

➔ 3. step up interest rate swap, step up IRS

MIFID complexity

IR 2

product description

A step up interest rate swap makes it possible for your company to swap its floating rate loans to step up fixed interest rate, or vice versa, without having to amend the underlying loan agreement. You can use this deal to hedge the interest rate risk of a cash flow starting on the present date or at a specific date in future. The latter is known as the forward start step up interest rate swap.

There are two possible types of step up interest rate swap, differentiated on the basis of the direction of swapping the interest payments:

- swapping of floating interest rate tied to a specific interest rate fixing (BUBOR, EURIBOR, etc.) for fixed step up interest rate (this is the so-called payer IRS).
- swapping of fixed step up interest rate for floating interest rate tied to a specific interest rate fixing (BUBOR, EURIBOR, etc.) (this is the so-called receiver IRS).

By entering into a step up interest rate swap transaction, the parties

agree that they swap floating rate for fixed step up interest rate or vice versa with respect to a specific loan notional and maturity. The settlement of interest payments is due at the end of each interest payment period. Fixing of the floating rate is two banking days before the starting date of each period.

A step up interest rate swap is equally suitable for hedging future interest revenues or interest payments, so it can be used for loans, deposits or even investments in government securities.

After concluding the deal you do not have the opportunity to realise savings on the interest rate if there should be an interest rate decrease on the market which is not priced in now (see EUR yield curve below) or if the interest rates would increase less than it is indicated in the current yield curve. The difference between the fixed market reference rate and the fixed interest rate to be paid by your company comes from the unique parameters of your loan, see the footnote.

example for swapping of floating interest rate for fixed step up interest rate: A company has a EUR 300 000 floating-rate loan with 3 years to maturity based on 3-month EURIBOR. The current 3-month EURIBOR is 0.50% and the 3-year fixed EUR interest rate is 0.85%. The company believes that in the medium term, interest rates will rise more than what is reflected in the term structure of fixed rates based on the current market expectations, and so decides to swap its floating-rate loan for a fixed step up rate one. It also might expect a stable yield curve, but it would like to fix its interest rate exposure for 3 years. The company swaps its 3-month EURIBOR floating rate to a fixed step up rate as follows:

- during the first one and a half year a fix interest rate of 0.4% is payable
- during the second one and a half year a fix interest rate of 0.8% is payable,

parameters of the step up interest rate swap

notional	EUR 300 000
tenor	3 years
variable notional	no
interest due to client	3-month EURIBOR
fixing day of floating interest rate	2 working days before the start of the interest rate period
interest payable by client	the first one and a half year: 0.4% the second one and a half year: 0.8%
frequency of interest payment	quarterly
interest rate calculation convention (fixed rate)	actual number of days/360
interest rate calculation convention (variable rate)	actual number of days/360
settlement of interest payments	net settlement at the end of each interest period
current 3-year ICAP EURO offer rate against 6-month EURIBOR (market reference rate)	0.85%
current 3-month EURIBOR	0.50%
transaction cost	zero
possible scenarios on the settlement day, depending on the 3-month EURIBOR rates on the fixing date of market reference rate	
3-month EURIBOR is below the fixed rate	your company pays 0.40% fixed rate during the first 1.5 years period, 0.8% fixed rate during the second 1.5 years period for the total notional amount
3-month EURIBOR is above the fixed rate	
Best case scenario (treasury transaction on a standalone basis)	On fixing day the 3 month EURIBOR is above the fixed rate. Your company receives the time proportional difference between the fixed rate and 3 month EURIBOR for the actual notional amount in each interest rate period.
Worst case scenario (treasury transaction on a standalone basis)	On fixing day the 3 month EURIBOR is below the fixed rate. Your company pays the time proportional difference between the fixed rate and 3 month EURIBOR for the actual notional amount with an unlimited interest rate loss potential in each interest rate period.

the market value of the position one year after the contract conclusion from the customer's point of view

market value: the cost of liquidating the position calculated at a given point of time and under the prevailing market terms and conditions (in case of a positive value the company can close the transaction with profit) (assumption: there is parallel shift in the entire yield curve in the extent of the change of the 3-month EURIBOR, and the shape of the yield curve remains unchanged)

The number of possible outcomes is unlimited, and there may be even more extreme values than the ones presented below.

3-month EURIBOR in one year (%)	market value of the position (EUR)
-1.00	-9 135
0.50	-1 200
2.00	6 735

financial outcome of some possible scenarios 1 year after the trade date, supposing that the 3-month EURIBOR evolves as below in the last quarter of the given year

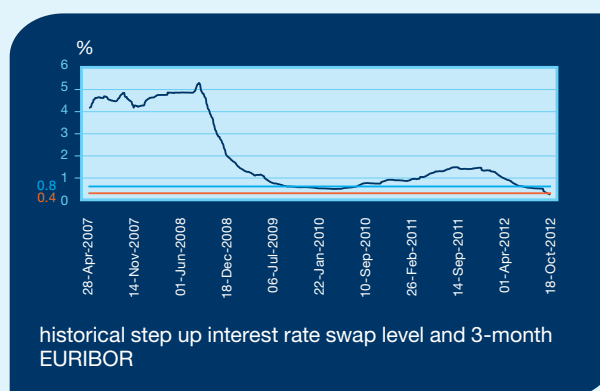
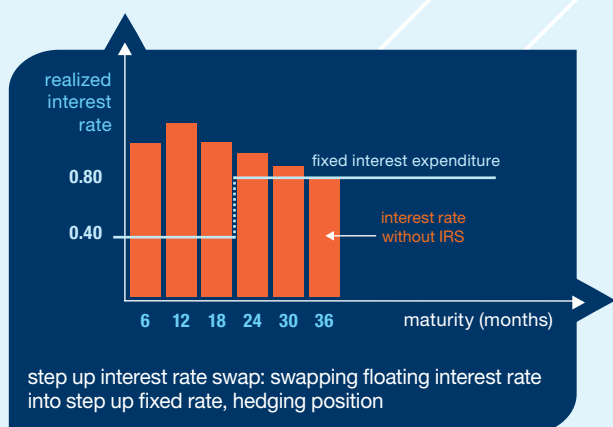
The number of possible financial outcomes is unlimited, and there may be even more extreme values than the ones presented below.

end of period (outstanding principal: EUR 300 000)	3-month EURIBOR at the start of the inte- rest period (%)	underlying exposure's financial outcome with no treasury transaction (3 months' interest expense without step up IRS, EUR)	profit / loss of the product on a standalone basis (net settlement at the end period, client pays if value is "+", EUR)	underlying exposure's financial outcome with the treasury transaction, hedged position (3 months' interest expense with step up IRS, EUR) fixed rate: 0.40%
1 year	-1.00	-750	1 050	300
1 year	0.00	0	300	300
1 year	0.50	375	-75	300
1 year	1.50	1 125	-825	300
1 year	2.50	1 875	-1 575	300

financial outcome of some possible scenarios 2 year after the trade date, supposing that the 3-month EURIBOR evolves as below in the last quarter of the given year

The number of possible financial outcomes is unlimited, and there may be even more extreme values than the ones presented below.

end of period (outstanding principal: EUR 300 000)	3-month EURIBOR at the start of the inte- rest period (%)	underlying exposure's financial outcome with no treasury transaction (3 months' interest expense without step up IRS, EUR)	profit / loss of the product on a standalone basis (net settlement at the end period, client pays if value is "+", EUR)	underlying exposure's financial outcome with the treasury transaction, hedged position (3 months' interest expense with step up IRS, EUR) fixed rate: 0.80%
2 év	-1.00	-750	1 350	600
2 év	0.00	0	600	600
2 év	0.50	375	225	600
2 év	1.50	1 125	-525	600
2 év	2.50	1 875	-1 275	600



The chart shows the interest level(s) of the treasury deal and the historical evolution of 3 month EURIBOR. The historical data is intended merely to compare the interest level(s) of the deal to the historical rates. Future evolution of interest rates and interest changes for the remaining tenor are unforeseeable in advance, actual profit and loss depends on the interest rate prevailing on the fixing days. The chart is not suitable to forecast interest rates and market value of the position.

advantages of transaction

- paying step up interest rate, obtained in the place of floating interest rate, gives you protection against actual interest rates in the future which are higher than those “predicted” by the market at the inception of the deal
- at the start of the tenor you do not have to pay the higher interest rates of an IRS deal
- reliable planning: you can quantify your future interest expenditure or income due to the step up interest rate
- the step up interest rate swap can be set to start now or some time in the future (with a forward start IRS)
- if the yield curve is downward sloping, you can immediately at inception benefit from the interest rates cuts expected by the market by fixing the interest rate
- if the yield curve is upward sloping, you can shield yourself from a rise in interest rates that is of a greater extent than what is expected by the market
- net settlement: only the difference between fixed and floating interest rate will be settled in cash between the parties
- you can conclude step up interest rate swaps for loans extended by, or deposits placed with, other financial institutions, as well, because this deal is separate (in legal terms) from the underlying loan or deposit transaction
- a step up interest rate swap can be concluded in most liquid currencies
- the date of expiry, as well as the periods of fixed or floating interest rate payment, can be set at your will, in accordance with your expectations, plans and budget; the change of one parameter will cause the rest of the parameters to change, too
- an IRS can be concluded to fit any repayment schedule
- your position can be closed at any time before the expiry date, resulting, of course, in a profit or a loss, depending on the current market situation at the time concerned

risks of transaction

- because of the fluctuation of market rates, the closing of a step up interest rate swap before expiry involves settlement obligations, which may result in a profit or a loss, depending on the current situation in the interest rate market at the time concerned
- at the end of the tenor the payable interest rates are higher than it would be in case of an IRS which might be even higher than it is indicated by the current yield curve

- if the underlying loan is repaid, it is advisable to close the step up interest rate swap, too, since there is no longer any risk resulting from your core business. If a fixed interest rate loan rate is repaid before maturity, you will realise a loss on closing the step up interest rate swap in the case that the fixed interest rates have decreased in the meantime.
- if a loan with floating interest rate is repaid before maturity, you will realise a loss on closing the interest rate swap in the case that the floating rate have increased in the meantime
- if fixed interest rate payment is swapped for floating interest rate payment, you will become vulnerable to adverse changes in the interest rate
- in principle, any extent of interest rate loss is possible in the event that the evolution of interest rates takes an unexpected sharp turn to a more favourable level during the tenor of the deal
- the market value of interest rate derivatives is determined by the evolution of market interest rates, the length of interest rate periods, the number of days remaining until the expiry of the transaction, the day-count method and the evolution of the notional until expiry. In the case of an interest rate option the evolution of market volatility also influences the market value. The drop in market liquidity could lead to a bid-offer spread widening, which could also affect the market value of the position negatively.
- the change in market value could lead to an obligation of temporary or permanent increase of collateral which may affect the company's liquidity and solvency negatively. In case of exceptional market circumstances (eg, money market and other crisis) the negative market value of the position from the Client's viewpoint could reach so extreme levels that providing the adequate collateral may lead to the company's insolvency. Moreover, failure to provide additional collateral in time might lead to the closure of open positions thus prompt realization of losses, which may affect the company's liquidity and solvency negatively.
- chapter I/b. entitled “Risk Factors” of “K&H Treasury Handbook of Market Risk Management” lists those risks that do not originate exclusively from the nature of the product described here, but rather, from other factors.

product structure

The product is built up of an interest rate swap. The sections on interest rate swaps of Chapter I/c. entitled “5 Basic Products” of “K&H Treasury Handbook of Market Risk Management”, also applies to this product.