

Products to Manage Interest Rate Exposure



Bank of Ireland 

Global Markets

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The Governor and Company of the Bank of Ireland acting through its business unit Global Markets (hereafter referred to as “Bank of Ireland”) provides a range of tools for managing interest rate exposure. This booklet provides information on three of the most commonly used products; Interest Rate Swaps, Interest Rate Caps and Interest Rate Collars.

In this booklet, an overview of each of the aforementioned product is presented with an example to assist you in your understanding of the basic principles of the products. In addition, the key benefits and risks of each product are outlined, together with an explanation of Early Termination and an example of potential Early Termination costs in order to help you understand and assess your potential risk in entering into such an arrangement.

Bank of Ireland doesn't provide products for speculative purposes. Products are provided by Bank of Ireland in order to manage a known exposure e.g. where you have a loan that is exposed to variable interest rates and you require protection from this risk.

Please note, this booklet has been prepared by Bank of Ireland as an information/marketing communication. If you would like more details on these products please contact your Bank of Ireland Relationship Manager or your Bank of Ireland Global Markets contact. For ease of understanding a glossary can be found at the end of this document. This defines some of the more technical terms used in this booklet.

Other mechanisms/products for managing interest rate exposures are available in addition to those presented in this booklet. Should you require any other product (e.g. Fixed Rate Lending) to manage your interest exposure please contact your Bank of Ireland Relationship Manager. We may be in a position to provide a solution tailored to your particular requirements dependent on your knowledge and experience. Please note that whilst historically the typically used EUR and GBP Reference Rates have had positive readings, it is possible for Reference Rates to be negative. Any product can be tailored to protect you from an exposure to negative interest rates if required.

Some loans facilities incorporate a minimum Reference Rate to be charged at all time e.g. 0% therefore your interest management product should be matched to your underlying loan facility. Should you choose not to match your interest management product to your loan characteristics, the risk for a mismatch exists.

PLEASE NOTE: Bank of Ireland Global Markets does not provide Investment Advice and provides risk management solutions on a strictly non-advised basis only.

You should consider seeking your own independent advice on the financial and legal aspects before entering into any derivative transaction

All Derivative products are governed by rules and requirements set out by European Union (Markets in Financial Instruments) Regulations 2017 and the Financial Conduct Authority. Bank of Ireland is obliged to assess in advance of any transaction whether it is appropriate for the customer to enter into any of the products. In order to comply with this requirement Bank of Ireland has to obtain information on the knowledge and experience relevant to the product from each customer. The products outlined in this booklet are intended for both Retail and Professional clients taking account of the identified target market in accordance with Appendix 1 of this document.

Interest Rate Swap

Product Overview

An Interest Rate Swap ('Swap') is a tool for managing interest rate exposure. It typically provides a method of fixing Interest Rate Payments on the variable portion of your variable rate loan (where the variable rate is a published Reference Rate), to achieve certainty regarding Interest Rate costs.

Other mechanisms / products are available to manage interest rate risk including, but not exclusively, Fixed Rate Lending, Interest Rate Caps and Interest Rate Collars. (Please contact your Bank of Ireland Relationship Manager for further details).

A Swap is an agreement between the Bank of Ireland and a customer to swap Floating Interest Rate Payments, linked typically to a Reference Rate, (e.g. EURIBOR/LIBOR), for Fixed Interest Rate Payments over a specified Term for an agreed Notional Amount. The Notional Amounts are not exchanged and, on each interest Payment Date, the cash flows are netted.

For the purpose of illustration, this product overview is from the perspective of a borrower with an exposure to variable interest rates, (due to a variable rate loan) seeking to manage your interest rate risk.

Typically, borrowers may need to protect against rates rising by agreeing to pay a fixed interest rate on an agreed amount over an agreed term.

In the event that your loan contains a rate floor you may purchase a floor with the swap in order to match the flows of the loan. This would however result in a premium being charged or a higher fixed rate if the cost is embedded into the Swap.

Key Benefits

Certainty

A Swap enables you to align your underlying borrowing/liabilities with your cash flow and your view of the market, by considering the following parameters:

- ▶ Notional Amount (this Notional Amount can remain constant over the Term or can vary)
- ▶ Currency of your Notional Amount
- ▶ Effective Date / Start Date
- ▶ Term / Maturity Date
- ▶ Interest Payment frequency (monthly, quarterly or semi-annually)
- ▶ Floating Reference Rate
- ▶ Interest Payment Dates
- ▶ Reset Dates

Flexibility

Your Swap can be tailored to match your debt profile and will provide certainty of interest rate hedging costs over the life of the trade. By locking in an agreed Fixed Interest Rate, you can hedge a variable rate loan. This can allow for more accurate cash flow management and budgeting.

No upfront Premium

There is typically no upfront cash Premium payable by any party to the Swap.

Portability

It may also be possible to novate i.e. transfer a Swap to another entity or another bank, subject to credit approval.

Early Termination

It may be possible to terminate the product during the life of the swap, at prevailing market rates. This may incur costs. Please refer to Early Termination section for further information.

Key Risks

Interest Rate Risk

Interest rate markets can be unpredictable and can move in either direction. As a result, your fixed rate may be higher or lower than the prevailing rates in the market.

For example:

- ▶ If you are a borrower and have chosen to lock in a Fixed Interest Rate and receive Floating Interest Rate Payments and the rates in the market have decreased since you entered into the Swap, your interest costs will be higher than if you had not entered into the Swap.
- ▶ In this example a Swap will provide protection against higher interest rates but it is important to note that there is no potential to benefit from a fall in interest rates over the life of the Swap.
- ▶ If the Reference Rate is set at a negative rate; the Fixed Interest Rate will no longer be the maximum rate of interest on the Swap. In this situation the Fixed Interest Rate side pays the Floating Interest Rate amount in addition to the Fixed Interest Rate amount.
- ▶ You should examine your loan facility to ascertain whether your loan reference rate includes a floor or not.

Early Termination / Changes to the terms of the Swap

It is sometimes possible to terminate your Swap early or alter other pre-agreed terms during the life of the Swap. However, depending on prevailing interest rates at the time, there may be a cost to you or you may realise a gain. Given these risks it is important that you consider carefully the terms and duration of your Swap at the time of trading. Please refer to the Early Termination section for further information.

Counterparty Risk

- ▶ By entering into a Derivative contract with Bank of Ireland you have an exposure to Bank of Ireland in the event of insolvency or related events such as bail in.

How does an Interest Rate Swap Work?

Each Interest Rate Swap involves a Fixed Interest Rate and a Floating Interest Rate.

A Swap is a legally binding agreement between you and Bank of Ireland where one party agrees to pay the other (in cash) the difference between a fixed interest rate (the 'Fixed Rate') and a series of variable interest rates (the 'Floating Rates') over an agreed period of time.

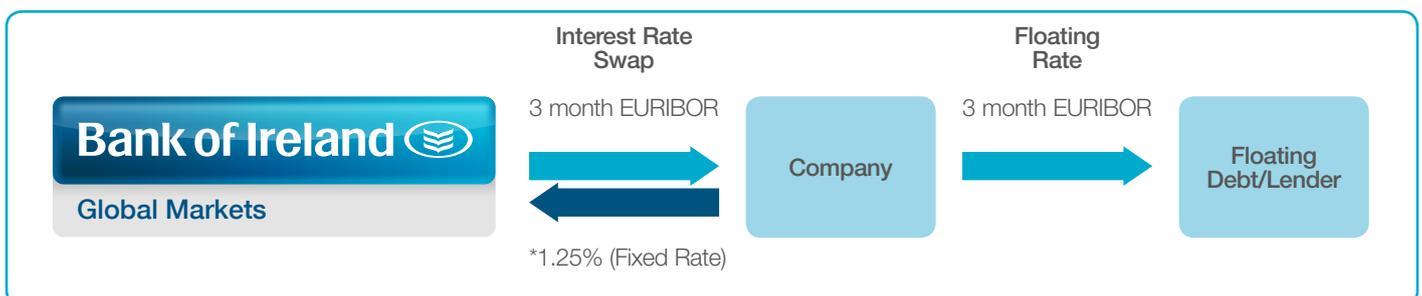
The Swap is based on an agreed Notional Amount (the 'Notional Amount'). The Notional Amount can vary over the Term depending on your underlying interest rate exposure and/or cash-flow requirements.

The Fixed Interest Rate is agreed at the start of the transaction while the Floating Interest Rate is based on a 'Reference Rate' determined on periodic 'Reset Dates'. The commonly used variable Reference Rates are '3 Month EURIBOR' or '3 Month LIBOR', but others are available.

The interest amounts payable based on the pre-agreed Fixed Interest Rate and the Floating Interest Rate will be netted on the Payment Dates.

The table below shows the interest flows where a borrower pays a Fixed Interest Rate to Bank of Ireland. In exchange the borrower receives a floating Payment linked to 3 month EURIBOR from Bank of Ireland if the Reference Rate sets as a positive number and uses this to pay their floating debt also linked to 3 Month EURIBOR.

Note: The Swap only hedges the Floating Interest Rate and does not hedge the loan margin or other costs on the floating debt.



* This is for illustration purposes only in a positive rate environment

At each Payment Date:

- ▶ if the Floating Interest Rate is greater than the Fixed Interest Rate, the Borrower (“Company”) will receive a cash Payment from Bank of Ireland;
- ▶ if the Floating Interest Rate is less than the Fixed Interest Rate, the Borrower (“Company”) will pay a cash Payment to Bank of Ireland.

In each case, the cash Payment will be determined as the difference between the Floating Interest Rate and the Fixed Interest Rate and one net Payment will be made. If, however, the Floating Interest Rate and the Fixed Interest Rate are the same, no cash Payment is made.

How is the Floating Rate determined?

The Floating Rate used to determine the Floating Interest Payments may be based on Reference Rates on EUR, GBP or another currency of your choosing.

Typically Reference Rates available are:

- ▶ one month (EURIBOR or LIBOR);
- ▶ three months (EURIBOR or LIBOR);
- ▶ six months (EURIBOR or LIBOR).
- ▶ Bank of England Official Base Rate

The period/Term of the Reference Rate will be the same as the Interest Payment Frequency you have chosen and should match the rollover frequency of your loan with a view to hedging your interest rate exposure, for example if your variable rate loan has a quarterly rollover against 3 month EURIBOR it will be appropriate to choose 3 month EURIBOR as your Reference Rate.

While historically the typically used EUR and GBP Reference Rates have had positive readings, Reference Rates may also be negative. In this situation, the net payment would be higher than the Fixed Interest Rate, for the Fixed Interest Rate payer.

Note: The EURIBOR/LIBOR floating rate will not fully match the interest cost on your underlying loan, i.e. excludes any other costs to your borrowing such as your lending costs.

EURIBOR and LIBOR are widely used as interest Rate Reference rates by investment banks, fund managers and retail banks.

Reference Rate	Description
EURIBOR	EURIBOR [Euro Interbank Offered Rate] is the benchmark rate of the large euro money market. A detailed explanation of EURIBOR and how it is calculated may be found at: http://www.EURIBOR-ebf.eu/EURIBOR-org/about-EURIBOR.html
LIBOR	LIBOR [London Interbank Offered Rate] is the rate of interest at which banks borrow funds, in marketable size, from other banks in the London interbank market. LIBOR, the most widely used benchmark or reference rate for short term interest rates, is an international rate. A detailed explanation of LIBOR and how it is calculated may be found at https://www.theice.com

It is important to understand that EURIBOR and LIBOR are NOT the European Central Bank or Bank of England’s Base Rate. EURIBOR and LIBOR do not necessarily reflect nor follow movements in these rates but generally trend in a consistent manner.

How is the Fixed Rate determined?

The Fixed Rate takes into account a number of factors, including:

- ▶ the Term of the swap
- ▶ prevailing market interest rates;
- ▶ market Volatility;
- ▶ the Net Interest Payment frequency;
- ▶ the Reset Dates and Payment Dates;
- ▶ any changes in the Notional Amount during the Term;
- ▶ credit assessment
- ▶ transaction margin.

How are Net Interest Payments calculated?

The Fixed Rate Interest Payments will be:

- ▶ calculated using the pre-agreed Fixed Interest Rate on every interest Payment Date; and
- ▶ usually paid in arrears on each Payment Date in respect of the period since the last Payment date or since the Start Date if it is the first interest period.

If you choose to vary the Notional Amount during the Term of your Swap, your Net Interest Payments will be calculated based on the Notional Amount applying for that interest period.

Both the Fixed Interest Rate Payment and the Floating Interest Rate Payment can be calculated using the following formula:

$$A = B \times C \times (D/360) *$$

where

A = The interest Payment;

B = The Notional Amount for that interest rate period;

C = either the Fixed Interest Rate expressed as a percentage, or the Floating Interest Rate expressed as a percentage, as determined on the preceding Reset Date (or the Start Date, as the case may be); and

D = the number of days since (but not including) the previous Payment Date, or in the case of the first Payment Date, the number of days since (but not including) the Commencement Date.

***This will be divided by 365 for a GBP notional.**

There is no payment of Notional Amounts – only exchange of Net Interest Payments.

When are Net Interest Payments made?

You can choose the Net Interest Payment dates to match the cash flow on your underlying exposure. Net Interest Payment dates can be monthly, quarterly, semi-annual or annual. Typically;

- ▶ At the beginning of each interest rate period (on each Reset Date), the Floating Interest Rate will be set.
- ▶ At the end of each interest rate period (on each Payment Date) the respective Fixed Interest Rate and Floating Interest Rate Payments will be netted and paid in arrears.

Details of the Reset Dates and Payment Dates that have been agreed between parties will be set out in your Confirmation.

Could the Notional Amounts vary during the term of the Swap?

When agreeing the details of the Swap on the Trade Date, you can decide to have a constant Notional Amount or to vary the Notional Amount during the life of the trade. At the outset, you will need to give details of the proposed Notional Amount schedule on each Payment Date.

Example

The examples below are indicative only. In order to assess the merits of any particular Swap, you would need to use the actual rates and figures quoted to you at the time.

ABC Ltd has a €1m 3 year floating loan which rolls on a 3 month EURIBOR basis. ABC Ltd would like to remove any uncertainty on future interest rate Payments and so, enters into a 3 year Swap with Bank of Ireland. A Fixed Interest Rate of 0.5% is agreed for this Swap, for a 3 year Term, based on a Notional Amount of €1m. On every 3 month rollover date, ABC Ltd pays 0.5% to Bank of Ireland and receives the 3 month EURIBOR rate set at the beginning of that period. In this way, the ABC's equivalent floating obligation on their loan is offset by the floating receipts from BOI on the Swap. This does not offset loan margin or other charges associated with the loan.

Rollover Period	3 Month Euribor	ABC pays Interest Rate Swap Rate of 0.5%	ABC receives 3 Month Euribor	Net rate on the Interest Rate Swap	Net Cost of funds (of Debt and Swap)*
1	-0.30%	0.50%	-0.30%	0.80%	0.50%
2	-0.30%	0.50%	-0.30%	0.80%	0.50%
3	-0.30%	0.50%	-0.30%	0.80%	0.50%
4	-0.20%	0.50%	-0.20%	0.70%	0.50%
5	-0.10%	0.50%	-0.10%	0.60%	0.50%
6	-0.10%	0.50%	-0.10%	0.60%	0.50%
7	0.00%	0.50%	0.00%	0.50%	0.50%
8	0.05%	0.50%	0.05%	0.45%	0.50%
9	0.10%	0.50%	0.10%	0.40%	0.50%
10	0.30%	0.50%	0.30%	0.20%	0.50%
11	0.60%	0.50%	0.60%	-0.10%	0.50%
12	0.70%	0.50%	0.70%	-0.20%	0.50%

The rates in this example are for illustrative purposes only.

*Based on variable loan without EURIBOR Floor

Generic Example of an Early Termination

If you wish to terminate early or partially terminate a transaction before its Maturity Date, we will consider such request as soon as reasonably practicable. Should we agree to such a request, the termination may result in a breakage cost payable by either you (to Bank of Ireland) or the Bank of Ireland (to you) (the "Breakage Cost"). This cost will be dependent on the time remaining on the transaction and the relevant market rate available to the Bank of Ireland on the day on which such Early Termination takes effect. The market rate available is not controlled by the Bank of Ireland and is impacted by external factors such as volatility, liquidity or lack of thereof and economic or political turbulence. All of these factors will impact the breakage cost. You are strongly advised to discuss potential Early Termination cost with us in advance of requesting an Early Termination of a transaction.

Example of Early Termination cost calculation for a Swap

If you are the fixed rate payer under a Swap (with a constant notional amount) the Early Termination cost would be determined by:

The Notional Amount of the Swap x the remaining Term of the Fixed Interest Rate period (expressed in years) x difference between the interest rate available to the Bank of Ireland for the remaining term of the Swap and your Fixed Interest Rate for that period. This calculation takes the expected future Net Interest Payments into account, as these payments were scheduled to happen at later dates, their value is adjusted to account for receiving their sum at the Early Termination date and to reflect their current or (net present) value.

E.g. ABC Ltd have entered into a Swap of €1m (with a constant notional amount i.e. €1m for the life of the transaction) with the Bank of Ireland for a Term of three years and agreed to pay a Fixed Interest Rate of 3.50% for the life of the Swap and in return to receive a Floating Interest Rate matched to a pre-agreed EURIBOR or LIBOR rate. If ABC Ltd wish to Early Terminate this Swap in full after two years and the Fixed Interest Rate available in the market to the Bank of Ireland is then 1.50%, ABC Ltd will be obliged to make a Payment to the Bank of Ireland in the amount of €20,000 which is calculated ($€1m \times 1year \times 2.00\% = €20k$). Conversely, if the Fixed Interest Rate at the time of breakage is 3.75%, the Bank of Ireland will have to make a Payment to ABC in the amount of €2,500 ($€1m \times 1 year \times 0.25\% = €2,5k$).

Should you wish to Transact an Interest Rate Swap

Please follow the steps below to enter into a Swap:

- ▶ talk to your Bank of Ireland Relationship Manager who will refer you to the relevant interest rate derivative contact in our Global Markets unit.
- ▶ ensure you have read and understood this document.
- ▶ you will be required to sign an ISDA Master Agreement.
- ▶ talk to your Bank of Ireland Global Markets contact about the particular parameters of the Swap you require.

In accordance with the rules and requirements set out by the European Union (Markets in Financial Instruments) Regulations 2017 and the Financial Conduct Authority the Bank of Ireland is required to categorise each client either as eligible counterparty, professional client or retail client. Bank of Ireland also has to assess the appropriateness of the product for each customer. Therefore, you may be required to supply supporting documents in order to establish the client category and appropriateness of the transaction. Before your first transaction, you should receive a categorisation letter and associated Terms of Business. If you do not receive these before the proposed transaction, please contact your Bank of Ireland Global Markets contact.

Your Bank of Ireland Global Markets contact will give you an indicative quote based on the details of your Swap. Once you have decided you would like to enter into a Swap, you will be required to provide the necessary documentation, such as:

- ▶ Mandate and other account opening requirements
- ▶ Credit approval will be required before entering into a Swap
- ▶ Confirmation of capacity as detailed in your Memorandum and Articles of Association (if applicable)
- ▶ Execution of an ISDA Master Agreement
- ▶ Any other relevant documents

All conversations such as telephone conversations and electronic communications will be recorded (even where they do not lead to the conclusion of an agreement). Transactions are also executed on recorded lines.

As the prevailing market rates are constantly changing, the rate quoted is only valid for immediate acceptance. This rate may differ from the indicative quote given previously.

Any person authorised in your mandate to trade the relevant product may engage and conclude transactions with Bank of Ireland.

Confirmations

Post transaction Bank of Ireland will send you a Confirmation outlining the relevant commercial terms of the transaction.

It is important you check the Confirmation to make sure that it matches your understanding of the Trade. If so, please sign and return the Confirmation as directed. In the case of a discrepancy, you will need to raise the matter with your Bank of Ireland Global Markets contact as a matter of urgency.

What are the Fees and Charges?

Typically there are no upfront fees. However, the Fixed Rate agreed will incorporate Bank of Ireland's risk, execution, administration costs and revenue margin.

A disclosure of expected Aggregated Costs and Charges and expected Total Consideration will be provided as an indication via a pre trade term sheet in advance of any transaction. This pre trade term sheet will use actually incurred costs as a proxy for the indication term sheet. We will also provide this information on a post trade term sheet confirming actual Aggregated Costs and Charges and actual Total Consideration following execution of any Derivative trade. An itemised break down of costs will be provided on request.

An Interest Rate Cap

Product Overview

An Interest Rate Cap ('Cap') is a tool for managing interest rate exposure. It typically provides a method of setting a maximum interest rate on the variable portion of your variable rate loan (where the variable rate is a published Reference Rate).

A Cap may protect against a rise in interest rates and maintain the ability to benefit from a fall in interest rates.

A Cap works in conjunction with a variable rate bank facility. It protects you against increases in interest rates by limiting the interest rate applicable to your underlying loan facility to a maximum rate. This maximum interest rate is known as the Strike Rate. In exchange for the protection of the Cap, you pay a Premium. This is paid as a one-off up front Premium.

Please note: the Cap only hedges the Floating Interest Rate and does not hedge the loan margin or other costs on the floating debt.

For the purpose of illustration this product overview is from the perspective of a borrower with an exposure to variable interest rates, (due to a variable rate loan) seeking to manage their interest rate risk.

Typically, borrowers may need to protect against rates rising by agreeing a maximum rate on an agreed amount over an agreed Term. In return for this protection an upfront Premium is paid by the customer.

Other mechanisms / products are available to manage interest rate risk including, but not exclusively, Fixed Rate Lending, Interest Rate Caps and Interest Rate Collars. (Please contact your Bank of Ireland Relationship Manager for further details).

Key Benefits

Certainty

Caps provide you with protection against upward interest rate movements above the Strike Rate, while allowing you to benefit from downward interest rate movements.

Flexibility

Caps are flexible interest management tools and can be tailored to suit your requirements. The Strike Rate can be positioned to reflect the level of protection you seek. However the amount of Premium payable is affected by the choice you make, typically the lower the Strike rate, the higher the Premium. By locking in an agreed Strike Rate, you can hedge a variable rate loan. This can allow for more accurate cash flow management and budgeting. The Term of the Cap does not have to match the term of the underlying loan facility.

A Cap can be customised to your particular needs by varying some or all of the following elements

- ▶ Notional Amount (this Notional Amount can remain constant over the Term or can vary)
- ▶ Currency of your Notional Amount
- ▶ Effective Date / Start Date
- ▶ Term / Maturity Date
- ▶ Interest Payment frequency (monthly, quarterly or semi-annually)
- ▶ Floating Reference Rate
- ▶ Interest Payment Dates
- ▶ Premium-upfront cost of the Cap
- ▶ Preferred Strike rate

Portability

It may be possible to novate (i.e. transfer) a Cap to another entity or another bank, subject to credit approval.

Early Termination

It may be possible to terminate the product during the life of the Cap, at prevailing market rates.

Key Risks

Interest Rate Risk

- ▶ Interest rate markets can be unpredictable and can move in either direction.
- ▶ If the reference rate remains at or below the Strike rate for the duration of the Cap, your Cap will expire unutilised. Your Premium will not be refunded.
- ▶ You will be exposed to interest rate movements if the term of the Cap is shorter than that of your underlying loan or less than the full amount of your floating rate loan.
- ▶ You should examine your loan facility to ascertain whether your loan reference rate includes a floor or not.

Early Termination / Changes to the terms of the Cap

- ▶ It is sometimes possible to terminate your Cap early or alter other pre-agreed terms during the life of the Cap. However, depending on prevailing interest rates at the time, there may be a cost to you or you may realise a gain. Given these risks it is important that you consider carefully the terms and duration of your Cap at the time of trading. Please refer to the Early Termination section for further information.

Counterparty Risk

- ▶ By entering to a Derivative contract with Bank of Ireland you have an exposure to Bank of Ireland in the event of insolvency or related events such as bail in.

How does an Interest Rate Cap Work?

When you buy a Cap, you agree the Strike Rate which is the maximum interest rate (excluding loan costs) that you are prepared to pay over the term of the Cap. The Strike Rate is agreed at the start of the transaction.

In return for the Cap, you pay Bank of Ireland an upfront Premium. This is a cash amount paid by you to Bank of Ireland at the start of the trade, and is non-refundable. We calculate the Premium at the time you purchase the Cap. We will advise you of the Premium for your Cap before you enter the transaction.

To calculate the Premium, we take several factors into account, including;

- ▶ Strike Rate
- ▶ Notional Amount
- ▶ Reference Rate
- ▶ Currency
- ▶ Term
- ▶ Reset Dates selected
- ▶ Current market interest rates
- ▶ Market Volatility

The following factors impact the Premium as follows:

- ▶ The lower the Strike Rate; the more expensive the Premium.
- ▶ The greater the Notional Amount; the more expensive the Premium.
- ▶ The longer the Term; the more expensive the Premium.
- ▶ The higher the Market Volatility; the more expensive the Premium.

The Premium must be paid in cleared funds within two business days of entering into the transaction.

The Cap is also based on an agreed Notional Amount. This is the predetermined principal on which the interest rate payments are based. The Notional Amount can vary over the Term depending on your underlying interest rate exposure and/or cash-flow requirements. If you choose to vary the Notional Amount on your Cap, your Payments will be calculated based on the Notional Amount applying for the relevant period.

An appropriate Reference Rate will also be agreed. The Reference Rate of the Cap should match that of your loan. For example if your variable rate loan has a quarterly rollover against 3 month EURIBOR it would be appropriate to choose 3 month EURIBOR as your Reference Rate. The Reference Rate to be used will be agreed at the beginning of the transaction.

In addition, the Reset Dates, the dates which the readings of your Reference Rate will be taken for the next period and payments made for the previous period, will also be agreed at the beginning of the transaction.

Typical Reference Rates available are:

- ▶ one month EURIBOR or LIBOR;
- ▶ three months EURIBOR or LIBOR;
- ▶ six months EURIBOR or LIBOR;
- ▶ Bank of England Official Base Rate

Note: the EURIBOR /LIBOR floating rate may not fully match the interest cost on your underlying loan i.e. excludes any other costs to your borrowing such as your lending costs.

EURIBOR and LIBOR are widely used as interest rate reference rates by investment banks, fund managers and retail banks.

Reference Rate	Description
EURIBOR	EURIBOR [Euro Interbank Offered Rate] is the benchmark rate of the large euro money market. A detailed explanation of EURIBOR and how it is calculated may be found at: http://www.EURIBOR-ebf.eu/EURIBOR-org/about-EURIBOR.html
LIBOR	LIBOR [London Interbank Offered Rate] is the rate of interest at which banks borrow funds, in marketable size, from other banks in the London interbank market. LIBOR, the most widely used benchmark or reference rate for short term interest rates, is an international rate. A detailed explanation of LIBOR and how it is calculated may be found at https://www.theice.com

It is important to understand that EURIBOR and LIBOR are NOT the European Central Bank or Bank of England's Base Rate. EURIBOR and LIBOR do not necessarily reflect nor follow movements in these rates but generally trend in a consistent manner.

How are Cap Payments calculated?

On each payment date, Bank of Ireland will compensate you if the prevailing Reference Rate exceeds the Strike Rate. This amount is used to offset the higher interest rate applying to your underlying loan facility. If the Reference Rate is less than the Strike Rate, then no payments will be made under the Cap, and the interest rate applicable to your variable rate bank facility will be the rate applying under your loan agreement.

To summarise your effective interest rate for the period will be the lower of the Reference Rate or the Strike Rate (excluding any fees and margins payable under your loan agreement).

The table below shows the interest flows where you have bought a Cap on a €1m Notional Amount with a Strike Rate of 1% over a 90 day period from Bank of Ireland under three different hypothetical EURIBOR,(a typical Reference Rate) scenarios.

Scenario	EURIBOR	Strike Rate	Net Interest Costs on Loan without a Cap*	Amount Received from the Cap	Net Int Cost on Loan with a Cap*
1	0.50%	1.00%	1,250	No Flows	1,250
2	1.00%	1.00%	2,500	No Flows	2,500
3	2.00%	1.00%	5,000	2,500	2,500

*excluding other lending costs

- ▶ In the first scenario the Reference Rate (0.5%) is less than the Strike Rate (1%). You will not receive a cash payment from Bank of Ireland under the Cap.
- ▶ In the second scenario, the Reference Rate (1%) is the same as the Strike Rate (1%). As a result, no payment is made under the Cap.
- ▶ In the final scenario, the Reference Rate (2%) is greater than the Strike Rate (1%), thus you receive a cash payment from Bank of Ireland to compensate you for this difference.

Note: the Cap only hedges the Floating Interest Rate and does not hedge the loan margin or other costs on the floating debt.

For explanation purposes only, a simple way to calculate the amount payable by Bank of Ireland is to look at the amount that you would pay at the Reference Rate and the amount payable at the Strike Rate. The difference between these amounts is the amount receivable, if greater than zero. Using the figures in the example above, i.e. a **Reference Rate of 2%** and a Strike Rate of 1% and a **Notional of €1m** this is calculated as follows;

$$\text{Amount Payable at Reference Rate: } \text{€1m} \times \frac{90}{360} \times 2\% = \text{€5,000}$$

$$\text{Amount Payable at Strike Rate: } \text{€1m} \times \frac{90}{360} \times 1\% = \text{€2,500}$$

As the Amount Payable at the Reference Rate is more than the Amount Payable at the Strike Rate, Bank of Ireland will make a payment of (€5,000 - €2,500) = €2,500.

When are Cap Payments made?

Payments are usually paid in arrears on each Payment Date covering the previous Reference Rate period.

You can choose the Payment Dates to match the cash flow on your underlying exposure or loan. Payment Dates can be monthly, quarterly, semi-annual or annual.

Typically:

- ▶ At the beginning of each interest period (on each Reset Date), the Reference Rate will be set.
- ▶ At the end of each interest period (on each Payment Date) the difference between the Reference Rate and the Strike Rate Payments will be calculated, and if greater than Zero, paid in arrears, at that time.

Details of the Reset Dates and Payment Dates that have been agreed will be set out in your Confirmation.

Example

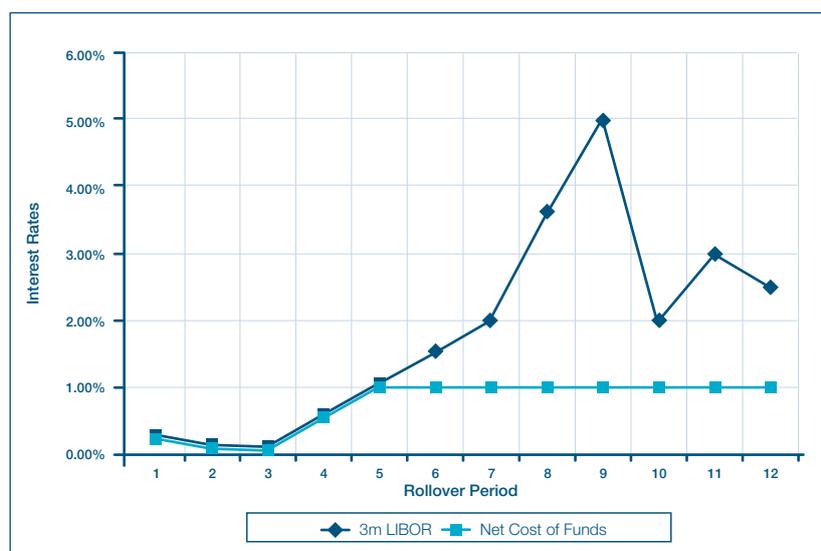
The example below is indicative only. In order to assess the merits of any particular Cap, you would need to use the actual rates and figures quoted to you at the time.

ABC Ltd has a £1m 3 year variable loan which rolls on a 3 month LIBOR basis. ABC Ltd would like to limit their borrowing cost to a maximum interest rate of 1%. They decide to purchase a Cap with a Strike Rate of 1%, for an upfront Premium cost of 0.9% of the Notional (£9,000). They decide to hedge the full amount of the £1m Notional for the full 3 year Term.

On every 3 month rollover date, Bank of Ireland will compensate ABC Ltd if Reference Rate rises above 1% for the Notional Amount specified. Regardless of how high LIBOR rises, the Company is protected for the Notional Amount specified against any rate moves above 1% for the life of the Cap. This excludes loan margin or other costs associated with the loan.

Rollover Period	3 Month LIBOR	Is 3 Month LIBOR above the Cap strike rate of 1%?	Cashflow on the Cap	Net Int Cost on Loan * (LIBOR paid on debt minus any receipts on the Cap)
1	0.20%	No	Zero	0.20%
2	0.10%	No	Zero	0.10%
3	0.05%	No	Zero	0.05%
4	0.50%	No	Zero	0.50%
5	1.00%	No	Zero	1.00%
6	1.50%	Yes	0.50%	1.00%
7	2.00%	Yes	1.00%	1.00%
8	3.50%	Yes	2.50%	1.00%
9	5.00%	Yes	4.00%	1.00%
10	2.00%	Yes	1.00%	1.00%
11	3.00%	Yes	2.00%	1.00%
12	2.50%	Yes	1.50%	1.00%

*Excluding other lending costs.



The rates in this example are for illustrative purposes only.

Early Termination

If you wish to terminate or partially terminate a Cap transaction before its Maturity Date, we will consider such a request as soon as reasonably practicable. Should we agree to such a request, the termination may result in a benefit payable by Bank of Ireland to you. Your Cap may have a residual value, depending on the time remaining on the transaction and the relevant market rates available to the bank on the day on which such Early Termination takes effect. The market rate available is not controlled by the Bank and is impacted by external factors such as volatility, liquidity or lack of thereof and economic or political turbulence. All of these factors will impact the breakage cost. Please discuss potential terminations with us at the earliest possibility.

As you will have bought a Cap from Bank of Ireland at the start of the trade, you will be the owner of an asset. If you wish to sell this back to Bank of Ireland, we will quote a value, if any, at which we are willing to purchase the asset from you.

Our quote will be based on the same variables used when pricing the original Cap. These will be adjusted for prevailing market rates over the remaining Term of the Cap. Bank of Ireland will also need to consider the cost of reversing or offsetting your original transaction. If you accept the Early Termination quote, the Cap will be terminated. Where you continue to have interest rate exposure, you should appreciate that you may be exposed to all future interest rate movements.

Should you wish to transact an Interest Rate Cap

Please follow the steps below to enter into an Interest Rate Cap:

- ▶ Talk to your Bank of Ireland Relationship Manager who will refer you to the relevant interest rate derivative contact in our Global Markets unit.
- ▶ Ensure you have read and understood this document.
- ▶ Although not specifically required, before you enter into your first Interest Rate Cap you or we may wish to enter into an ISDA Master Agreement.
- ▶ Talk to your Bank of Ireland Global Markets contact about the particular parameters of the Interest Rate Cap that you require.

In accordance with the rules and requirements set out by the European Union (Markets in Financial Instruments) Regulations 2017 and the Financial Conduct Authority the Bank of Ireland is required to categorise each client either as eligible counterparty, professional client or retail client. Bank of Ireland also has to undertake assess the appropriateness of the product for each customer. Therefore, you may be required to supply supporting documents in order to establish the client category and appropriateness of the transaction. Before your first transaction, you should receive a categorisation letter and associated Terms of Business. If you do not receive these before the proposed transaction, please contact your Bank of Ireland Global Markets contact.

Your Bank of Ireland Global Markets contact will give you an indicative quote based on the details of your Cap. Once you have decided you would like to enter into a Cap, you will be required to provide the necessary documentation, such as:

- ▶ Mandate and other account opening requirements
- ▶ Confirmation of capacity as detailed in your Memorandum and Articles of Association (if applicable)
- ▶ Any other relevant documents

All conversations such as telephone conversations and electronic communications will be recorded (even where they do not lead to the conclusion of an agreement). Transactions are also executed on recorded lines.

As the prevailing market rates are constantly changing, the Premium quoted is only valid for immediate acceptance. This Premium may differ from the indicative quote given previously.

Any person authorised in your mandate to trade the relevant product may engage and conclude transactions with Bank of Ireland.

Confirmations

Post transaction, Bank of Ireland will send you a Confirmation outlining the relevant commercial terms of the transaction. It is important you check the Confirmation to make sure that it matches your understanding of the trade. If so, please sign and return the Confirmation as directed. In the case of a discrepancy, you will need to raise the matter with your Bank of Ireland Global Markets contact as a matter of urgency.

What are the Fees and Charges?

Typically there are no upfront fees other than the Premium specified. However the Premium agreed will incorporate Bank of Ireland's risk, administration costs and revenue margin.

A disclosure of expected Aggregated Costs and Charges and expected Total Consideration will be provided as an indication via a pre trade term sheet in advance of any transaction. This pre trade term sheet will use actually incurred costs as a proxy for the indication term sheet. We will also provide this information on a post trade term sheet confirming actual Aggregated Costs and Charges and actual Total Consideration following execution of any Derivative trade. An itemised break down of costs will be provided on request.

Interest Rate Collar

Product Overview

A Collar can be used to manage interest rate exposure. It typically provides a method of setting a maximum interest rate and a minimum interest rate on the variable portion of your variable rate loan (where the variable rate is a published Reference Rate). A Collar may protect against a rise in interest rates beyond a certain level and maintain the ability to benefit from a fall in interest rates to a specified point.

A Collar works in conjunction with a variable rate bank facility. It protects you against increases in interest rates by limiting the interest rate applicable to your underlying loan facility to a maximum rate. This maximum interest rate is known as the Cap Strike Rate ('Cap Rate'). You will also be allowed to take advantage of falling interest rates down to a pre-determined level known as the Floor Rate. The Floor Strike Rate ('Floor Rate') is the lowest possible interest rate available to you once you establish a Collar.

Please note: the Cap and Floor rates only hedge the Floating Interest Rate and do not hedge the loan margin or other costs on the floating debt.

This product overview is from the perspective of a borrower with an exposure to variable interest rates (due to a variable rate loan) seeking to manage their variable interest rate risk

Other mechanisms / products are available to manage interest rate risk including, but not exclusively, Fixed Rate Lending, Interest Rate Caps and Interest Rate Collars. (Please contact your Bank of Ireland Relationship Manager for further details).

Key Benefits

Certainty

A Collar provides you with protection against upward interest rate movements above the Cap Rate while allowing you to participate in interest rate decreases down to the pre-agreed Floor Rate. By selecting a maximum and minimum rate, you can hedge a variable rate loan. This can allow for more accurate cash flow management and budgeting. The term of the Collar does not have to match the maturity term of the underlying loan facility

Flexibility

A Collar is a flexible interest rate management tool and can be tailored to suit your requirements. The Cap and Floor rates can be positioned to reflect the level of protection you seek. However the amount of Premium payable, if any, is affected by the choice you make. Typically a lower Cap rate is more expensive and a higher Floor rate can be used to offset some or all of this expense.

A Collar can be customised to your particular needs by varying some or all of the following elements:

- ▶ Notional Amount (this Notional Amount can remain constant over the Term or can vary)
- ▶ Currency of your Notional Amount
- ▶ Effective Date / Start Date
- ▶ Term / Maturity Date
- ▶ Interest Payment frequency (monthly, quarterly or semi-annually)
- ▶ Floating Reference Rate
- ▶ Interest Payment Dates
- ▶ Preferred Cap and Floor rates

Collars can be structured so that there is no up-front Premium payable (zero cost structure). As you can also set your own Cap and Floor Rates, a Premium may be payable in other circumstances.

Your Bank of Ireland Global Markets Relationship Manager will provide you with a Term Sheet tailored to your specific requirements.

Portability

It may be possible to novate (i.e. transfer) a Collar to another entity or another bank, subject to credit approval etc.

Early Termination

It may be possible to terminate the product during the life of the Collar, at prevailing market rates.

Cost

Generally, the Cap rate and the Floor rate can be set at particular levels in order to create a zero cost structure. If, however, you wish to select a different Cap or Floor rate, an upfront non-refundable Premium may be payable. We will determine the amount of the Premium and advise you of that before entering into the transaction.

A disclosure of expected Aggregated Costs and Charges and expected Total Consideration will be provided as an indication via a pre trade term sheet in advance of any transaction. This pre trade term sheet will use actually incurred costs as a proxy for the indication term sheet. We will also provide this information on a post trade term sheet confirming actual Aggregated Costs and Charges and actual Total Consideration following execution of any derivative trade.

A collar can be priced by its component parts and provided separately if requested e.g. a Cap and a Floor can be transacted separately and priced individually if required

Key Risks

Interest Rate Risk

- ▶ Interest rate markets can be unpredictable and can move in either direction.
- ▶ If the Reference Rate remains below the Cap Rate and above the Floor Rate for the duration of the Collar, your Collar will expire unutilised. If you have paid a Premium upfront, it will not be refunded.
- ▶ There is no potential to benefit from any interest rate movement below the Floor Rate.
- ▶ To provide a zero cost structure or a reasonable reduction in Premium payable under the Cap, the Floor Rate may need to be set at a high level. This will reduce the potential to take advantage of favourable interest rate movements.
- ▶ You will be exposed to interest rate movements if the term of the Collar is shorter than that of your underlying loan facility, or less than the full amount of your floating rate loan.
- ▶ There is a possibility that a Reference Rate may set as a negative number. In this situation, the difference between the negative Reference Rate and the Floor Rate is calculated, and this difference is payable by the borrower. You should examine your loan facility to ascertain whether your loan reference rate includes a floor or not.

Early Termination / Changes to the terms of the Collar

- ▶ It is sometimes possible to terminate your Collar early or alter other pre-agreed terms during the life of the Collar. However, depending on prevailing interest rates at the time, there may be a cost to you or you may realise a gain. Given these risks it is important that you consider carefully the terms and duration of your Collar at the time of trading. Please refer to the Early Termination section for further information.

Counterparty Risk

- ▶ By entering to a Derivative contract with Bank of Ireland you have an exposure to Bank of Ireland in the event of insolvency or related events such as bail in.

How does an Interest Rate Collar Work?

An Interest Rate Collar is created by purchasing a Cap and selling a Floor. When you buy a Collar, you agree the Strike Rate on the Cap (the maximum interest rate) and the Strike Rate on the Floor (the minimum interest rate) that you are prepared to pay over the term of the Collar. Both Strike Rates will exclude other loan costs and will be agreed at the start of the transaction. The Cap Rate and the Floor Rate can be set at a particular level in order to generate no upfront Premium payable to you. Alternative Cap and Floor Rates may require an upfront non-refundable Premium payable by you.

Your Collar is based on an agreed Notional Amount. The Notional Amount can vary over the Term depending on your underlying interest rate exposure and/or cash-flow requirements. If you choose to vary the Notional Amount on your Collar, any Payments will be calculated based on the Notional Amount applying for the relevant period.

An appropriate Reference Rate will also be agreed. The Reference Rate of the Collar is best suited to match that of your loan. For example if your variable rate loan has a quarterly rollover based on 3 month EURIBOR it would be appropriate to choose 3 month EURIBOR as your Reference Rate. The Reference Rate to be used will be agreed at the beginning of the transaction.

Typical Reference Rates available are:

- ▶ one month EURIBOR or LIBOR;
- ▶ three months EURIBOR or LIBOR;
- ▶ six months EURIBOR or LIBOR;
- ▶ Bank of England Official Base Rate

Note: the EURIBOR/LIBOR floating rate will not fully match the interest cost on your underlying loan; i.e. excludes any other costs to your borrowing such as your lending costs.

EURIBOR and LIBOR are widely used as interest rate reference rates by investment banks, fund managers and retail banks.

Reference Rate	Description
EURIBOR	EURIBOR [Euro Interbank Offered Rate] is the benchmark rate of the large euro money market. A detailed explanation of EURIBOR and how it is calculated may be found at: http://www.EURIBOR-ebf.eu/EURIBOR-org/about-EURIBOR.html
LIBOR	LIBOR [London Interbank Offered Rate] is the rate of interest at which banks borrow funds, in marketable size, from other banks in the London interbank market. LIBOR, the most widely used benchmark or reference rate for short term interest rates, is an international rate. A detailed explanation of LIBOR and how it is calculated may be found at https://www.theice.com

It is important to understand that EURIBOR and LIBOR are NOT the European Central Bank or Bank of England's Base Rate. EURIBOR and LIBOR do not necessarily reflect nor follow movements in these rates.

How are Collar Payments calculated?

On each payment date, Bank of Ireland will compensate you if the prevailing Reference Rate exceeds the Cap Rate. This amount is used to offset the higher interest rate applying to your underlying loan facility (excluding any fees and margins payable under your loan agreement).

If the Reference Rate is less than the Floor Rate, then you will make a payment to Bank of Ireland. If the Reference Rate is between the Cap and Floor Rates, then no Payments will be made.

- ▶ If the Reference Rate sets as a positive number, your effective interest rate for the period will be between the lower Floor Rate and the higher Cap Rate, (excluding any fees and margins payable under your loan agreement). If the Reference Rate sets as a negative number the difference between the negative Reference Rate and the Floor Rate is calculated and this difference is payable by the borrower.

The table below shows the interest flows where you have bought a Cap on a €1m Notional Amount with a Cap Rate of 1.75% and a Floor Rate of 0.75% over a 90 day period from Bank of Ireland under four different hypothetical EURIBOR scenarios.

Notional	EURIBOR	Cap Rate	Floor Rate	Net Interest Costs on a Loan without a Collar*	Payment Under the Collar	Net Interest Cost on a Loan with a Collar*
1,000,000	0.50%	1.75%	0.75%	1,250	-625	1,875
1,000,000	1.00%	1.75%	0.75%	2,500	0	2,500
1,000,000	-0.20%**	1.75%	0.75%	500	-2375	1875
1,000,000	2.00%	1.75%	0.75%	5,000	+625	4,375

*Excluding any other lending costs. **If your loan has a minimum reference rate you will not benefit from negative reference rates.

Looking at the above scenario we can analyse how the Payments under a Collar are calculated. We have assumed that there is no floor in the loan agreement for all four scenarios

In the **first** scenario you would pay the difference between the Floor and the Reference Rate. This is calculated as follows;

$$\text{Amount Payable by you: } \frac{\text{€1m} * 90}{360} * (0.75\% - 0.5\%) = \text{€625 to Bank of Ireland}$$

In the **second** scenario the Reference Rate is higher than the Floor Rate, and lower than the Cap Rate therefore no Payments are made by either party.

In the **third** scenario EURIBOR sets as a negative therefore you would pay the difference between the Floor and the Reference Rate. This is calculated as follows;

$$\text{Amount Payable by Bank of Ireland: } \frac{\text{€1m} * 90}{360} * (0.75\% + 2\%) = \text{€2375 to Bank of Ireland}$$

In the **fourth** scenario Bank of Ireland would pay you the difference between the Reference and the Cap rates. This is calculated as follows;

$$\text{Amount Payable by Bank of Ireland: } \frac{\text{€1m} * 90}{360} * (2\% - 1.75\%) = \text{€625 to you}$$

Note: the Collar only hedges the Floating Interest Rate and does not hedge the loan margin or other costs on the Floating Debt.

When are Collar Payments made?

Payments are usually paid in arrears on each Payment Date covering the previous reference period. You can choose the Payment Dates to match the cash flow on your underlying exposure or loan. Payment Dates can be monthly, quarterly, semi-annual or annual.

Typically;

- ▶ At the beginning of each interest rate period (on each Reset Date), the Reference Rate will be set.
- ▶ At the end of each interest rate period (on each Payment Date) the difference between the Reference Rate and the Strike Rates on the Cap and Floor will be calculated, and duly paid.

Details of the Reset Dates and Payment Dates that have been agreed will be set out in your Confirmation.

Example

The example and rates below are indicative only. In order to assess the merits of any particular Collar, you would need to use the actual rates and figures quoted to you at the time.

ABC Ltd has a €1m 3 year floating loan which rolls on a 3 month EURIBOR basis. ABC would like to limit their exposure to the Reference Rate moving above 1.75%, while benefiting from any potential fall in interest rates to a certain level. Additionally ABC would like to limit the amount that they spend to put this in place. ABC decides to purchase a Collar with a Cap Rate of 1.75% and a Floor Rate of 0.75%. This structure has a zero cost to ABC. They decide to hedge the full amount of the €1m Notional for the full 3 year term.

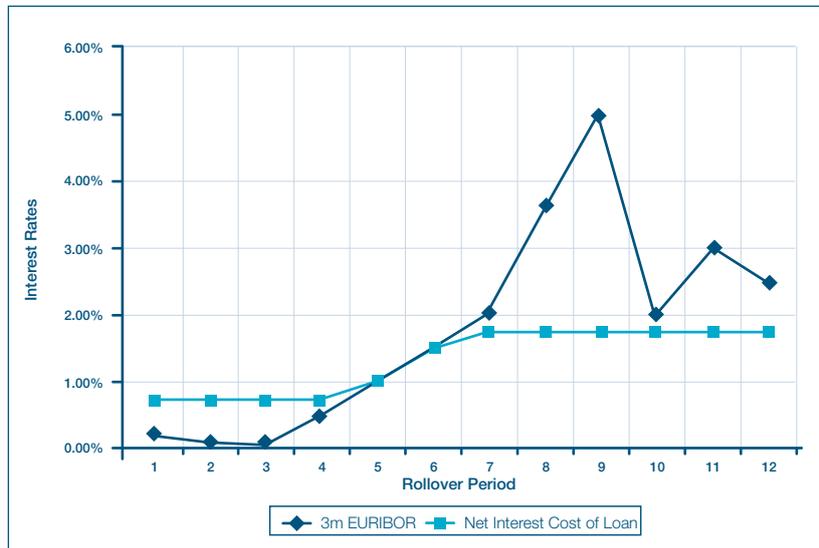
On every 3 month rollover date, the Reference Rate setting will be compared to the Cap and Floor Rates. Bank of Ireland will compensate ABC if the Reference Rate rises above 1.75% for the Notional specified. Regardless of how high EURIBOR rises, ABC is protected for the Notional specified against any Reference Rate moves above 1.75% for the life of the Collar.

If the Reference Rate sets below the Floor Rate of 0.75%, then ABC Ltd makes a Payment to Bank of Ireland to reflect this. ABC Ltd can benefit from the reduction in the Reference Rate from 1.75% to 0.75% but no lower. 0.75% is the lowest interest rate available to ABC Ltd regardless of how low the Reference Rate falls.

The below table and diagram illustrate one hypothetical path of interest rates over the 3 years of the product.

Rollover Period	3 Month EURIBOR	Is 3 Month EURIBOR above the Cap Rate or below the Floor Rate?	Cash flow on the Collar	Net Int Cost on Loan * (EURIBOR paid on debt including Payments on the Collar)
1	0.20%	Below the Floor	-0.55%	0.75%
2	0.10%	Below the Floor	-0.65%	0.75%
3	0.05%	Below the Floor	-0.70%	0.75%
4	0.50%	Below the Floor	-0.25%	0.75%
5	1.00%	Neither	No Flows	1.00%
6	1.50%	Neither	No Flows	1.50%
7	2.00%	Above the Cap	+0.25%	1.75%
8	3.50%	Above the Cap	+1.75%	1.75%
9	5.00%	Above the Cap	+3.25%	1.75%
10	2.00%	Above the Cap	+0.25%	1.75%
11	3.00%	Above the Cap	+1.25%	1.75%
12	2.50%	Above the Cap	+0.75%	1.75%

*Excluding other lending costs.



The rates in this example are for illustrative purposes only.

As an illustration of Early Termination, if ABC Ltd decided to unwind the collar specified in the example above one year into the trade, the value of the collar will have changed and it will no longer have a zero cost. Assuming a 0.1% upward move in interest rates then the collar could have a value of €1,800 payable to ABC to unwind at this date. A similar downward change in interest rates could lead to the collar having a cost to ABC Ltd of € 1,500 to unwind. These moves in interest rates and values are for illustrative purposes only.

Early Termination

If you wish to terminate or partially terminate a Collar Transaction before its Maturity Date, we will consider such a request as soon as reasonably practicable. Should we agree to such a request, the Early Termination may result in a cost or a benefit to you. Your Collar may have a residual value, depending on the time remaining on the transaction and the relevant market rates available to the Bank on the day on which such early termination takes effect. The market rate available is not controlled by the Bank and is impacted by external factors such as volatility, liquidity or lack of thereof and economic or political turbulence. All of these factors will impact the breakage cost. Please discuss potential terminations with us at the earliest possibility.

Our quote will be based on the same variables used when pricing the original Collar:

- ▶ Cap Strike Rate
- ▶ Floor Strike Rate
- ▶ Notional Amount
- ▶ Reference Rate
- ▶ Currency
- ▶ Term
- ▶ Reset Dates selected
- ▶ Current market interest rates
- ▶ Market Volatility

These will be adjusted for prevailing market rates over the remaining term of the Collar. Bank of Ireland will also need to consider the cost of reversing or offsetting your original transaction. If you accept the termination quote, the Collar will be terminated. Where you continue to have interest rate exposure, you should appreciate that you may be exposed to all future interest rate movements.

Should you wish to transact an Interest Rate Collar

Please follow the steps below to enter into an Interest Rate Collar:

- ▶ Talk to your Bank of Ireland Relationship Manager who will refer you to the relevant interest rate derivative contact in our Global Markets unit.
- ▶ Ensure you have read and understood this document;
- ▶ Before you enter into your first Interest Rate Collar you will be required to sign an ISDA Master Agreement.
- ▶ **You are strongly advised to talk to your Bank of Ireland Global Markets contact about the particular parameters of the Interest Rate Collar that you require.**

In accordance with the rules and requirements set out by the European Union (Markets in Financial Instruments) Regulations 2017 and the Financial Conduct Authority the Bank is required to categorise each client either as eligible counterparty, professional client or retail client. Bank of Ireland also has to undertake assess the appropriateness of the product for each customer. Therefore, you may be required to supply supporting documents in order to establish the client category and appropriateness of the transaction. Before your first transaction, you should receive a categorisation letter and associated Terms of Business. If you do not receive these before the proposed transaction, please contact your Bank of Ireland Global Markets contact.

Your Bank of Ireland Global Markets contact will give you an indicative quote based on the details of your Collar. Once you have decided you would like to enter into a Collar, you will be required to provide the necessary documentation, such as:

- ▶ Mandate and other account opening requirements
- ▶ Credit Approval
- ▶ Execution of an ISDA Master Agreement
- ▶ Confirmation of capacity as detailed in your Memorandum and Articles of Association (if applicable)
- ▶ Any other relevant documents

All conversations such as telephone conversations and electronic communications will be recorded (even where they do not lead to the conclusion of an agreement). Transactions are also executed on recorded lines.

As the prevailing market rates are constantly changing, the rates quoted are only valid for immediate acceptance. The Premium, if any, may differ from the indicative quote given previously.

Any person authorised in your mandate to trade the relevant product may engage and conclude transactions with Bank of Ireland.

Confirmations

Post transaction, Bank of Ireland will send you a Confirmation outlining the relevant commercial terms of the transaction. It is important you check the Confirmation to make sure that it matches your understanding of the transaction. If so, please sign and return the Confirmation as directed. In the case of a discrepancy, you will need to raise the matter with your Bank of Ireland Global Markets contact as a matter of urgency.

What are the Fees and Charges?

Typically there are no upfront fees other than the specified Premium, if any. However the Premium agreed will incorporate Bank of Ireland's risk, execution, administration costs and revenue margin.

Where the Collar is on a zero cost basis, Bank of Ireland recovers its execution and margin cost. In effect, you pay for the Collar by accepting the Cap Rate and Floor Rate quoted by us

A disclosure of expected Aggregated Costs and Charges and expected Total Consideration will be provided as an indication via a pre trade term sheet in advance of any transaction. This pre trade term sheet will use actually incurred costs as a proxy for the indication term sheet. We will also provide this information on a post trade term sheet confirming actual Aggregated Costs and Charges and actual Total Consideration following execution of any Derivative trade. An itemised break down of costs will be provided on request.

Glossary

Aggregated Costs and Charges is the total of all execution, administration ,credit margin.

Bank of England Official Base Rate is the interest rate that the Bank of England charges Banks for secured overnight lending.

Cap An Interest Cap is a derivative under which the buyer receives payments at the end of each period in which the interest rate exceeds the agreed Strike Price.

Cap Rate The agreed Strike Rate on a Cap.

Collar A Collar is the simultaneous purchase of a Cap and the sale of a Floor on the same Reference Rate for the same Maturity Date and Notional Amount.(Cap and Floor can also be transacted on a stand alone basis).

Commencement Date or Start Date means the date on which your Interest Rate Product commences. This will be referred to as the 'Effective Date' in your Confirmation.

Confirmation means the document issued to you by Bank of Ireland following the agreement of the Trade.

A Derivative is a financial contract which derives its value from the performance of an underlying asset or value such as an interest rate.

Early Termination refers to bringing a transaction either partially or wholly to an end before the agreed Maturity Date.

Effective Date is the Start Date of your product. This is not necessarily the same as the Trade Date.

EURIBOR EURIBOR [Euro Interbank Offered Rate] is the benchmark rate of the large euro money market. A detailed explanation of EURIBOR and how it is calculated may be found at: <http://www.EURIBOR-ebf.eu/EURIBOR-org/about-EURIBOR.html>

Fixed Interest Rate means the fixed interest rate applying to your Notional Amount during the Term of a Swap.

Fixed Rate Lending refers to a fixed rate loan where the interest rate does not fluctuate during the period of the loan.

Floating Interest Rate means the floating or variable interest rate applying to your Notional Amount during the Term of your Interest Rate Product, expressed as a percentage and based on the Reference Rate.

Floor An interest rate floor is a derivative contract under which the buyer receives payments at the end of each period in which the interest rate is below the agreed Strike Price.

Floor Rate The agreed Strike Rate on a Floor.

Interest Rate Exposure means that a move in variable interest rate will impact you or your business.

Interest Rate Product means a Cap, a Collar,a Floor or a Swap.

ISDA stands for International Swaps and Derivatives Association and is also a shorthand reference to the ISDA Master Agreement, 1992 version and 2002 version, which are standard master dealing agreements issued by the Association and used to document your Interest Rate Product(s) with Bank of Ireland.

LIBOR [London Interbank Offered Rate] is the rate of interest at which banks borrow funds, in marketable size, from other banks in the London interbank market. LIBOR, the most widely used benchmark or reference rate for short term interest rates, is an international rate. A detailed explanation of LIBOR and how it is calculated may be found at <https://www.theice.com>

Maturity Date means the date on which your Interest Rate Product expires. This will be referred to as the 'Termination Date' in your Confirmation.

Negative Interest Rates – means where Reference Rates set below Zero.

<p>Net Interest Payment means the net payment made on an Interest Rate Swap at each Payment Date in respect of the Notional Amount.</p>
<p>Notional Amount is the nominal amount that is used to calculate payments made on an Interest Rate Product. The Notional Amount can be a fixed amount for the full Term or vary over the Term. If the Notional Amount varies, the balance at the beginning of the period is used for calculation purposes.</p>
<p>An Option is a derivative which gives the buyer of the Option the right, but not the obligation, to buy or sell an underlying asset at a specified price on or before a specified date. Each contract will specify whether the buyer of the Option has the right to buy or to sell the underlying asset.</p>
<p>Payment is a movement of money either from Bank of Ireland to you, or from you to Bank of Ireland. The economics of the underlying deal and market conditions will decide the direction of the movement.</p>
<p>Payment Date refers to each date on which a payment will be made in respect of your Notional Amount on your Interest Rate Product. The specific Payment Dates applying to your Interest Rate Product will be specified in your Confirmation. If a Payment Date does not fall on a business day, the payment will be processed on the following business day.</p>
<p>Premium The premium is the upfront cost/price the customer pays to the Bank when they purchase a Cap or Collar.</p>
<p>Reference Rate The type of Floating Interest Rate you chose at the start of your transaction. Typical Reference rates are 1 month EURIBOR or LIBOR, 3 month EURIBOR or LIBOR, Bank of England base rate but other terms and currencies are available. The period/term of the Reference Rate will be the same as the interest payment frequency you have chosen and should match the roll over frequency of your loan with a view to hedging your interest rate exposure. For example, if your variable rate loan has a quarterly rollover against 3 month EURIBOR it will be appropriate to choose 3 month EURIBOR as your Reference Rate.</p>
<p>Reset Date refers to each date on which the Floating Interest Rate is set. The specific Reset Dates applying to your Interest Rate Product will be specified in your Confirmation. If a Reset Date does not fall on a business day, the Floating Rate will be set on the following business day.</p>
<p>Start Date means the date on which your Interest Rate Product commences. This will be referred to as the 'Effective Date' in your Confirmation.</p>
<p>Strike Rate The price at which an option can be exercised. This is the agreed maximum rate applicable in a Cap, or the agreed minimum rate applicable to a Floor.</p>
<p>Swap is a derivative under which two parties (counterparties) swap Floating Interest Rate payments, linked typically to a Reference Rate (eg EURIBOR/LIBOR), and Fixed Interest Rate payments over a specified Term for an agreed Notional Amount.</p>
<p>Term means the period between the Start Date and the Maturity Date.</p>
<p>A Term Sheet sets out the details of an Interest Rate Product. A draft of the Term Sheet will be compiled prior to trading specifying the details such as; Term, Notional Amount, Fixed rate if applicable, Premium if payable, Aggregated Costs and charges, Total Consideration Reference Rate and Start Date.</p>
<p>Total Consideration is the Final agreed rate or premium including aggregated costs and charges.</p>
<p>Trade - the purchase of an Interest Rate Product.</p>
<p>Trade Date is the date on which the trade details are agreed and binding on both parties.</p>
<p>Volatility The relative rate at which the underlying interest rates move up and down over the term of a product.</p>

GM Product Target Market Matrix

Product Mapping

MiFID CATEGORISATIONS	RETAIL			RETAIL			RETAIL / PROF		PROFESSIONAL		PROF / ECP	
	PERSONAL			SME			LARGE PRIVATE		LARGE CAP		FINANCIAL INSTITUTION	
Product	PE1	PE2	PE3	SME1	SME2	SME3	LPCO1	LPCO2	LRGC1	LRGC2	FC1	FC2
Interest Rate Swaps			✓		✓	✓	✓	✓	✓	✓	✓	✓
IR Caps		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IR Floors		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IR Options			✓		✓	✓	✓	✓	✓	✓	✓	✓
FX Forwards		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NDFs				✓	✓	✓	✓	✓	✓	✓	✓	✓
Cross CCY Swaps					✓	✓	✓	✓	✓	✓	✓	✓
FX Options			✓		✓	✓	✓	✓	✓	✓	✓	✓
Structured Deposits (100% capital protected)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Structured Products (<100% capital protected)			✓		✓	✓	✓	✓	✓	✓	✓	✓
Other non-standard options (e.g. equity options, hybrid options)			✓			✓	✓	✓	✓	✓	✓	✓

Criteria

FACTORS	The type of clients to whom the product is targeted:	Retail	Professional	ECP
	Channel	Non advised. Execution Only.	Non advised. Execution Only.	Non advised. Execution Only.
1	Knowledge and experience:	Basic knowledge and experience. Can be supported by education or external advice.	Advanced knowledge and experience or external advice.	Expert knowledge and experience with Derivative products.
2	Financial situation with a focus on the ability to bear losses:	No loss or minor loss of capital invested.	Partial loss or total loss of capital invested.	Expert knowledge and experience with Derivative products.
3	Risk tolerance and compatibility of the risk / reward profile of the product with the target market:	1 - 4 generally low to medium risk tolerance - however if they require Derivatives risk is 7.	7 - Very high risk tolerance - Ability to trade Derivatives to hedge risk.	7 - Very high risk tolerance - Ability to trade Derivatives to hedge risk.
4	Clients' Objectives and Needs:	Certainty of price / a pre agreed fixed rate or pre agreed premium.	Risk management / Price certainty / Balance sheet hedging.	Hedging risk and general Derivative trading.

Customer Segments

Segment Reference	Customer Type	Knowledge & Experience Options	MiFID Category	Ability to bear losses	Risk Tolerance	Description
PE1	Personal	Mass Retail.	Retail	No loss or minor loss of capital invested.	1 - Very low risk tolerance.	Individual in course of personal dealings.
PE2	Personal	Retail - Educated / Informed / Experienced.	Retail	No loss or minor loss of capital invested.	4 Low risk tolerance.	Individual in course of personal dealings.
PE3	Personal	Retail - Sophisticated Experienced or External Advisor.	Retail	Partial loss or total loss of capital invested.	Up to 7 - Very high risk tolerance.	Individual in course of personal dealings.
SME1	SME	Basic knowledge and experience.	Retail	No loss or minor loss of capital invested.	4 - Low risk tolerance Low return.	Small or Medium Enterprise private companies hedging risk.
SME2	SME	Advanced knowledge and experience / Informed / External advisors.	Retail	Partial loss or total loss of capital invested.	Up to 7 - Very high risk tolerance.	Small or Medium Enterprise private companies hedging risk.
SME3	SME	Comprehensive knowledge and experience.	Retail	Partial loss or total loss of capital invested.	Up to 7 - Very high risk tolerance.	Small or Medium Enterprise private companies hedging risk.
LPCO1	Large Private Company	Comprehensive knowledge and experience.	Retail or Professional	Partial loss or total loss of capital invested.	Up to 7 - Very high risk tolerance Highest return.	Large corporate hedging commercial risk.
LPCO2	Large Private Company	Expert knowledge and experience with Derivative products.	Retail or Professional	Loss exceeding capital invested.	Up to 7 - Very high risk tolerance Highest return.	Generally an internal Treasurer or Financial Officer.
LRGC1	Large Public Company	Comprehensive knowledge and experience.	Professional	Loss exceeding capital invested.	Up to 7 - Very high risk tolerance.	Above MiFID Professional thresholds hedging commercial risk.
LRGC2	Large Public Company	Expert knowledge and experience with Derivative products.	Professional	Loss exceeding capital invested.	Up to 7 - Very high risk tolerance Highest return.	Above MiFID Professional thresholds hedging commercial risk.
FC1	Financial Institution	Expert knowledge and experience with Derivative products.	ECP	Loss exceeding capital invested.	Up to 7 - Very high risk tolerance Highest return.	Regulated Institution who's main business is trading, investments, banking.
FC2	Financial Institution	Expert knowledge and experience with Derivative products.	Professional or ECP	Loss exceeding capital invested.	Up to 7 - Very high risk tolerance.	Financial Counterparty such as fund or fund manager, may be regulated.

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