5. commodity collar

MIFID complexity
COMM 2

product description

A collar deal provides more flexibility than a standard forward or a swap deal. Using this product, you can fix the future buying or selling price of a commodity in a range around the forward. In contrast to a forward deal, the prices of the right and the obligation are different. Your company has a limited potential gain from the favourable market movements; in return, your company is protected against unfavourable market movements at a price unfavourable than the forward. 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.

<u>Consequently, your company – in the case of a commodity collar for buying</u>

- has a right to incur net settlement at a price less favourable, if the price upon the expiry is above the top of the range
- has an obligation to incur net settlement at a price more favourable than the forward price, provided that the price upon the expiry is below the bottom of the range

<u>Consequently, your company – in the case of a commodity collar for selling</u>

- has a right to incur net settlement at a price less favourable, if the price upon the expiry is below the bottom of the range
- has an obligation to incur net settlement at a price more favourable than the forward price, provided that the price upon the expiry is above the top of the range

The deal can be built up of both European and Asian type options. In the case of European type option, the deal is concluded for a given expiry, the net settlement occurs against the spot rate upon the expiry. However, in the case of Asian type option the deal is concluded for the given tenor, the net settlement occurs against the average of daily prices over the tenor.

example for buying milling wheat (in the case of Asian collar):

our Client may decide to buy a collar with a 1 month tenor and zero deal premium. The collar defines a range around the swap price where at the top of the range the company has a protection level, i.e. has a right to buy, and at the bottom of the range has an obligation to buy. Our Client is not willing to pay more than 220 EUR/mt, so it enters into a collar deal with protection level 220 EUR/mt. In order to be this deal free of charge, our Client has to have an obligation to buy at 180 EUR/mt. In this case, the company has 100% protection against unfavourable price movements (i.e. increase over 220 EUR/mt), but in the same time it can partly benefit from the favourable market price movements (to 180 EUR/mt). On the monthly settlements, we compare the average of daily variable prices to the range. There are 3 possible scenarios:

- if the variable price is above the top of the range, then the Bank pays the difference between the variable and the fixed price (top of the range) for the given monthly wheat quantity
- if the variable price is in the range, then there is no settlement
- if the variable price is below the bottom of the range, then the Client pays the difference between the variable and the fixed price (top of the range) for the given monthly wheat quantity

parameters of collar	
notional	50 mt/expiry (mt = metric ton, 1 metric ton = 1 000 kg) in total: 600 mt
futures	Euronext Liffe Milling Wheat
tenor	1 month
calculation periods (expiry date = last day of period)	1 month
settlement dates	every month, 2 business days after end of each calculation period
fixed price - top of the range	220 EUR/mt
fixed price - bottom of the range	180 EUR/mt
fixed price payable by	client
variable price	average of prices fixed during a calculation period, on the basis of reference prices published by EURONEXT
variable price payable by	bank
possible outcomes on a given expiry:	
the variable price (average of daily prices) is above 220 EUR/mt	the Client receives net payment: 50mt * (variable price-220EUR/mt)
the variable price (average of daily prices) is between 180 and 220 EUR/mt	no settlement
the variable price (average of daily prices) is below 180 EUR/mt	the Client completes net payment: 50mt * (180 – variable price)
settlement	net settlement in EUR
precondition for signing contract	K&H Treasury master agreement including a section relating to the hedging of commodities depending on the current K&H Treasury master agreement
option premium	zero
best-case scenario (treasury transaction on a standalone basis)	the variable price (average of daily prices) is above 220 EUR/mt. In this case the Client receives net settlement.
worst-case scenario (treasury transaction on a standalone basis)	the variable price (average of daily prices) is below 180 EUR/mt. In this case the Client pays net settlement. The loss can be unlimited.

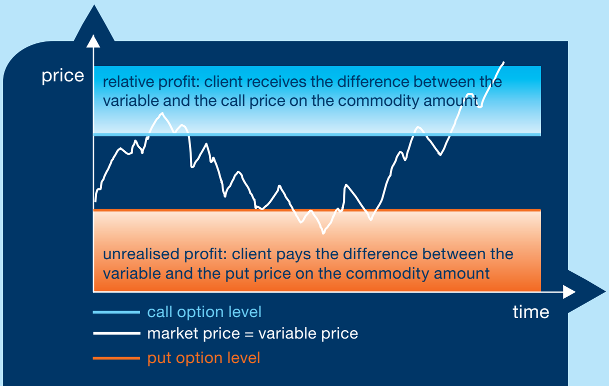
evolution of market value of the position and the associated risk

The cash flows of the deal depend on the evolution of wheat price. The market value of the deal changes during the tenor, the payment from a given settlement is only one component of the transaction's market value. The market value of the transaction is determined by the present value of future payments based on current market conditions. While client may benefit from a settlement payment for a given period, the market value of the transaction may be negative at the same time if the discounted value of client's aggregate future payment obligations exceeds the discounted value of the future receivables. As a result, client may have to pay a high compensation if he wants to terminate the transaction early during its lifetime. Moreover, there is a risk that client may have to enter a significant negative market value into his balance sheet during the lifetime of the transaction. The liquidity or lack of liquidity of the underlying stock market indices may significantly affect the positions value negatively. Market liquidity may have a significant effect on the market value of commodity deals.

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.

	option price (EUR)	average of variable prices (EUR)	notional (mt)	variable price - fixed price (EUR)	payment (EUR)	settlement
obligation level	180	160	50	-20	-1 000	client pays
obligation level	180	170	50	-10	-500	client pays
obligation level	180	180	50	0	-	no settlement
		190	50	-	-	no settlement
		200	50	-	-	no settlement
		210	50	-	-	no settlement
protection level	220	220	50	0	-	no settlement
protection level	220	230	50	10	500	client receives
protection level	220	240	50	20	1 000	client receives



commodity collar: protective range against rising commodity prices

advantages of transaction

- you can benefit partly from favourable commodity movements
- the maximum and minimum prices applicable to the future transaction for selling and buying commodities are fixed in advance (the worst case scenario is known), therefore the minimum and the maximum equivalent of the commodity price can be set in advance
- partial protection against the potential unfavourable evolution of commodity price
- no cost or separate fee charged
- the top and the bottom of the range for a given tenor and notional can be set at your will, in accordance with your expectations, your plans and your budget; the change of one parameter will cause the rest of the parameters to change, too
- if the hedge is no longer needed, the position can be closed with a counter deal. This may result in profit or loss, depending on the prevailing market conditions.

risks of transaction

- as a result of the range, the company may incur a loss if the price of the commodity changes favourably, because in this case the company could have reached better position without the Treasury deal. Namely if the variable price is below/above (depending of the deal's direction) the obligation level on a given settlement day, the Client pays to the bank the difference, i.e. the company can not gain from the more favourable price levels.
- the market value of collar is determined by the evolution of the underlying product (wheat) price, the volatility, the evolution of the actual settlements. The market value of the option deal is determined by the option price on the market. As a result, if you decide to close your position before expiry by means of a counter deal, you may incur a loss
- the collar deal changes with the termination of underlying exposure. The original hedge becomes an open position with unlimited potential of loss
- 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

This product is built up of one commodity call and one commodity put option. The section of Chapter I/c. entitled "5 Basic Products" of "K&H Treasury Handbook of Market Risk Management" also applies to this product.