

→ types of products

→ 1. interest rate swap, IRS

MIFID complexity

IR 2

product description

An interest rate swap makes it possible for your company to swap its floating rate loans to 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 interest rate swap. By entering into an interest rate swap transaction, the parties agree that they swap floating rate for fixed 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. There are two possible types of interest rate swaps, 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 interest rate (this is the so-called payer IRS), or
- swapping of fixed interest rate for floating interest rate tied to a specific interest rate fixing (BUBOR, EURIBOR, etc.) (this is the so-called receiver IRS).

An 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.

example: swapping of floating interest rate for fixed interest rate: a company has a floating rate loan of EUR 300 000 notional with a remaining tenor of 3 years. The current 3-month EURIBOR is 0.50% and the 3-year fixed EUR interest rate is 0.85%. In the middle term, this company expects interest rates to decrease by less than what is expected in the term structure of fixed rates (yield curve) based on the current market expectations, and so decides to swap its floating-rate loan for a fixed rate one. The company believes that in the medium term, interest rates will rise more than what is reflected in the term structure of fixed rates (i.e. the yield curve, see below) based on the current market expectations, and so decides to swap its floating-rate loan for a fixed 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 0.60% fixed rate based on the outstanding notional. After concluding the deal it is not possible to benefit from an interest rate decline which is not indicated by the yield curve (see on chart) or from a smaller rise in interest rates than it is indicated by the yield curve. The difference between the fixed reference market rate and your company's interest payments is caused by the unique parameters of your loan.

parameters of the interest rate swap	
notional	EUR 300 000
tenor	3 years
variable notional	no
interest due to client	3-month EURIBOR
fixing date of market reference rate	two banking days before the start date of the future interest period
interest payable by client	0.60% fixed rate
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 (day count: ANN 30/360 vs 6M EURIBOR)	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 0.60% rate	your company pays 0.60% fixed rate for the total notional amount in every interest period
3-month EURIBOR is above 0.60% rate	On the fixing date the 3 month EURIBOR is above 0.60%. Your company receives the time proportional difference between 0.60% and the 3-month EURIBOR for the actual notional amount in each interest rate period.
best base scenario (treasury transaction on a standalone basis)	On the fixing the 3 month EURIBOR is below 0.60%. Your company pays the time proportional difference between 0.60% and 3 month EURIBOR for the actual notional amount with an unlimited interest rate loss potential in each interest rate period.
worst case scenario (treasury transaction on a standalone basis)	

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)

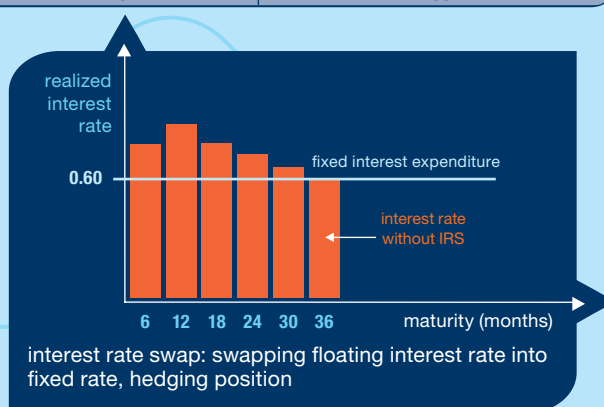
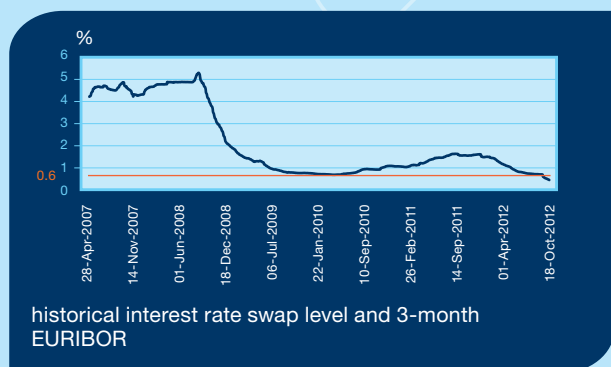
The number of possible outcomes is unlimited, and there may be even more extreme values than the ones presented below.

3-month EURIBOR in one year (%)	market value of the position (EUR)
-1.00	-13 051
0.50	-670
2.00	11 700

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 interest period (%)	underlying exposure's financial outcome with no treasury transaction (3 months' interest expense without 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 IRS, EUR)
1 year	-1.00	-750	1 200	450
1 year	0.00	0	450	450
1 year	0.50	375	75	450
1 year	1.50	1 125	-675	450
1 year	2.50	1 875	-1 425	450



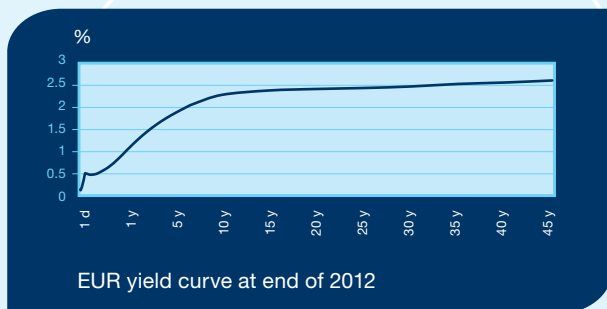
The chart shows the interest level(s) of the treasury deal and the historical evolution of 3 month EURIBOR. The historical data is intended merely to compare the interest level(s) of the deal to the historical rates. Future evolution of interest rates and interest changes for the remaining tenor are 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 fixed 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
- reliable planning: you can quantify your future interest expenditure or income due to the fixed interest rate
- the 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 (only when swapping to obtain a fixed 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 (only when swapping to obtain a fixed interest rate)
- net settlement: only the difference between fixed and floating interest rate will be settled in cash between the parties
- you can conclude 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
- an 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 an 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
- if the underlying loan is repaid, it is advisable to close the 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 interest rate swap in the case that the fixed interest rates have decreased in the meantime
- if a floating rate loan is repaid before maturity, you will realise a loss on closing the interest rate swap in the case that the fixed interest of an interest rate swap for the remaining tenor (with same parameters as the original interest rate swap except the tenor) is lower than the fixed rate of the original interest rate swap.
- if floating interest rate payment is swapped for fixed interest rate payment, it may happen that you will not benefit from an interest rate change of unexpectedly large extent, otherwise favourable for your business
- 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,



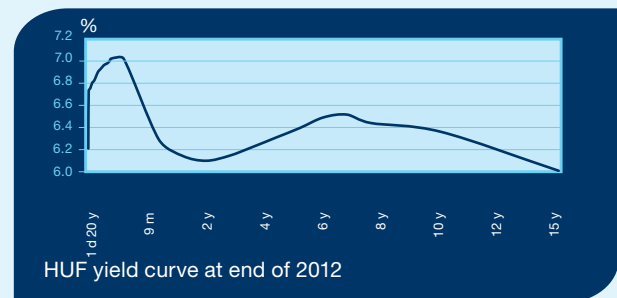
EUR yield curve: increasing, protection might be provided by IRS against the increase of interest rates by a larger extent than expected by the market

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.



HUF yield curve: declining, i.e. the market expects HUF interest rates to drop in the future. The 3-year fixed interest rate is lower than the current 6-month BUBOR, thus the client can benefit already now from an interest rate cut, which is expected in the future but not sure that it will actually materialize