3. buying a call option

MIFID complexity
COMM 2

product description

When you buy a call option, your company will acquire the right to buy commodity on a specific delivery date and at a specific strike rate, both set in advance, provided that on the expiry date the commodity market price is above the strike (the company will receive a net settlement). Similarly to a forward or a swap, this option will give you complete protection at the level of the strike rate against the increasing commodity prices.

If on the expiry date the commodity market price is lower than the strike price, your company will have neither a right nor an obligation and there will not be a net settlement on expiry. This means that, as opposed to a forward or swap agreement, buying a commodity call option gives your company the possibility to derive 100% benefit from a potential price decrease (below the strike rate). In return for this benefit, the option comes at a price paid by the buyer of the option in the form of a premium upon concluding the deal. In contrast to a forward or a swap deal if you buy an option your potential loss is limited to the amount of the option premium.

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.

You can buy European and Asian options as well. In case of a European option the deal is due at a specific date in time and net settlement will be against the market price prevailing at expiry. In case of an Asian option the deal is for a time period and net settlement is against the arithmetic mean of the market prices during the period.

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

our Client may decide to buy a call option. The company's profit threshold, i.e. the maximum cost what the company is able to handle, is 220 EUR/mt. In other words, if the price of wheat rises above this level in the coming years, it will put serious risk on the company's profitability. In order to avoid this risk, the company buys a call option at a price of 220 EUR/mt, the premium charged for it is 10 EUR per tons for the next 12 months, what the company is willing to pay when the deal is concluded in return for the 100% protection. If the price of wheat is above 220 EUR/mt on the monthly expiries, the Bank pays to the company the difference of the variable and the fixed price for the given monthly quantity of wheat. However, if the average of daily variable prices in a month is below 220 EUR/mt, there is no settlement between the company and the Bank. So the company can benefit from favourable market price movements.

parameters of buying a call option	
notional	50 mt / expiry (mt = metric ton, 1 metric ton = 1 000 kg) in total: 600 mt
futures	Euronext Liffe Milling Wheat
tenor	12 months, monthly expiries
calculation periods (expiry date = last day of period)	1-12 months
settlement dates	every month, 2 business days after end of each calculation period
type of the option	asian type call option
buyer of the option	client
fixed price	220 EUR/mt
fixed price payable by	client
variable price	average of prices fixed during the calculation period, on 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 below 220 EUR/mt	no settlement upon the given expiry
the variable price (average of daily prices) is at or above 220 EUR/mt	client receives net payment = 50 mt* (variable price-200 EUR/mt)
settlement	net settlement in EUR, no physical settlement
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 (payable by the client on the trade date)	10 EUR/mt, ie. 120 000 EUR
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 payment.
worst-case scenario (treasury transaction on a standalone basis)	the variable price (average of daily prices) is below 220 EUR/mt. In this case the Client's loss equals the amount of the option premium.

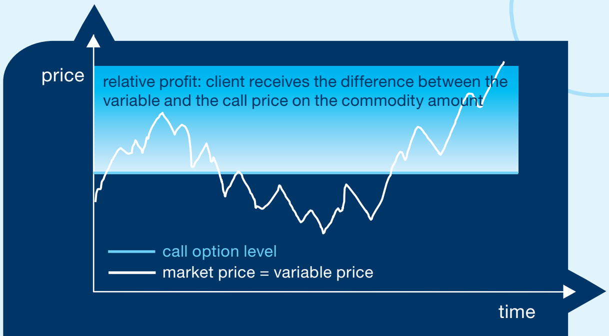
evolution of market value of the position and the associated risk

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. As a result, client may have to pay cost if he wants to terminate the transaction early during its lifetime if the premium received at closing is lower than the premium paid for the option. 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
protection level	220	250	50	30	1500	client receives
protection level	220	240	50	20	1000	client receives
protection level	220	230	50	10	500	client receives
protection level	220	220	50	0	0	no settlement
protection level	220	210	50	-10	0	no settlement
protection level	220	200	50	-20	0	no settlement
protection level	220	190	50	-30	0	no settlement



purchase of commodity call option: insurance against rising commodity prices

advantages of transaction

- full protection against the potential unfavourable evolution of commodity price
- you can fully benefit from favourable commodity price movements
- limited potential loss with the option premium as maximum
- cash flow can be calculated with certainty
- the option premium and strike 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

- the option premium must be paid on the trade date
- if the strike is the same as the swap price, the profit threshold of the option (taking into account the option premium) is less favourable than the swap price
- the market value of options is determined by the evolution of the underlying product (wheat) price, the volatility, the evolution of the actual settlements and the number of days remaining until the expiry of the transaction. The drop in market liquidity could lead to a bid-offer spread widening, which could also negatively affect the market value of the position. As a result, if the client wants to terminate the transaction early during its lifetime, the Bank might pay lower premium to the Client than the option premium paid by the client on the trade date.
- 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 option. The section of Chapter 1.c.entitled "5 Basic Products" of "K&H Treasury Handbook of Market Risk Management" also applies to this product.