5. seagull option

MIFID complexity

FX 2

product description

A seagull option provides more flexibility than a standard forward deal; moreover it offers a selling obligation rate better than the forward. With a seagull structure your company can gain limited profit from rates higher than the forward in case of a potential forint weakening. However, you have a limited protection from a potential forint strengthening at a rate lower than the forward.

In return for this limited protection your company can get a fixed amount of compensation.

The seagull structure offers a higher selling obligation rate than the range forward. But, unlike the range forward, the protection against potential forint strengthening is limited. The seagull structure is built up of three options, with the result that your company may acquire a right or an obligation in respect of three different exchange rate levels. Consequently, your company

- has to sell your foreign currency at a level above the forward rate (at the upper level of the seagull option), provided that the spot rate on expiry is higher than the upper level of the seagull option
- has a right to sell your foreign currency at a rate somewhat lower than the forward rate (or at the forward rate, in case of a narrower range), provided that the spot rate on expiry is between the lower and middle levels of the seagull option
- has to buy foreign currency at the lower level of the seagull option, which, combined with the right to sell at the middle level of the seagull option, results in limited protection against forint strengthening, but in return you receive a fixed amount of compensation from the bank.

Costs and revenues of the underlying exposure can compensate both the potential gains and losses of the deal, as long as the company assesses its underlying exposure and market situation properly. The deals are made in order to stabilize the results, not to realise standalone financial gain.

example: a Hungarian exporter expects to receive a year from now EUR 100 000 in revenues. Let us assume that the current spot rate is 290 EUR/HUF, the one-year forward rate is 302 EUR/HUF, and the range forward rates are 298-310. The company wants to gain from a possible weakening of the forint to a greater extent than the forward would allow, and it is willing to take the risk that it is not protected from a forint strengthening below a certain exchange rate level. In the latter case, it receives a fixed amount of compensation from the bank in return. The company would like to receive at least 295 forints for 1 euro, and since it does not expect the forint to appreciate beyond 265 EUR/HUF it enters into a seagull option with exchange rate levels of 265-295-320. The obligation to sell at 320 allows the company to benefit to a greater extent from a potential depreciation of the forint than in a forward deal of 302, and than in a range forward deal with a top level of 306. In the seagull option, there is protection against the appreciation of the forint beyond 295, but it is limited at 265 (below this the fixed compensation is paid), while in a range forward deal the protection below 298 is unlimited.

parameters of the seagull	
notional amount	EUR 100 000
currency pair	EUR/HUF
tenor	1 year
expiry date (date of exchange rate monitoring)	2 business days before end of tenor
exchange rate monitoring	EUR/HUF spot rate at 12:00 p.m.(CET) on the expiry date
settlement date	end of tenor
spot rate prevailing at pricing	290 EUR/HUF
forward rate prevailing at pricing	302 EUR/HUF
ATMF volatility	15%
lower level of seagull option (obligation to buy)	265 EUR/HUF
middle level of seagull option (right to sell)	295 EUR/HUF
upper level of seagull option (obligation to sell)	320 EUR/HUF
transaction cost on the trade date	zero
possible scenarios on expiry depending on the spot market rates at 12:00 p.m. on the expiry date	
exchange rate is above 320 EUR/HUF	Your company has an obligation to sell EUR 100 000 at a rate of 320 EUR/HUF (better than the forward rate effective on the trade date).
exchange rate is between 295 and 320 EUR/HUF	Neither the right, nor the obligation is exercised. Your company can sell euros at the spot rate prevailing on expiry.
exchange rate is between 265 and 295 EUR/HUF	your company can sell EUR 100 000 at a rate of 295 EUR/HUF
exchange rate is below 265 EUR/HUF	Your company has an obligation to buy at a rate of 265 EUR/HUF and a simultaneous right to sell at a rate of 295 EUR/HUF. Your company's protection does not extend any further, but in return it receives a fixed amount of compensation.
amount of compensation	(295 EUR/HUF – 265 EUR/HUF) = 30 HUF per EUR (HUF 3,000,000)
settlement of compensation	on the delivery date
best-case scenario (treasury transaction on a standalone basis)	The EUR/HUF spot rate is below 265 on the expiry date. In this case your company can sell euros at the spot rate prevailing on expiry (below 265), but it receives compensation in return.
worst-case scenario (treasury transaction on a standalone basis)	The EUR/HUF spot rate is above 320 on the expiry date. In this case your company has to sell EUR 100 000 at a rate of 320 EUR/HUF. The resulting foreign exchange loss can be unlimited.

the market value of the position two weeks after the trade date from the customer's point of view

market value: the cost of closing the position calculated at a given point of time and under the prevailing market terms and conditions (the deal can be closed with profit if the market value is positive)

(assumption: except for the spot market rate, all other factors are unchanged)

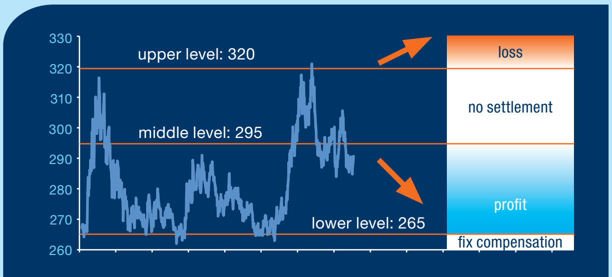
The number of possible outcomes is unlimited, and there may be even more extreme values than the ones presented below.

spot rate in two weeks (EUR/HUF)	market value of the position (HUF)
270	1 080 000
300	- 861 000
330	- 2 820 000

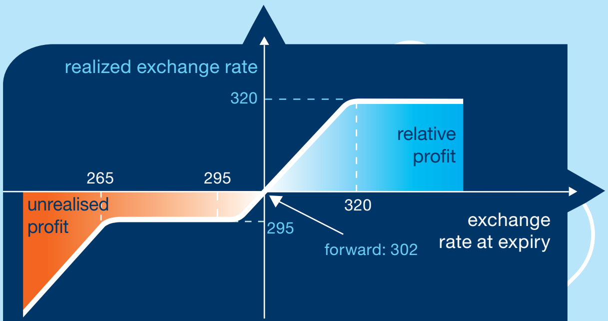
financial outcome of some possible scenarios on the expiry date

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

exchange rate on the expiry date (EUR/HUF)	underlying exposure's financial outcome with no treasury transaction (HUF)	profit / loss of the product on a standalone basis (HUF)	underlying exposure's financial outcome with the treasury transaction, hedged position (HUF)
260	260 * 100 000 = 26 000 000	(295 – 265) * 100 000 = 3 000 000	260 * 100 000 + (295 - 265) * 100 000 = 29 000 000
290	290 * 100 000 = 29 000 000	(295 – 290) * 100 000 = 500 000	295 * 100 000 = 29 500 000
300	300 * 100 000 = 30 000 000	0	300 * 100 000 = 30 000 000
330	330 * 100 000 = 33 000 000	(320 – 330) * 100 000 = - 1 000 000	320 * 100 000 = 32 000 000



possible outcomes of seagull at expiry compared to the exchange rate at expiry (exporter)



outcome of seagull at expiry as a hedging position compared to forward foreign exchange sale (exporter)

The chart illustrates the possible financial outcomes; profit or loss of the transaction may be balanced out by the financial outcome of the underlying exposure. The evolution of the historical exchange rate on the chart only intends to show a comparison between the level(s) of the transaction and the exchange rates prevailing in the past. Future evolution of the exchange rate and exchange rate fluctuations until maturity are unknown in advance, extent of profit or loss depends on the exchange rate level upon expiry. Number of possible outcomes is infinite and there may be even more extreme values than the ones presented below. The chart is not suitable to forecast the market value of the position during the tenor.

advantages of transaction

- limited benefit from exchange rate levels better than the forward rate
- limited protection against the appreciation of the forint
- you will receive compensation in case of significant forint strengthening, but there is no protection beyond a certain level
- no cost or separate fee charged
- the exchange rate levels specified in the seagull option can be tailored to your expectations, plans and budget. Changing a parameter entails change in the rest.
- if the hedge is no longer needed, the position can be closed with a counter deal at any time before the expiry date. This may result in profit or loss, depending on the prevailing market conditions.

risks of transaction

- your company enjoys protection only up to the lower level you consider as an unlikely outcome. If on expiry the exchange rate is below that level, this strategy will give you compensation for the difference between the middle and the lower levels only.
- if upon expiry the spot rate is above the upper level of the seagull option, your company will be obliged to sell foreign currency at the upper level of the seagull option with unlimited foreign exchange loss potential,
- if you decide to close your position before expiry by means of a counter deal, you may incur a loss
- The market value of options is determined by the evolution of the spot exchange rate, the interest rate levels of the two currencies for the given tenor, the difference between the interest rates for the given tenor, the number of days remaining until the expiry of the transaction, and the evolution of market volatility. 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 (e.g. money market and other crises) the negative market value of the position from the Client’s viewpoint could reach such extreme levels that providing sufficient collateral may cause the company to become insolvent. 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 seagull option is built up of three plain vanilla options. The section on plain vanilla options of Chapter I/c. entitled “5 Basic Products” of “K&H Treasury Handbook of Market Risk Management” also applies to this product.