5. seagull option

MIFID complexity
FX 2

product description

A seagull option provides more flexibility than a standard forward deal and moreover it offers a buying obligation rate better than the forward. With a seagull structure your company can gain limited profit from rates lower than the forward in case of a potential forint strengthening. However, you have a limited protection from a potential forint weakening at a level higher than the forward. In return for this limited protection your company can get a fixed amount of compensation.

The seagull structure offers a higher buying 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; therefore your importing company may acquire a right or an obligation in respect of three different exchange rate levels. Consequently, your company

- has to buy foreign currency at a level lower than the forward rate (the lower level of the seagull option), provided that the spot rate on expiry is below the lower level of the seagull option
- has a right to buy foreign currency at a level somewhat higher 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 middle and the upper levels of the seagull option
- has to sell foreign currency at the upper level of the seagull option, which, combined with the right to buy at the middle level of the seagull option, results in limited protection against forint weakening, 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 importer expects to incur, EUR 100 000 in expenses a year from now . Let us assume that the current spot exchange rate is 290 EUR/HUF, the one-year forward rate is 302 EUR/HUF, and the range forward rates are 295-320. The company wants to gain from a possible strengthening 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 weakening above a certain exchange rate level. In the latter case, it receives a fixed amount of compensation from the Bank in return. The company wants to buy euros at the maximum rate of 310 EUR/HUF, and because it does not expect the forint to depreciate beyond 330, it enters into a seagull option with exchange rate levels of 290-310-330. The obligation to buy at 290 allows the company to benefit to a greater extent from a potential appreciation of the forint than in a forward deal at 302 and with a range forward deal with 295. In the seagull option, there is protection against the depreciation of the forint above 310, but it is limited at 330 (above this the fixed compensation is paid), while in a range forward deal the protection above 320 is unlimited.

parameters of the seagull option	
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)	290 EUR/HUF
middle level of seagull option (right to buy)	310 EUR/HUF
upper level of seagull option (obligation to sell)	330 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 below 290 EUR/HUF	your company has an obligation to buy EUR 100 000 at a rate of 290 EUR/HUF (better than the forward rate effective on the trade date)
exchange rate is between 290 and 310 EUR/HUF	Neither a right, nor an obligation is exercised. Your company can buy euros at the spot rate prevailing on expiry.
exchange rate is between 310 and 330 EUR/HUF	your company can buy EUR 100 000 at a rate of 310 EUR/HUF
exchange rate is above 330 EUR/HUF	Your company has a right to buy at a rate of 310 EUR/HUF and a simultaneous obligation to sell at a rate of 330 EUR/HUF. Your company's protection does not extend any further, but in return it receives a fixed amount of compensation.
amount of compensation	(330 EUR/HUF – 310 EUR/HUF) = 20 HUF per EUR (2 000 000 HUF)
settlement of compensation	on the delivery date
best-case scenario (treasury transaction on a standalone basis)	The EUR/HUF spot rate is above 330 on the expiry date. In this case your company can buy euros at the spot rate prevailing on expiry (above 330), but it receives compensation in return.
worst-case scenario (treasury transaction on a standalone basis)	The EUR/HUF spot rate is below 290 on the expiry date. In this case your company has to buy EUR 100 000 at a rate of 290 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)

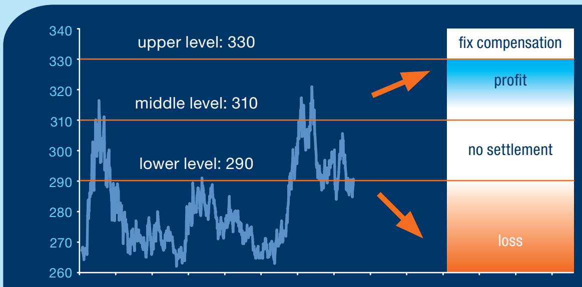
The number of possible outcomes is unlimited, and there may be even more extreme values than the ones presented below.

spot rate in two weeks (EUR/HUF)	market value of the position (HUF)
270	- 1 510 000
300	205 700
330	1 288 000

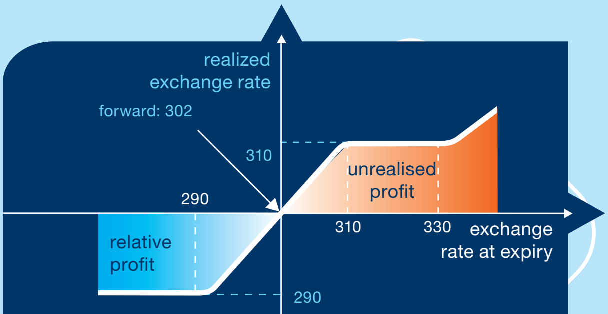
financial outcome of some possible scenarios on the expiry date

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)
270	270 * 100 000 = 27 000 000	(270 – 290) * 100 000 = -2 000 000	290 * 100 000 = 29 000 000
300	300 * 100 000 = 30 000 000	0	300 * 100 000 = 30 000 000
320	320 * 100 000 = 32 000 000	(320 – 310) * 100 000 = 1 000 000	310 * 100 000 = 31 000 000
340	340 * 100 000 = 34 000 000	(330 – 310) * 100 000 = 2 000 000	340 * 100 000 – 2 000 000 = 32 000 000



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



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

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 depreciation of the forint
- you will receive compensation in case of significant forint weakening, 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 upper level you consider as an unlikely outcome. If on expiry the exchange rate is above that level, this strategy will give you compensation for the difference between the upper and the middle levels only.
- if upon expiry the spot rate is below the lower level of the seagull option, your company will be obliged to buy foreign currency at the lower 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.