000)
6.55	6.5	Yes	(165,570)
6.75	6.5	Yes	372,151
7	6.5	Yes	1,044,303

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Option to Unwind and Early unwind date

An amount equal to Deutsche Bank's total costs or loss (which shall be a positive number) or gain (which shall be a negative number) in connection with terminating all payments and contingent payments that would otherwise have been made under this transaction in the period from but excluding the relevant Optional Termination Date up to and including the originally scheduled Termination date.

Deutsche Bank's total costs or loss shall include, without limitation, any loss of bargain, cost of funding, or loss or cost incurred as a result of Deutsche Bank terminating, liquidating, obtaining or re-establishing any hedge or related position.

Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

Deutsche Bank  
Investment Bank

## Sensitivity Analysis

### If trade is held till maturity:

- 1) If underlying swap rate trades below strike at payment date, counterparty will incur a loss to the extent of premium paid in the transaction
- 2) If underlying trades above strike on payment date but the moneyness is less than the premium paid, counterparty will incur a loss as indicated in the scenarios to the left

### If transaction is terminated before maturity, assuming everything else is constant

- 1) If the underlying decreases below the strike, counterparty will incur a loss equal to the premium paid in the transaction.

# Interest Rate Payer Swaption



## Market Risk

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Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe "stop loss" and "stop limit" orders, market conditions may prevent us from executing any "stop loss" or "stop limit" orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.

# Interest Rate Receiver Swaption

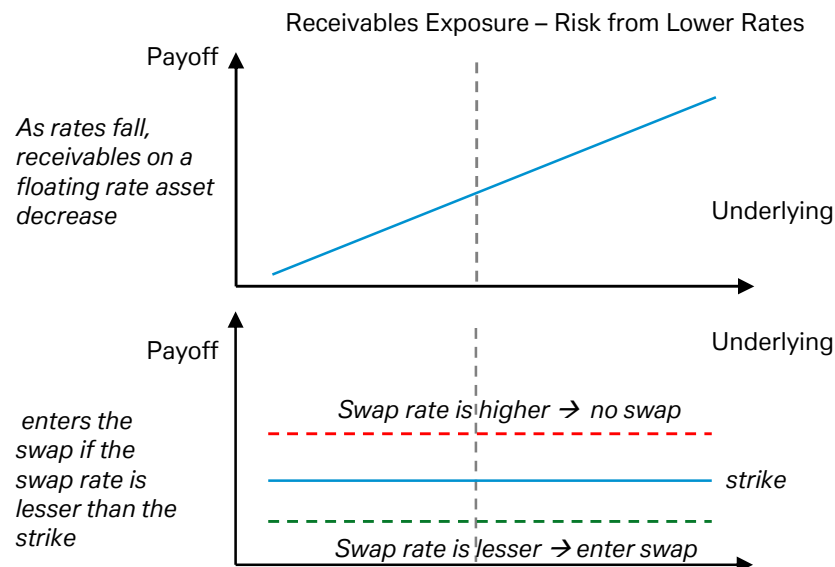
Gain in a high rate environment and protection in a low rate environment



## Product Highlights

- The product enables **hedging floating interest rate assets/liabilities**
- A swaption allows borrowers to benefit from high MIBOR-OIS interest rate, while giving protection against low rates whenever rates begin to decrease
- A swaption gives the buyer the right to enter a swap and receive a fixed interest rate for the tenor of the swap and pay a floating rate that can be used to offset the floating interest receipts
- The buyer of protection receives an interest equivalent to swaption strike
- Advantages:
  - Offers Protection if MIBOR-OIS is expected to fall (or remain at depressed levels) during the tenor of the swap
  - Offers benefits from high interest rate environment
  - Downside limited to premium payment
- Disadvantages:
  - Requires Upfront premium

## Payoff Illustration



## Components

- INR OIS
- Interest rate(IR) volatility

This Scenario Analysis only represents the payoff at maturity. It does not take into consideration the premium paid. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# Interest Rate Receiver Swaption

Gain in a high rate environment and protection in a low rate environment



## Indicative Terms

Swaption Tenor	2X5
Swap Tenor	5 years
Notional	INR []
Receives	X% p.a., Semi Annually, ACT/360
Pays	INR Rates, Semi Annually, ACT/360
Strike	[]

Payoff Scenarios ( At Option Exercise date ) assuming premium of 300,000 and other swap terms as mentioned above

Swap Rate	Strike	Swaption Exercise?	Indicative Net P&L
5.5	6.5	Yes	INR 3,936,094
6	6.5	Yes	INR 1,818,047
6.45	6.5	Yes	INR (88,195)
6.75	6.5	No	INR (300,000)
7	6.5	No	INR (300,000)

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Option to Unwind and Early unwind date

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Deutsche Bank's total costs or loss shall include, without limitation, any loss of bargain, cost of funding, or loss or cost incurred as a result of Deutsche Bank terminating, liquidating, obtaining or re-establishing any hedge or related position.

Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

Deutsche Bank  
Investment Bank

## Sensitivity Analysis

### If trade is held till maturity:

- 1) If underlying swap rate trades above strike at payment date, counterparty will incur a loss to the extent of premium paid in the transaction
- 2) If underlying trades below strike on payment date but the moneyness is less than the premium paid, counterparty will incur a loss as indicated in the scenarios to the left

### If transaction is terminated before maturity, assuming everything else is constant

- 1) If the underlying increases above the strike, counterparty will incur a loss equal to the premium paid in the transaction.

# Interest Rate Receiver Swaption



## Market Risk

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Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe “stop loss” and “stop limit” orders, market conditions may prevent us from executing any “stop loss” or “stop limit” orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.



# Appendix (CMS Derivatives)

# INR CMS Interest Rate Cap

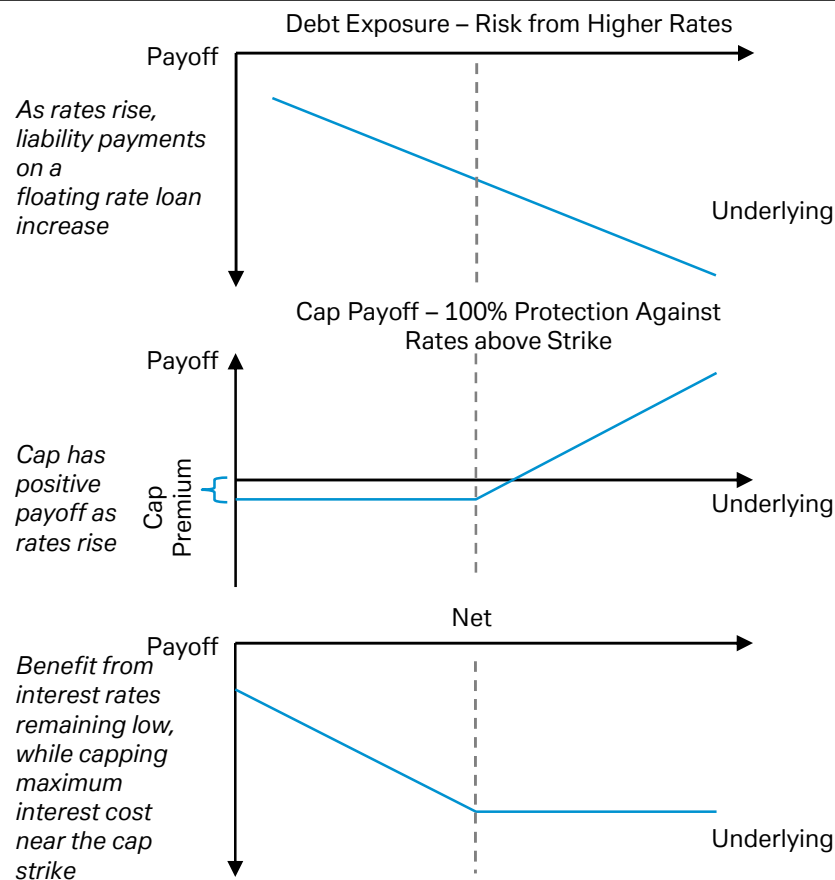
Gain in a low INR rate environment and protection in a high INR rate environment



## Product Highlights

- The product enables **hedging exposure to INR floating rate liabilities**
- A Cap allows borrowers to benefit from low INRCMS interest rates, while giving protection against high rates whenever rates begin to increase
- A Cap guarantees that the floating interest obligation will be limited to the cap strike (+ cap cost)
- The buyer of protection receives (interest rate fixing — cap strike)
- Advantages:
  - Offers protection against MIBOR-OIS rising above the Cap Strike
  - Offers benefits in low interest rate environment
  - Downside limited to premium payment
- Disadvantages:
  - Requires Upfront premium

## Payoff Illustration



## Components

- INR CMS Interest rate
- Interest rate Volatility

This Scenario Analysis is only for representation. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# INR CMS Interest Rate Cap

Gain in a low INR rate environment and protection in a high INR rate environment



## Payoff – Indicative terms

Tenor	5 years
Notional	USD []
Receives	[] – Strike , Floored at 0%
Pays	X% p.a., ACT/360

## Scenarios (At Maturity)

INR CMS Rate	Strike	Payoff
6	6.5	0
6.5	6.5	0
7	6.5	0.5*Notional
8	6.5	1.5* Notional

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Option to Unwind and Early unwind date

An amount equal to Deutsche Bank's total costs or loss (which shall be a positive number) or gain (which shall be a negative number) in connection with terminating all payments and contingent payments that would otherwise have been made under this transaction in the period from but excluding the relevant Optional Termination Date up to and including the originally scheduled Termination date.

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Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

# INR CMS Interest Rate Cap



## Market Risk

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Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe "stop loss" and "stop limit" orders, market conditions may prevent us from executing any "stop loss" or "stop limit" orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.

# INR CMS Interest Rate Floor

Gain in a high INR rate environment and protection in a low INR rate environment



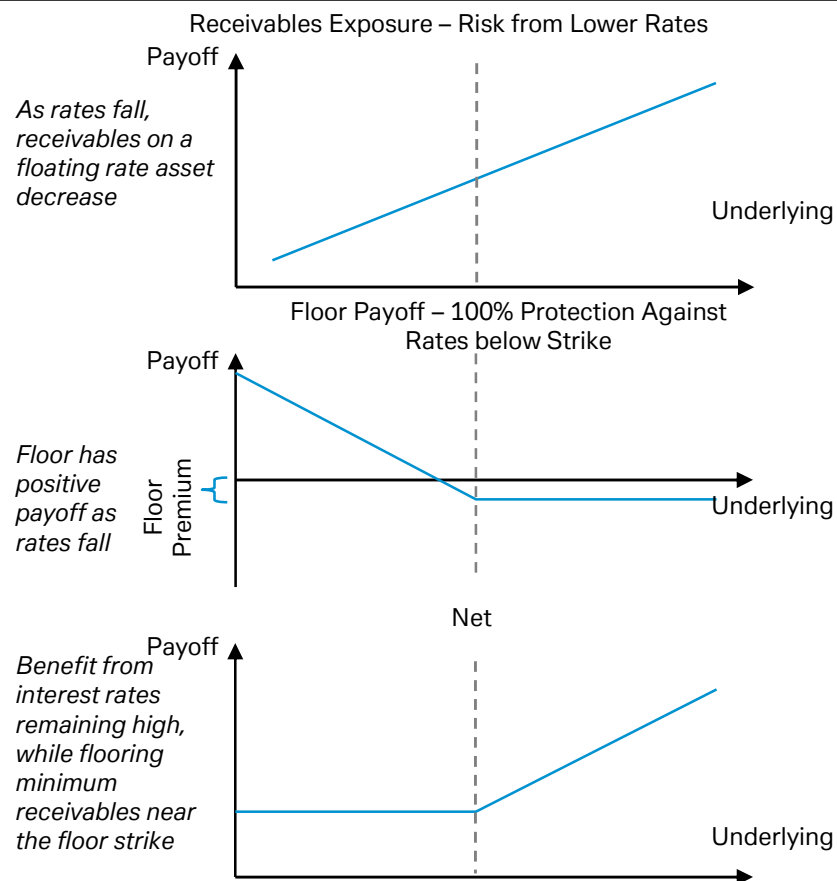
## Product Highlights

- The product enables **hedging exposure to a series of INR floating rate assets**
- A Floor allows the to benefit from high INR CMS interest rates, while giving protection against low rates whenever rates begin to decrease
- A Floor guarantees that the floating interest receivables will be limited to the floor strike (- floor cost)
- The buyer of protection receives (Floor Strike – interest rate fixing)
- Advantages:
  - Offers protection against MIBOR-OIS falling below the Floor Strike
  - Offers benefits in interest rate environment
  - Downside limited to premium payment
- Disadvantages:
  - Requires Upfront premium

## Components

- Interest rate
- Interest rate volatility

## Payoff Illustration



This Scenario Analysis is only for representation. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# INR CMS Interest Rate Floor

Gain in a High INR rate environment and protection in a low INR rate environment



## Payoff – Indicative terms

Tenor	5 years
Notional	INR []
Receives	Strike – [], Floored at 0%
Pays	X% p.a., ACT/360

## Scenarios (At Maturity)

INR CMS	Strike	Payoff
5	6.5	1.5*Notional
6	6.5	0.5*Notional
6.5	6.5	0
7	6.5	0

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Option to Unwind and Early unwind date

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Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

# INR CMS Interest Rate Floor



## Market Risk

---

Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe "stop loss" and "stop limit" orders, market conditions may prevent us from executing any "stop loss" or "stop limit" orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.

# INR CMS Spread with Cap or Floor

Cheaper structure with Protection from INR rate curve steepening/flattening within range



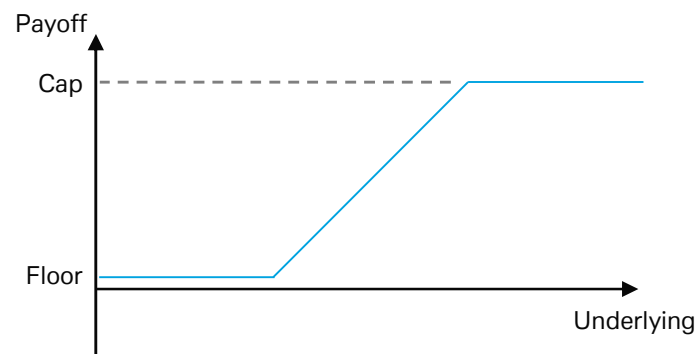
## Product Highlights

- Product offers hedging relative movements in Local Currency (LCY) liabilities and Local currency (LCY) assets where the expectation is range bound
- The underlying for the call is a CMS Spread which is defined as a long tenor CMS Rate minus a short tenor CMS Rate
- The buyer receives the CMS spread fixing up to a maximum of cap and down to a minimum of floor
- If the fixing is below the floor, the buyer receives the floor and if the fixing is above the cap, the buyer receives cap
- Advantages:
  - Cheaper than individual hedges for asset and liabilities
  - Depending on the relative value of the cap and floor, the premium is very less
- Disadvantages:
  - Partial hedge

## Components

- INR CMS rate
- INR CMS Rate Volatility

## Payoff Illustration for INR CMS Spread



This Scenario Analysis only represents the payoff at maturity. It does not take into consideration the premium paid. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# INR CMS Spread with Cap/Floor

Cheaper structure with Protection from INR rate curve steepening/flattening within range



## Payoff – Indicative terms

## Scenarios (At Maturity)

Tenor	1 year	INR CMS long tenor	INR CMS short tenor	Spread	Floor / Cap	Payoff
Notional	INR []	9	2	7	2/4	4*Notional
Receives	INR CMS Spread, Floored at []% and capped at []%, ACT/365	8	3	5	2/4	4*Notional
Pays	X% p.a., ACT/360	7	4	3	2/4	3*Notional
Strike	[]	6	5	1	2/4	2*Notional
		5.5	5.5	0	2/4	2*Notional

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

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## Contract terms and conditions – Option to Unwind and Early unwind date

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Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

# INR CMS Spread with Cap/Floor



## Market Risk

---

Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe "stop loss" and "stop limit" orders, market conditions may prevent us from executing any "stop loss" or "stop limit" orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

## Currency Risk

---

Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.

# European Call on INR CMS Spread

Cheaper option with Protection from INR rate curve steepening



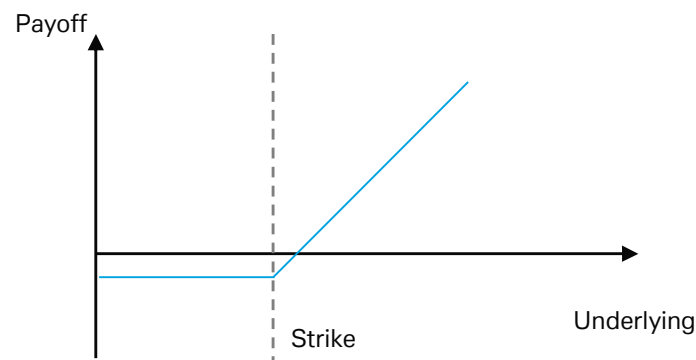
## Product Highlights

- The product enables hedging relative movements in **long-term foreign currency (LCY) liabilities and short-term foreign currency (LCY) assets**
- The underlying for the call is a CMS Spread which is defined as a long tenor CMS Rate minus a short tenor CMS Rate
- A Call allows borrowers to protect from curve steepening i.e., when the difference increases
- For every CMS spread fixing above the Strike the buyer of protection receives an amount equivalent to (CMS Spread — Strike)
- Advantages:
  - Cheaper than individual hedges for asset and liabilities
  - Downside limited to premium payment
- Disadvantages:
  - Partial hedge

## Components

- Risk components include INR rate Delta
- Interest rate volatility and correlation between the rates of the CMS Spread.

## Payoff Illustration for INR CMS Spread



This Scenario Analysis only represents the payoff at maturity. It does not take into consideration the premium paid. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

# European Call on INR CMS Spread

Cheaper option with Protection from INR rate curve steepening



## Payoff - Indicative terms

Scenarios (At Maturity) ( Assuming strike at 3 for all the below scenarios )

Tenor	1 year	INR CMS [ ]	INR CMS [ ]	Spread	Payoff
Notional	INR [ ]	9	2	7	4*Notional
Receives	[ ] - Strike, Floored at 0%, ACT/365	8	3	5	2*Notional
Pays	X% p.a., ACT/360	7	4	3	0
Strike	[ ]	6	5	1	0
		5.5	5.5	0	0

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Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

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# European Call on INR CMS Spread



## Market Risk

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Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe "stop loss" and "stop limit" orders, market conditions may prevent us from executing any "stop loss" or "stop limit" orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

## Currency Risk

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Currency Risk The profit or loss from Transactions in foreign currencies will be affected by fluctuations in currency exchange rates where there is a need to convert from the currency denomination of the Transaction to another currency.

# European Put on INR CMS Spread

Cheaper option with Protection from INR rate curve flattening



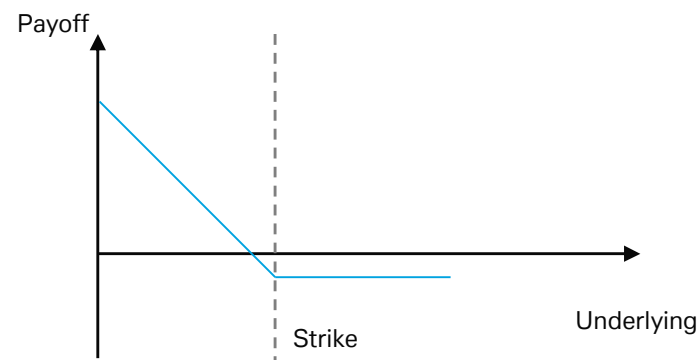
## Product Highlights

- The product enables hedging relative movements in **long-term foreign currency (LCY) assets and short-term foreign currency (LCY) liabilities**
- The underlying for the put is a CMS Spread which is defined as a long tenor CMS Rate minus a short tenor CMS Rate
- A Put allows borrowers to protect from curve flattening i.e., when the difference decreases
- For every CMS spread fixing below the Strike the buyer of protection receives an amount equivalent to  $(\text{Strike} - \text{CMS Spread})$
- Advantages:
  - Cheaper than individual hedges for asset and liabilities
  - Downside limited to premium payment
- Disadvantages:
  - Partial hedge

## Components

- INR interest rate
- INR Interest rate volatility

## Payoff Illustration for USD CMS Spread



This Scenario Analysis only represents the payoff at maturity. It does not take into consideration the premium paid. It is important to acknowledge that there is no limit to the possible scenario variations on this Transaction

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## Payoff – Indicative terms

## Scenarios (At Maturity) ( Assuming strike at 3 )

Tenor	1 year	INR CMS long tenor	INR CMS Short tenor	Spread	Payoff
Notional	INR []	9	2	7	0
Receives	Strike – [], Floored at 0%, ACT/365	8	3	5	0
Pays	X% p.a., ACT/360	7	4	3	0
Strike	[]	6	5	1	2*Notional
		5.5	5.5	0	3*Notional

The above table illustrates possible scenarios of this Transaction and the resulting payoff. It is important for Counterparty to acknowledge that there is no limit to the possible scenario variations on this Transaction.

The analyses are provided to the Counterparty for information purposes only and Deutsche Bank does not make any representation or warranty to the Counterparty in respect of the same. Deutsche Bank shall not be liable for any errors or omissions made in calculating or disseminating the below analyses, or for any inaccuracies or flaws in the methodologies, adjustments or assumptions used in deriving the analyses

## Contract terms and conditions – Option to Unwind and Early unwind date

An amount equal to Deutsche Bank's total costs or loss (which shall be a positive number) or gain (which shall be a negative number) in connection with terminating all payments and contingent payments that would otherwise have been made under this transaction in the period from but excluding the relevant Optional Termination Date up to and including the originally scheduled Termination date.

Deutsche Bank's total costs or loss shall include, without limitation, any loss of bargain, cost of funding, or loss or cost incurred as a result of Deutsche Bank terminating, liquidating, obtaining or re-establishing any hedge or related position.

Party A shall provide the Mark to Market value of the trade as and when desired by Party B

Party B has the option to unwind this trade as specified in the relevant confirmation and subject to unwind costs.

## Costs and Fees

Transactions of this nature are executed at an all-inclusive price and there would not be any separate breakup and recovery of costs, fees and other charges. Breakup will however be provided as per the extant RBI guidelines. This doesn't include statutory charges/levies and same will be recovered separately as applicable.

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## Market Risk

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Market Risk is the risk that the value of a Transaction will be adversely affected by fluctuations in the level or volatility of or correlation or relationship between one or more market prices, rates or indices or other market factors or by illiquidity in the market for the Transaction or in a related market. In particular leveraged Transactions will entail a higher degree of risk as the losses arising from a small market movement will be multiplied and you may be required to provide substantial margin at short notice to meet your obligations. Failure to meet such obligations may result in us having to liquidate your position at a loss for which you would be liable. You should also note that while we will seek to observe "stop loss" and "stop limit" orders, market conditions may prevent us from executing any "stop loss" or "stop limit" orders which may have been previously agreed.

## Credit Risk

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Credit Risk is the risk that we may, under certain circumstances, fail to perform our obligations to you when due.

## Funding Risk

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Funding Risk is the risk that, as a result of mismatches or delays in the timing of cash flows due from or to you under Transactions or related hedging, trading, collateral or other transactions, you will not have adequate cash available to fund current obligations.

## Liquidity Risk

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Liquidity Risk is the risk that due to prevailing market conditions it may not be possible to liquidate, nor to assess a fair value of your position. In addition, you should be aware that the operation of exchange rules or any power or system failure affecting electronic trading facilities may, in certain circumstances, impair or prevent us from liquidating or executing your Transactions, thus increasing the likelihood of loss..

## Operational Risk

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Operational Risk is the risk of loss to you arising from inadequacies in, or failures of, your internal procedures and controls for monitoring and quantifying the risks and contractual obligations associated with Transactions.

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