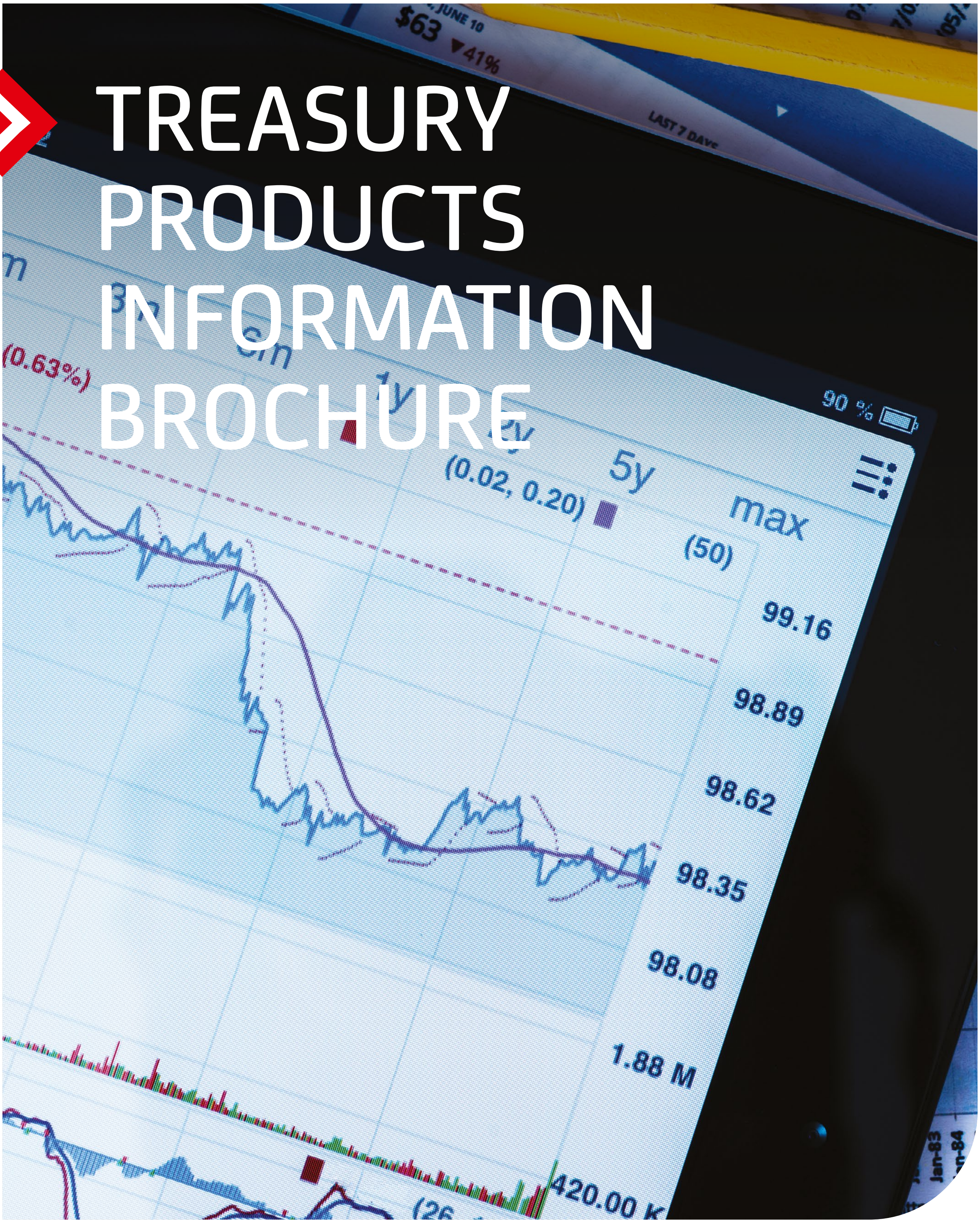
TREASURY PRODUCTS INFORMATION BROCHURE



FX and Interest Rate Hedging Products

UniCredit Bank

www.unicreditbank.hu

Dear Clients,

In a rapidly changing world, we believe it is important to offer our corporate clients a choice of optimal instruments for managing the financial risks of their business operations. This information brochure is intended to present to you the wide range of Treasury products available for hedging currency and interest rate risk, as well as their proper use, the sales process and the conditions for contracting.

The first part of this brochure provides an overview of the legislative background to treasury products, some of the key things to know about contracting, and the general risks associated with treasury products. The second part describes in detail the most important currency and interest rate hedging products, illustrated with examples for exporters and importers and highlighting both the advantages and potential risks.

Our Bank's experienced and highly qualified treasury sales team is at your disposal with an in-depth knowledge of the markets, allowing us to contribute to your success with hedging solutions adapted to the unique needs of your company. If you have any questions about our products or request advice for your business, our colleagues will be happy to help.

Budapest, September 2021

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1 THE APPLICATION OF MIFID REGULATIONS

On 1 December 2007, Act CXXXVIII of 2007 on Investment Firms and Commodity Dealers and on the Regulations Governing their Activities (hereinafter: "Investment Services Act" or "Act") came into effect, which adopted the European Union's Markets in Financial Instruments Directive (MIFID) under Hungarian legislation.

The changes in capital market that have been since implemented required new regulations applying to the entire European Union. These changes are effective as from 3 January 2018, and are equally applicable by our clients and our bank.

MiFID II (Directive 2014/65/EU of the European Parliament and of the Council) covers multilevel regulations applicable across the European Union, the introduction of which requires substantial changes to two domestic laws[1] and other industry legislation, and a number of European laws directly effective and applicable in Hungary.

Earlier regulatory elements and their amendments

As required by the regulations, investment service providers – including our bank – must classify their clients under client categories. The classification is based on the client's knowledge and experience relating to the investment products, as well as their operation and risks, and its objective is to ensure that the clients thus specified are granted protection corresponding to their expertise.

The law distinguishes the following three client categories:

- Retail clients
- Professional clients
- Eligible Counterparties

The following are considered as eligible counterparties or professional clients: institutional investors defined as such by law and businesses fulfilling certain size requirements. The 'professional client' classification may also be requested by a retail client who meets the criteria specified by law. A retail client is anyone else, who does not belong either to the eligible counterparty or the professional client category (hereinafter: MiFID retail client).

The client categories and reclassification rules are described in detail in UniCredit Bank's Client Classification Policy, and there has been no material change in this respect. The most stringent rules on client information apply to MiFID retail clients, who make up the vast majority of clients. Our bank informs all of its clients about the applied client category and their related rights at the time of contract conclusion and whenever a change occurs in the classification.

In the event that investment advice is provided, the bank must assess its client's:

- knowledge and experience relating to financial instruments,
- risk appetite,
- financial standing and
- investment goals.

Furthermore, prior to the execution of any individual orders specified in the law, the bank must obtain information on its clients' knowledge and experience relating to the essence, the characteristics and, in particular, the risks of the transaction contained in the contract or the order. Based on all these, our clients will be able to conclude transactions related to certain products.

Accordingly, in order to conclude a derivative transaction, a declaration must be made, using the "Investor Questionnaire":

- on the knowledge and experience relating to the products (appropriateness test), and
- on risk appetite, investment goals and financial standing (suitability test).

In order to protect our clients, providing them with adequate preliminary and subsequent information (including the so-called cost transparency) is of paramount importance. The Bank provides its clients with preliminary cost information through KIDs (Key Information Documents) and ICOs (Indicative Cost Information), while the subsequent cost information is provided by the bank annually, by sending summary statements to its clients. The annual information shows the costs of all of the client's derivative transactions.

Further novelties

- The bank must record all the relevant communication conducted with the client.
- Provision of information on the risks associated with financial instruments and on the investment advisory services provided during sales, in more detail than previously.
- Increased harmonisation of trading venues, and further regulations on the best practice in executing orders.

1.1 Derivative Policy

Besides applying MiFID, the Bank has also formulated its own internal rules on derivatives in its Derivative Policy (DP). The purpose of the DP is to ensure that the Bank sells derivative instruments to clients subject to the DP only if these instruments serve the purpose of hedging risks associated with the client's business. The Bank does not support derivatives contracting for clients subject to its DP if the intended purpose is not hedging (but speculation).

The Policy covers clients who are classified as retail or professional under MiFID. Clients in these categories need to complete both the Appropriateness and Suitability Test sections of the Investor Questionnaire. Under the DP, the Bank offers its derivative products only within its investment advice services and not as an execution only or non-advisory service.

Within the scope of the DP, the Bank assesses the client's activities and typical risks, and uses this information as well as the data from the Investor Questionnaire to decide which types of contracts it can recommend to the client for hedging purposes. The Bank will inform the client of which contract types it

[1] Act CXXXVIII of 2007 on Investment Firms and Commodity Dealers, and on the Regulations Governing their Activities and Act CXX of 2001 on the Capital Market.

has approved for them and also maintains internal records of the contract types approved for particular clients; the Bank will refuse to enter into contracts additional to these.

1.2 Conditions of Contract

For purposes of this brochure, the term ‘treasury products’ refers to currency and interest rate contracts.

Dealing with treasury products is subject to the following conditions:

- A Master Agreement duly signed by the Client, together with the annexes required for the relevant contract.
- The client code provided for orders placed on the phone pursuant to the Master Agreement.
- Annex of the Master Agreement for email confirmation: Due of the modernization the confirmations for the Client only be sent by email.
- An Investor Questionnaire completed correctly by the Client and in compliance with the provisions of the EMIR (European Market Infrastructure Regulation), the latter applying to all treasury products other than spot FX trading.
- A sufficient internal pre-settlement and settlement limit, or funds on the client’s account sufficient to enter into the contract. Pre-settlement and settlement limits: in-house limits, which the Bank does not incorporate in an agreement signed jointly with the client. The Bank’s internal limit tracking system monitors its credit risk exposure incurred from its total portfolio of open contracts with clients at any one time, and compares this with the limits defined. If the market prices relevant for the open portfolio shift in such a manner that the Bank’s exposure reaches the internal limits, the Bank may refuse to execute further transactions or request the client to supply additional collateral, and it may also close some or all of the open contracts.
- Valid LEI code.
- Current accounts opened in the currency or the currencies of the desired contract.
- In case of commodity hedging products, it may also be required to sign commodity product brochure or proxy hedge declaration document depending on the commodity underlying , the correlation of the physical exposure and the hedging product and the client’s rating.
- In connection with the conclusion of a derivative transaction, disclosure of the result of the Suitability Test, where the bank informs its clients about the derivative products that can be offered to them.

2 GENERAL RISKS

The first step for a business to take when selecting the optimal means for managing its risks is to assess its operating environment, and the existence and nature of its external and internal risks. In the following, we discuss the most important risk categories that can affect the profits, cash flow, liquidity and asset value of your business and the valuation of the financial instruments you choose for hedging.

2.1 Foreign exchange risk

Foreign exchange risk means the possibility of change in the exchange rate of one currency versus another: a particular domestic currency might buy less or more foreign currency, or an investment in a foreign currency can increase or decrease in value as expressed in the domestic currency.

Companies exporting products or services, and businesses with significant imports experience on a daily basis that exchange rates can have a considerable influence on the profitability, and even the market value, of their business. Exposure to exchange rates and hedging against such exposure is therefore a strategic issue requiring the special attention of management and owners alike.

2.2 Interest rate risk

Interest rate risk refers to the possibility of change in the interest paid by the company on its borrowing, or received from its investments, having either a negative or a positive impact on the company's financial results. Beyond the changes in current interest rates (for instance a loan interest rate tied to a variable base rising after the central bank raises rates), interest rate risk also entails the full-term repricing of particular instruments due to changes in the interest rate environment (examples include the early repayment of a loan with fixed interest rate or the revaluation of a financial instrument in the company's balance sheet).

2.3 Commodity market risk

Commodity market risk is the possibility of a consumer company experiencing changes in acquisition or production costs or a raw material producing company experiencing changes in its income arising from the sale of commodities due to changes in the price of the raw materials or commodities concerned. Consumer companies seek protection against increased costs deriving from eventual price rises, while producing companies wish to avoid any profit loss incurred due to price cuts.

The risks influencing the price of commodities may be of a political or regulatory nature, however, they may also include other factors such as weather conditions, the transportation and storage of physical goods, seasonal demand, changes in technology or tastes, as well as market supply and demand.

Commodities are traded in physical markets, on the commodity exchange and on OTC markets. Physical markets allow for the real exchange of commodities between actual buyers and sellers. The commodity exchange also allows for the physical exchange of goods, but numerous operators only trade on this concentrated market for hedging against the financial risks related to the commodities concerned, while on OTC markets only financial derivative transactions are made, which do not include the physical handling of goods.

2.4 Liquidity risk

A financial instrument is considered liquid if it can be converted to cash easily and within a relatively short time, at minimal loss and with low transaction costs. Liquidity risk has to do with the likelihood that a company becomes unable to meet its payment obligations without considerable loss. We can distinguish between financing and market liquidity risk.

- **Financing liquidity risk:** the risk that a business becomes unable to meet its expected and its unexpected obligations arising from current and future cash flows and collaterals, without this fact impacting on its day-to-day operations or position on the market.
- **Market liquidity risk:** the risk that the institution is unable to sell or buy instruments at acceptable prices on the market due to the inadequate operation or disturbances of the markets. Market liquidity risk represents the risk that a market position can be closed within a satisfactorily short time only at a price less favourable than the market price, so that achieving the desired market price requires maintaining the position, which in turn may tie up/require additional liquid assets, making it more difficult to manage financing liquidity risk.

2.5 Volatility risk

Volatility is a measure in financial mathematics, representing the degree of fluctuations in price over a given period of time. The greater the price volatility of a financial instrument the higher risk it represents as an investment/instrument; volatility is thus a suitable descriptor of the riskiness of a product. Volatility has a very significant impact on the value of options: the greater the implied volatility (estimated up to expiry), the higher the value of the option. Volatility over time is determined primarily by the changes on the market of the underlying product and the supply and demand on the option market. The implied volatility reflected in product price and the historic volatility measured on the market tend not to coincide: the former is an estimate of how the latter will change over time.

2.6 Credit risk

Credit risk means the risk of non-payment as a result of the debtor's future solvency or willingness to pay. Three sub-types can be distinguished:

- **Lending risk:** represents the uncertainty surrounding the recovery of the disbursed principal and the associated interest. It is the possibility that the Bank will receive cash flow from the instrument not at the time and not in the amounts stipulated in the contract.
- **Issuer risk:** a type of risk arising with securities investments. In the event of the insolvency of the issuer of the securities, the holder of the securities may not get back all or some of their invested capital and the related interest.
- **Counterparty risk:** the possibility that a party incurs a loss due to non-performance by the counterparty at the time of the settlement of a transaction in accordance with the contract or upon closing it early. This is the type of credit risk most frequently encountered by banks and clients alike. When selecting banking counterparties for hedging transactions, it is therefore important to remember that not only the Bank may run counterparty risk: clients may also find that changes in the prices of derivative instruments can expose them to potentially significant credit risks from a counterparty bank, in which

the size, capitalisation and embeddedness of the institution against which a company runs this risk are also important to consider.

2.7 Macro risk

Macro risks represent the systemic risks arising from domestic or international economic indicators such as GDP growth, inflation, unemployment, current account balance of payments or budget deficit, the negative trends of which bear an impact on the price or liquidity of financial products. It is a non-diversifiable risk that has an impact on all types of financial instruments and investments. In addition to many others, the following two risks are especially important to consider when buying financial instruments and services:

- **Inflation risk:** inflation has a direct impact on the real yields from an investment. The real yields and real value of investments and cash flows with nominally fixed yields depend mostly on the rates of inflation.
- **Country risk:** the likeliness of a country's economic actors becoming unable or unwilling to meet their payment obligations due to political and economic events, regulatory changes and administrative constraints, and, as a result, investors and domestic or overseas market players subject to the measures in question incur losses on their open transactions or other exposures.

3 CORPORATE RISK MANAGEMENT STRATEGY

A coherent **risk management strategy** approved and continuously upheld by the owners and the management is an essential part of prudent corporate financial planning. Without it, growth and profitability objectives would be meaningless, and there would be no fixed point of reference for adopting financing plans or hedging decisions. The key steps in developing a risk management strategy are as follows:

3.1 Identifying risks

Devising a risk management strategy starts by identifying the most important risks impacting the company's operations. These risks may be subdivided into risk factors that are operational or financial in nature.

Operational risks involve the technological changes in a particular industry and the shifts in the market positions and respective strengths of competitors, customers, and suppliers. Recognising and managing these risks is part of a company's core business strategy and is therefore not discussed in this information brochure.

Financial risks mean transaction and accounting (revaluation) exposures. These risks can typically be attributed to potential adverse changes in market factors (exchange rates, interest rates, commodity prices, volatility etc.). The best protection against market risks may be found among derivative products traded on liquid markets.

The following questions are important to consider when taking stock of financial risks:

- What risks relate to the company's core business that it is willing to accept and does not intend to hedge against?
- What are the risks that it can pass on to its customers or other partners?
- What are its genuinely material risks?

The risk profile compiled based on the answers to the above questions will highlight the areas and risk categories in which there is natural hedging or the risk may be passed on, as opposed to the net exposures in the company's operations that, in a negative scenario, may have a significant impact on the profitability of a project or the operations of the entire company.

3.2 Are we hedging or speculating?

"We don't deal with forwards, the owner does not like us to speculate..."

"If I don't hedge, I'll avoid trouble..."

"We don't do hedging contracts because we do not know which way the market is going.."

"I don't have the time to keep track of market prices..."

The above quotes are from company executives who believed treasury products were pure evil and considered their use as speculation.

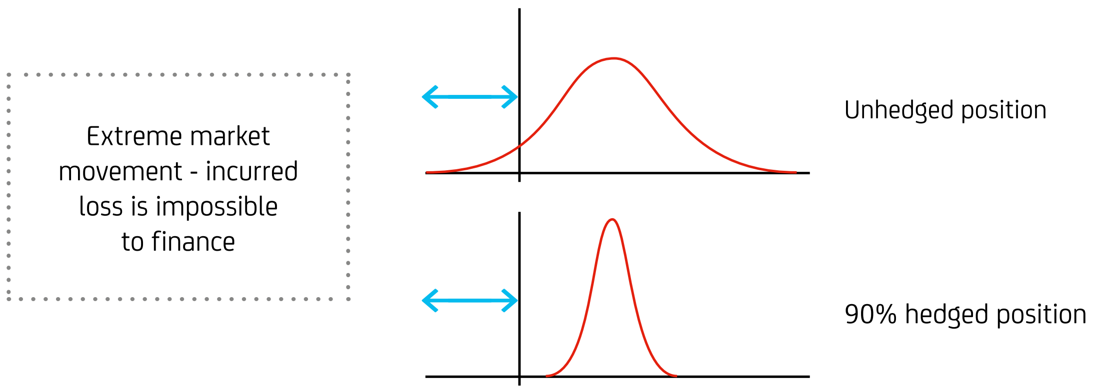
Whereas, in reality, it is accepting market risk and refusing to hedge against it is what constitutes speculation and leads to unprotected exposure to market changes.

Of course, there are multiple strategic approaches to hedging:

- **Static risk management:** the hedging of underlying risks precisely at their nominal values and terms completely eliminates market risk. In this case, the profit or loss from the hedging product will offset the loss or profit from the underlying transaction.
- **Dynamic risk management:** if corporate decision makers are well-informed and have clear ideas about market trends, they may decide to leave some of the underlying risks open and create the opportunity for earning profits from favourable changes in exchange and interest rates.
- **Speculation:** if the intended contracts are unrelated to, or even intensify, the exposures relating to the core operations, the strategy can be interpreted as speculative and aimed at making a profit, with possibly significant outcomes that could even jeopardise the company's operations.

In serving its clients, the Bank supports static as well as dynamic risk management; if well designed and executed, these will reduce risk.

The purpose of hedging is to reduce cash flow fluctuations at least to the extent that even negative deviations stay within the range of tolerance. This is in the fundamental interest of every company; after all, even if the directions and amounts of the deviations offset each other on the long term, major short-term deviations could lead to the destabilisation of the company's liquidity situation, and it is no consolation in such a scenario that the next deviation would have earned it extra profits, as the company may not survive until then (see diagram below).



3.3 What are the possible means of hedging?

As discussed later in this brochure, there are a number of financial instruments with diverse characteristics for use in executing a hedging strategy. Forward contracts tend to be the "benchmark" for hedging products: in exchange rates and commodity prices it is the forward, whereas with interest rate products it is the interest rate swap with a similarly symmetrical risk profile that may be considered the point of reference, serving as no-cost means for eliminating the risk at hand.

In a forward transaction or an interest rate swap, the contracted rate represents a right as well as an obligation for both parties. Other, more complex hedging products are always intended to surpass the forward transaction by adjusting to the client's unique situation, risk appetite and liquidity position better: they offer certain more favourable terms in return for assuming additional risk, paying a premium or accepting some other adverse feature. The basic variants may be the following:

- the client undertakes to pay a non-repayable premium for having only a right without an obligation (purchased option);
- the obligation and the right are separated: in return for a certain appreciation potential, the client accepts a lower degree of protection (e.g. cylinder option or interest rate collar);
- leveraging allows achieving a more favourable level than the forward exchange rate if the obligation is for a higher nominal value than the right. Since in a prudent hedging transaction the nominal value of the obligation must never exceed the underlying exposure, protection in the case of such leveraged transactions is for a part of the exposure only, with the rest remaining unhedged;
- a rate better than the forward may also be achieved in an arrangement in which the right is for a higher nominal value than the obligation; in such cases, however, we can benefit only to a certain extent from favourable changes in exchange rates (e.g. participating forward);
- incorporating a level of entry also allows achieving an exchange rate more favourable than the forward rate, but only within a limited exchange rate range. If the exchange rate leaves this range, then the hedging will be at a worse level than the forward rate (e.g. forward extra);
- incorporating a termination level allows achieving a level better than the forward exchange rate but the protection terminates completely if certain exchange rate levels are reached, leaving the underlying exposure unhedged; moreover, the hedging needs to be rebuilt from a rather unfavourable level (knock-out forward).

It is clear even from this brief overview that hedging products offer almost unlimited combination possibilities and the hedging exchange rate may also be improved with a variety of techniques, even though these tend to come at a cost. The aforementioned higher-risk hedging solutions beyond the basic forward products are recommended only to clients who fully understand the risks and the possible outcomes.

4 FOREIGN EXCHANGE TRANSACTIONS

4.1 Currency conversion

4.1.1 Conversion at the Bank's fixing rate

Each day, the Bank publishes its exchange rates between the HUF and foreign currencies, as used in settlements of commercial payments and transfers between accounts. Payments and transfers submitted by the Clients and requiring conversion are executed at the fixing buy or sell rate. The fixing rate reflects the interbank market exchange rates prevailing at the time of fixing. If submitting an order with currency conversion at the Bank's fixing rate, clients may opt for standard conversion (T+2 value date), urgent conversion (T+1 value date) or an extra urgent conversion (T value date). The Bank calculates the conversion commission depending on the value date requested and using the list of conditions for the relevant client segment (corporate, retail).

4.1.2 Conversion via the Bank's Treasury Department

4.1.2.1. Conversion at custom exchange rates

The Bank offers its clients the opportunity to contact its Treasury department during regular business hours on banking days and request a special exchange rate, if the amount they wish to convert is above the minimum required by the Bank and the other conditions stipulated for the transaction in their Treasury Master Agreement with the Bank apply. In such cases, the Bank quotes the exchange rate on the basis of the prevailing market conditions and with reference to the specific client request and transaction parameters. Conversion at a custom rate provides greater flexibility than conversion at the fixing rate: the client may accept the quoted rate, in which case the transaction will be contracted, or choose to reject it, in which case the conversion will not take place at the quoted rate.

By default, the market exchange rate applies to the spot value date. The spot date is the second banking day after the trade date (T+2 days). In practice, clients may wish to contract conversions for terms shorter than the spot date (T+2) , i.e. day T or T+1. In such cases, the Bank adjusts the exchange rate quoted for the spot date with swap points, which reflect the interest rate differential between the two currencies.

4.1.2.2 Limit order for conversion ("firm order")

Clients may give the Bank an order to buy or sell foreign currency at a certain limit rate and in certain quantities. When it receives the order, the Bank records each parameter of the requested transaction precisely (currency pair, buy/sell, value date, take-profit[1] / stop-loss[2] , the selected exchange rate limit, the expiry of the order). The order will be executed if the exchange rate quoted by the Bank for the individual client reaches the limit specified by the Client.

Limit orders may be given for maximum 7 calendar days. The Bank executes orders even overnight, by forwarding, to the own account, the orders valid at the end of a given business day towards its interbank counterparties. With stop-loss orders, the Bank is unable to guarantee that the order will be executed at the limit rate if sudden large exchange rate movements occur. Clients may cancel or modify any orders not yet executed by the Bank if they do so during working hours on workdays.

An example of limit orders:

A Hungarian exporter company earns EUR 200,000 in revenues and receives this amount to its EUR current account. The company needs to have liquidity in HUF within one week and wishes to finance this from its available EUR balance. The spot exchange rate is 322.00 EUR/HUF currently, but the company expects the HUF to weaken in the next few days and would like to achieve a conversion rate of 325.00. The company therefore gives the Bank a limit order for converting EUR 200,000 to HUF at the exchange rate of 325.00 if the EUR buy rate quoted by the Bank reaches 325.00 within 1 week.

If the EUR buy rate quoted by the Bank for this client reaches 325.00, the Bank will convert EUR 200,000 to HUF at the exchange rate of 325.00. If the exchange rate quoted by the Bank does not reach this level, the order will expire without being executed. The Bank notifies the Client by phone of the expiry of the order and the outcome of execution.

4.2 Managing foreign exchange currency risk

4.2.1 Forward Outright

Product description:

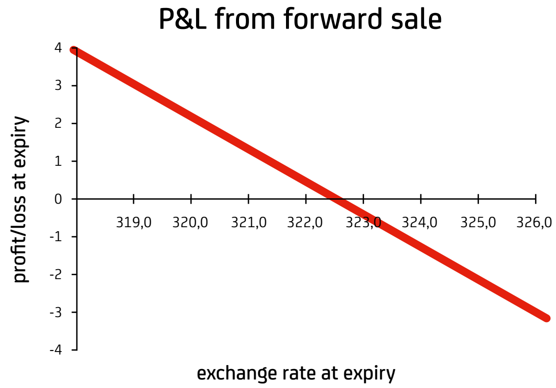
Forwards represent the simplest way for hedging currency risk, allowing you to fix the exchange rate of a future currency conversion at the time the transaction is concluded. The contract amount, the exchange rate and the expiry are fixed when the transaction is entered into, but the conversion will actually take place only on the expiry date. The Bank specifies the forward exchange rate in the contract as the sum, expressed in swap points, of the spot rate at the time of the trade and the interest rate differential between the two currencies. At the time of the trade, both you and the Bank undertake a commitment to execute the transaction with the agreed terms on the expiry date, and therefore the spot rate at expiry will not impact settlement.

1 Take-profit: an order that, if executed, will result in the Client's open foreign exchange position closing with a profit.

2 Stop-loss: an order to minimise losses, in which the client wishes to sell if a limit rate below the market rate prevailing at the time of giving the order is reached or wishes to buy if a limit rate above the current market rate is reached.

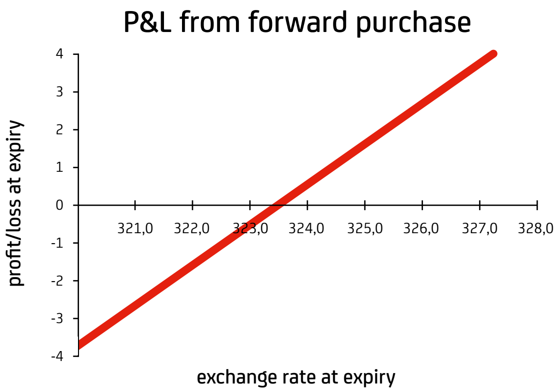
An example of forward outrights - exporter company:

A Hungarian exporter expects to collect EUR 100,000 in revenue in three months' time. In order to hedge its currency risk, the company contracts a 3-month forward outright with the Bank for the sale of EUR 100,000. The forward exchange rate comprises the current spot rate and the interest rate differential for the term. The Bank's current spot buy rate is 322.20 EUR/HUF and the interest rate differential is HUF 0.40, making the forward exchange rate 322.60 EUR/HUF. Accordingly, the company sells the Bank EUR 100 000 at an exchange rate of 322.60 for a value date 3 months from now. Three months later the Bank executes the conversion at the HUF 322.60 exchange rate, regardless of the market rate at the time, i.e. it debits EUR 100,000 to the company's account and credits to it HUF 32,260,000.



An example of forward outrights - importer company:

A Hungarian importer company expects to have to pay EUR 100,000 to a foreign partner in 3 months' time. In order to hedge its currency risk, the company concludes a foreign currency purchase contract with a 3-month term with the Bank for EUR 100,000. The forward exchange rate comprises the current spot rate and the interest rate differential for the term. The current spot sell rate is 322.80 EUR/HUF and the interest rate differential is HUF 0.60, making the forward exchange rate 323.40 EUR/HUF. Accordingly, the company buys from the Bank EUR 100,000 at an exchange rate of 323.40 for a term of 3 months. Three months later the Bank executes the conversion at the HUF 323.40 exchange rate, regardless of the market rate at the time, i.e. it credits EUR 100,000 to the company's account and debits to it HUF 32,340,000.



When do we recommend it?

- if you wish to reduce or eliminate your currency exposure;
- if your company has a planned target exchange rate and the forward exchange rates are close to this target.

Advantages of forward outrights:

- the forward exchange rate of the conversion is known in advance and is not influenced by the changes in exchange rates on the market, so that the company is able to fully eliminate its currency risk;
- the transaction is free of cost;
- entering into the transaction may be scheduled depending on the changes in the spot exchange rate on the market and its distance from the planned exchange rate;
- it is relatively easy to modify the expiry date with an FX swap in the event of changes to the planned cash flow.

Risks of forward outrights:

- conversion at the exchange rate fixed in the forward contract is mandatory even if conversion at expiry would be more favourable at the exchange rate prevailing on the market at the time;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential exchange loss from the transaction is unlimited (In theory, the potential gain or loss cannot be unlimited, since an exchange rate may never be less than zero. As a result, the maximum gain available through a forward sale or the maximum loss from a forward buy equals the amount of the strike price. In practice, however, this already presupposes such a huge change in exchange rates that in the following we will treat the maximum gain/loss from forward and option contracts as limitless).

4.2.2 Flexi Forward Transaction

A Flexi Forward is a foreign exchange forward contract that allows the Client to fix the bid or ask rate of a currency pair for a specific day within a predefined time interval for a fixed amount. The length of the time period depends on the agreement of the parties at the time the transaction is entered into, typically 1 month. The financial settlement within the period will take place automatically on the last day of the period at this predetermined exchange rate (depending on the agreement of the parties at the time of the transaction, but typically with same-day settlement), following the request/request of the Client and/or the last day of the period. Transactions can be concluded in all major currencies (HUF, EUR, USD, GBP, CHF and JPY). The minimum limit for both transactions and drawdown amounts is EUR 50.000,- or equivalent.

When do we recommend it?

- if you wish to reduce or eliminate your currency exposure;
- solution when settlement dates with customers and suppliers are not yet certain.

4.2.3 FX swap

Product description:

In an FX swap, the parties agree on the conversion of a given amount of currency at an agreed exchange rate and, at the same time, on the re-conversion of the same amount of foreign currency on a later date, at an exchange rate adjusted with the prorated interest rate differential between the two currencies. An FX swap allows you to optimise your liquidity position in different currencies in a cost and limit effective manner: you can use your current positive account balance in a particular currency temporarily for satisfying your need for liquidity in another currency, without exposing yourself to substantial currency risk. It follows from the above that the most frequent application of FX swaps is the rollover of existing and due forward deals to an earlier or later date as well as the adjustment of due expiries to the actual cash flow situation of the company.

A forward contract expiring at a later date can be rolled back to an earlier date using the original forward exchange rate as the starting point, so that the cash flows on the original expiry date offset each other exactly.

An example of FX swaps:

A company has a surplus on its HUF current account and the balance on its EUR account is zero at the moment, but it is expected to pay EUR 200,000 to its supplier with a two-day deadline. It also expects, however, EUR 200,000 in revenues from an overseas customer in 3 months. Instead of buying the necessary currency on the spot market now and selling the future revenue later, the Bank recommends entering into an FX swap as a solution; in this transaction, the company buys EUR 200,000 in the short leg of the transaction, with a value date of T+2 at the current spot rate of 322.00 EUR/HUF, using the surplus on its HUF account, while in the long leg it sells EUR 200,000 at a 322.40 exchange rate, with settlement due 3 months later. In this way, the company has been able to bridge its EUR liquidity need in a cost-effective manner, without exposing itself to foreign exchange currency risk.

An example of the rollover of a forward contract using an FX swap:

A Hungarian exporter company has sold EUR 200,000 at a forward exchange rate of 322.50 EUR/HUF. 2 working days before the expiry of the transaction, the company is informed that its customer will be one month late in paying the invoice. The company therefore decides to roll over its expiring transaction by one month; it executes this, by using an FX swap based on market mid-rate. The market mid exchange rate on the short leg of the transaction is thus 323.00 EUR/HUF and the interest rate differential is HUF 0.10, making the forward exchange rate on the far leg 323.10 EUR/HUF. In accordance with the terms of the FX swap, the company buys EUR 200,000 at the expiry date at an exchange rate of 323.00 on the short leg of the transaction, while on the long leg it sells, with settlement due 1 month later, EUR 200,000 at an exchange rate of 323.10, which reflects the increment by the swap points. On the expiry date the original forward contract is closed by the short leg of the FX swap with the cash flows offsetting each other, which may result in an exchange gain or loss on the transaction. With the long leg of the swap, the company will yet again have an EUR 200,000 forward sale at an exchange rate of 323.10.

When do we recommend it?

- if you wish to optimise your liquidity in different currencies;
- if you would like to bring forward or roll over the expiry of your existing forward deal without exposing yourself to additional currency risk.

Advantages of FX swaps:

- an FX swap allows you to manage your liquidity position in a cost and limit effective manner, often helping you avoid having to seek further financing at all;
- with an FX swap, you can adjust the due dates of your expiring forward deals to the actual, changing cash flows of your company;
- the transaction is free of cost, the quoted exchange rate already covers all the costs.

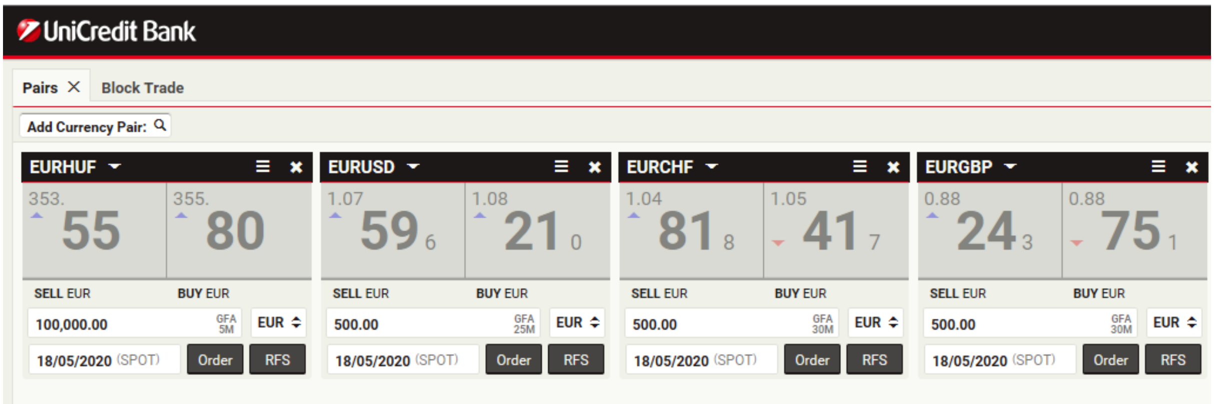
Risks of FX swaps:

- when only the long leg of the FX swap is in effect, the company has, in practice, an open forward transaction, and it must execute the conversion at the agreed forward exchange rate even if the exchange rates at expiry are less favourable than the forward exchange rate;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential exchange loss from the transaction is unlimited.

4.2.4 UC Trader - Online FX Trading System

In the current market environment, continuous monitoring of daily exchange rate fluctuations as well as direct access to real-time rates on the FX market may be particularly important as rates may change within a second due to the extreme volatility of the foreign exchange market.

Our goal is to provide an online foreign exchange trading system for our corporate clients that can be easily accessed from anywhere and which offers a wide range of services that satisfy your needs. Based on these reasons UC Trader trading platform has been developed which can be easily launched from an internet browser and which is even available on various desktop and mobile devices for our customers.



The system is capable of executing FX spot, forward and swap transactions and taking limit orders over EUR 10,000.

The application is easy to use and offers a freely customizable user interface. All transactions concluded are automatically stored and can be retrieved at any time, which also guarantees safety for business transactions.

Requirements for use:

- Valid UC Trader contract and Treasury framework agreement
- Current account opened in the currencies to be traded
- For forward transactions, sufficient available treasury limit

Trading is possible on bank business days from Monday to Thursday from 8.00 to 17.00 and on Fridays from 8.00 to 16.00.

Further details on UC Trader can be found on our website and if you have any questions or require any further information, please do not hesitate to contact our colleagues.

4.2.5 Fx option

Product description:

An FX option is a sale and purchase contract in which the buyer of the option obtains the right, but not the obligation, to buy or sell a particular currency against another currency at a specified date and a specified exchange rate. The buyer of the option pays an option fee (premium) to the seller (writer) of the option, thus obtaining the right to exercise the option as agreed, whereas the seller of the option undertakes the obligation to exercise it as agreed.

Plain vanilla options have two main styles in terms of when they are exercised:

- European options allow the buyer to exercise the option only on expiry;
- American options allow the buyer to exercise the option at any time from contracting the option to its expiry, i.e. throughout the entire term.

Plain vanilla options have two main types in terms of the object of the right:

- in a **call option,** the buyer obtains the right to **buy** the object of the option in accordance with the conditions of the option transaction;
- in a **put option,** the buyer obtains the right to **sell** the object of the option in accordance with the conditions of the option contract;

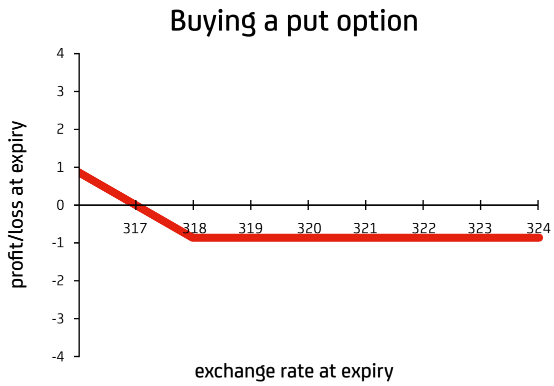
The object of currency option contracts is a currency pair, and therefore the call option for one currency naturally implies a put option for the other currency. Common terminology, however, refers to the quoted currency of the given currency pair when naming the option contract a call or a put option.

Similarly to forward transactions, an option right provides full protection at the contracted exchange rate against the appreciation of the currency to be bought or the depreciation of the currency to be sold. Unlike in forwards, the profit/loss curve of options is asymmetrical: the option buyer will exercise their option right only if the option provides better terms than the spot market for buying the particular currency (in call options) or for selling it (in put options). Otherwise the buyer will leave the purchased option to expire without exercising it and execute the desired transaction on the spot market. Thus if an option is purchased, the potential loss is limited and equal to the option premium, while potential profit is unlimited.

When writing an option, the above asymmetry applies in the opposite direction: the maximum profit equals the premium received, whereas the potential loss is unlimited. Due to this characteristic, writing options as such is not considered a prudent hedging instrument because it does not provide protection against adverse movements in the exchange rate. As a result, the Bank does not support the writing of options in the case of clients who are subject to the Bank’s Derivative Policy and rated under MiFID as retail or professional clients, unless the possibility for unlimited loss is limited with another - purchased - option (see cylinder option).

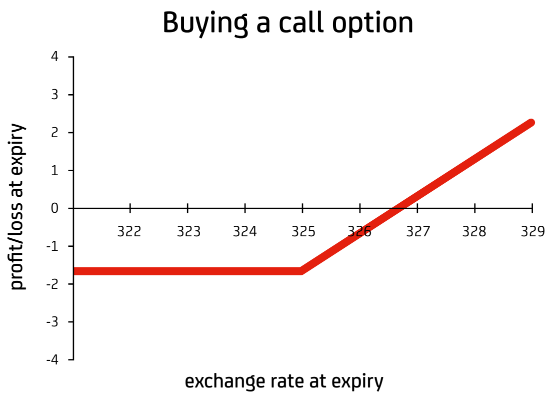
An example of buying a put option (Long Put) - for exporters:

A Hungarian exporter company expects EUR 100,000 revenues in two months' time and would like to convert this sum into HUF. The current spot rate is 322.00 and the forward exchange rate is 322.20. The company expects the EUR to appreciate further in the next few months but would also like to make sure that it is not forced to sell its euros at a rate below 318.00 even if the HUF appreciates in spite of the forecasts. It therefore decides to buy a European style EUR put option at a strike price of 318.00. At the expiry of the two-month term, it may exercise its option right depending on the exchange rate prevailing at the time. If the prevailing exchange rate is below 318.00, the company may sell its EUR 100,000 to the Bank at a rate of 318.00. If, however, the exchange rate prevailing at the end of the 2 months is higher than 318.00, then the company will sell its currency at the more favourable market rate and let its option right expire without exercising it.



An example of buying a call option (Long Call) - for importers:

A Hungarian importer company expects to have to pay EUR 100,000 to a foreign counterparty in 2 months' time. The current spot rate is 322.20 and the forward exchange rate is 322.55. The company expects the EUR to depreciate in the next few months but would also like to make sure that it is not forced to buy euros at a rate above 325.00 even if the currency appreciates in spite of the forecasts. It therefore decides to buy a European style EUR call option at a strike price of 325.00. At the expiry of the two-month term, it may exercise its option right depending on the exchange rate prevailing at the time. If the prevailing exchange rate is below 325.00, the company will buy the necessary currency on the spot market. If, however, the exchange rate prevailing at the end of the 2 months is higher than 325.00, then the company will take advantage of the protection provided by the option and buy the necessary euros at the 325.00 EUR/HUF exchange rate.



When do we recommend it?

Purchased option:

- if you would like protection against adverse movements in exchange rates but would also like to benefit from favourable changes in the exchange rate;
- if your company has a planned target exchange rate and, given the prevailing market rates, the option market provides the opportunity to buy protection against adverse shifts close to the planned exchange rate.

Sold (written) option:

- if your company is not subject to the Bank's Derivative Policy, would like to earn income from option premiums and you expect exchange rates to change in such a way that the option will not be exercised.

Advantages of FX options:

- when buying the option, you can select the strike price and the term without any restrictions, and the flexible timing of the transaction will allow you to benefit from favourable conditions prevailing on the market;
- the purchased option provides full protection against exchange rates less favourable than the strike price, while it leaves the opportunity open to take advantage of exchange rate movements favourable for the underlying transaction;
- the potential loss on purchased options is limited to the option fee paid;
- the seller receives an option fee when writing the option and if it expires without being exercised, the option fee paid will be registered by the seller as a profit.

Risks of FX options:

- the option fee paid for the purchasing of the option is a cost payable when entering into the transaction;
- closing a purchased option during the term with a transaction in the opposite direction may incur a loss if the option fee received at closing is lower than the premium paid when entering into the transaction;
- the potential exchange loss from written options is unlimited;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the written option, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the market value of an option may be impacted negatively by movements on the spot currency markets, the interest rates for the particular currencies for the particular terms as well as the changes in volatility on the market.

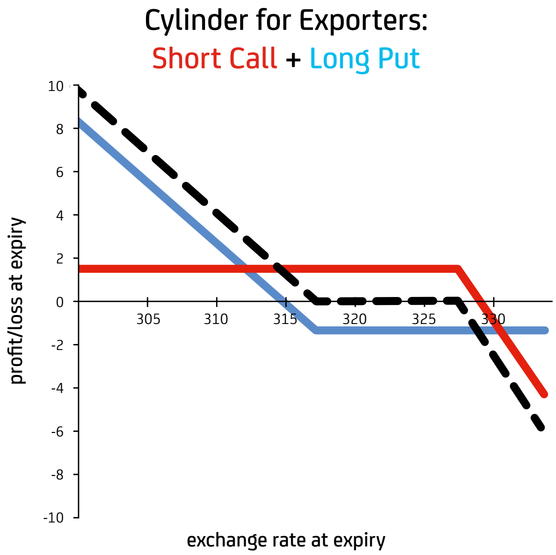
4.2.6 Cylinders/Range Forwards

Product description:

A cylinder transaction is a complex option strategy comprising the purchase of a put option and the simultaneous sale of a call option (exporters) or the purchase of a call option and the simultaneous sale of a put option (importers). The range boundaries set by the two plain vanilla options limit the exchange rate to between a cap and a floor, allowing you to fix the future buy or sell exchange rate of a currency in a range around the forward exchange rate. The company thus has an obligation if levels exceed the more favourable exchange rate range and a right if the exchange rate crosses the adverse level.

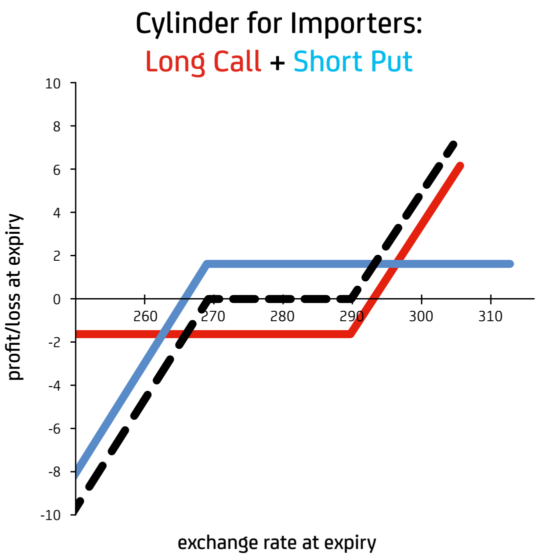
An example of cylinder contracts - for exporters:

An exporter company expects EUR 100,000 revenues in 1 year's time. The current spot rate is 322.00 and the forward exchange rate for 1 year is 324.00 The company hopes for an exchange rate more favourable than the forward rate at expiry but it must also achieve an exchange rate of 318.00 in order to earn satisfactory profits, and it therefore enters into a 1-year rage forward with range boundaries of 318 and 328. This contract allows it to convert currency at a more favourable level than the 324.00 forward rate but it does not let it benefit from the HUF weakening beyond the upper boundary of the range (328.00 EUR/HUF).



An example of cylinder contracts - for importers:

A Hungarian importer company has to make a payment of USD 100,000 in 3 months' time. The current spot rate is 280.00 and the 3-month forward exchange rate is 276.50 USD/HUF. The company expects to be able to purchase the necessary currency upon expiry at a more favourable exchange rate than the forward rate but it must also achieve an exchange rate no higher than 290.00 in order to earn sufficient profits. It therefore enters into a 3-month range forward transaction with range boundaries of 269 and 290. If the HUF starts to appreciate as expected, this contract allows the company to convert currency at a better level than the 276.50 forward rate but does not let it benefit from the HUF appreciating beyond the lower boundary of the range (269.00 USD/HUF). If the HUF were to weaken, this strategy would put a limit to its adverse effects at the 290.00 exchange rate, and protection would be provided against depreciation in excess of this rate.



When do we recommend it?

- if your company expects positive changes in exchange rates over the forthcoming period and wishes to profit from this but does not consider a movement in exchange rates in the opposite direction impossible and wants to purchase protection against it at a specified exchange rate;
- if strike price at the protection level matches your company's plan budget rate but you would also like to take advantage of potential more favourable changes in the exchange rate.

Advantages of cylinder transactions:

- potential to benefit from exchange rates better than the forward rate, up to the edge of the cylinder's range;
- the transaction is free of cost, because the two option premiums in the structure, the one received and the one paid, are equal;
- limited exposure to less favourable exchange rates.

Risks of cylinder transactions:

- if the exchange rate at expiry is beyond the agreed range boundary, your company will not be able to profit from exchange rates beyond that level;
- one boundary of the range provides protection at a level that is less favourable than the forward rate;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the

transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;

- the market value of an option may be impacted negatively by movements on the spot currency markets, the interest rates for the particular currencies for the particular terms and the changes in volatility on the market;
- the potential exchange loss from the transaction is unlimited.

4.2.7 Barrier Options

Barrier options are special currency options that, in addition to the strike price, also specify a so-called barrier or trigger rate: if this barrier rate is reached at any time during the entire term (American barrier) or a particular part of the term (partial barrier), or at expiry (European barrier), the option may terminate (in a knock-out option or KO) or may be activated (in a knock-in option or KI).

Even more complex structures may be created by incorporating two or more barrier levels. In this brochure we focus on the variants that occur most frequently in practice, namely the knock-out and knock-in options with American barrier levels.

4.2.7.1 Knock-out (KO) currency option:

Product description:

A knock-out currency option also stipulates a KO exchange rate level in addition to the strike price. If the exchange rate prevailing on the market reaches the KO exchange rate during the term, the option terminates, at which point the buyer of the option loses their rights from the option and the option seller's obligation to the buyer ceases. The seller of the option will, however, always receive the option fee payable at the time of contracting, regardless of whether the option has been knocked out or not. If the exchange rate prevailing on the market does not reach the KO exchange rate, the option is not terminated and the transaction allows exercising a plain vanilla option right.

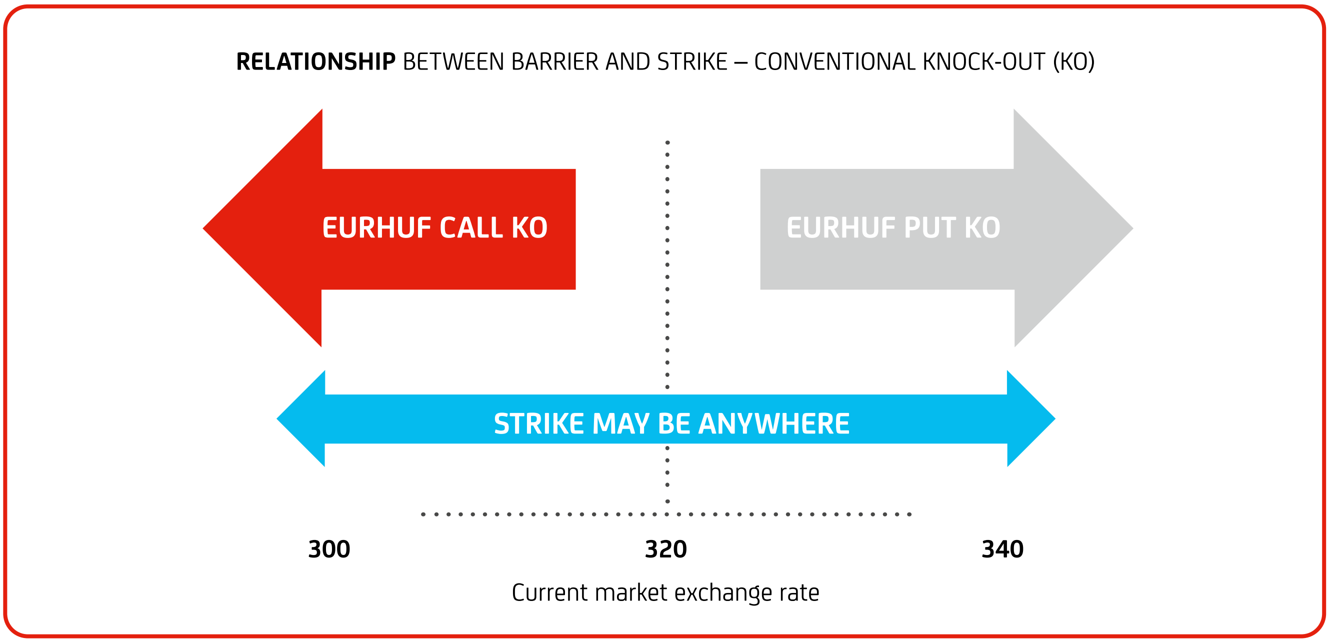
Given the possibility of the option terminating, the option premium payable for the KO option is, in theory, always lower than the premium for a plain vanilla option for the same strike price, nominal value and term. The sum of the values of a knock-in and a knock-out with the same strike price, nominal value and term is in theory equal to the value of the plain vanilla option with the same parameters.

We distinguish between conventional knock-out (KO) and so-called reverse knock-out (RKO) options depending on where the barrier level is located compared to the exchange rate prevailing on the market.

In a conventional KO:

- The barrier for the call option is always below the market exchange rate prevailing at the time of writing the option.
- The barrier for the put option is always above the market exchange rate prevailing at the time of writing the option.

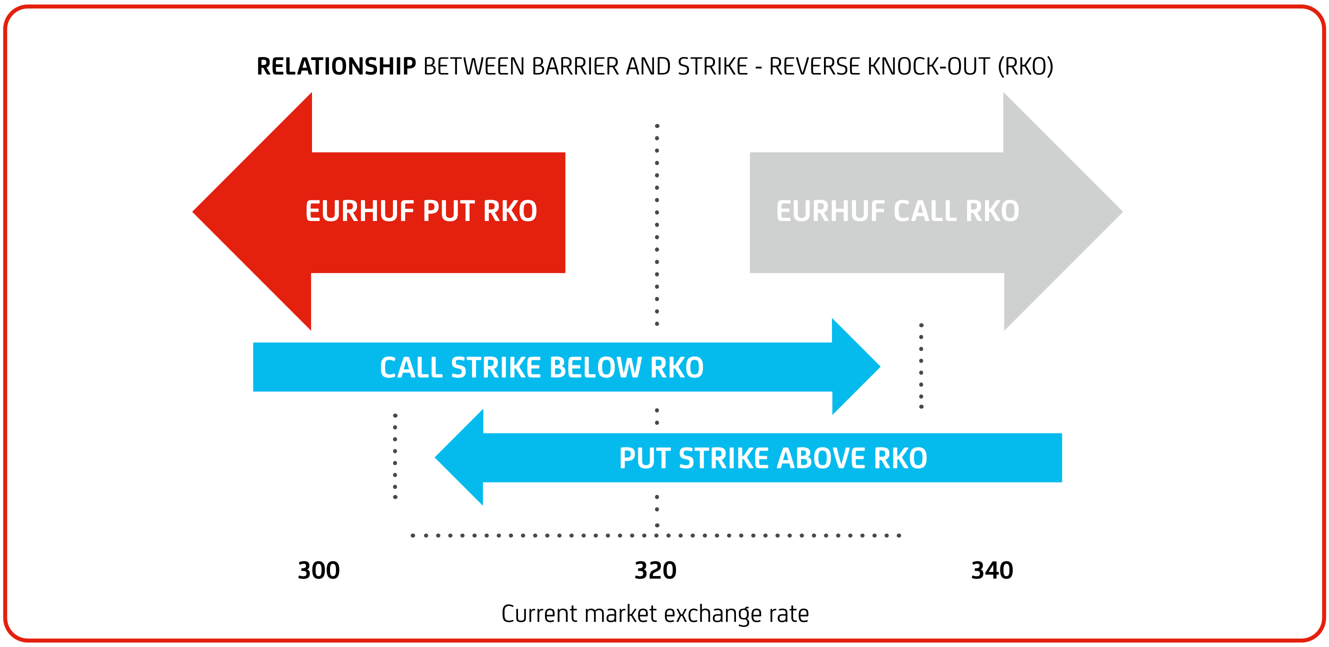
This means that the exchange rate must move in a direction opposite to the option buyer's expectations (out-of-the-money) for the option to be knocked out. In such cases the knock-out happens at a market rate that is more favourable for reopening the hedge than the rate at the time of buying the original option.



In the case of a reverse knock-out (RKO):

- The barrier for the call option is always above the market exchange rate previaling at the time of writing the option and above the strike price of the option.
- The barrier for the put option is always below the market exchange rate prevailing at the time of writing the option and below the strike price of the option.

This means that the option will be knocked out if the market exchange rate moves in a direction expected by the option buyer (in-the-money) but to an extent greater than expected. In such cases the knock-out happens at a market rate that is less favourable for reopening the hedge than the rate at the time of buying the original option.



Since in an RKO the option terminates and the buyer loses their option right if the knock-out level is reached, buying this option by itself cannot be considered a prudent instrument for hedging, since protection terminates the very time when the buyer of the option needs it most. As a result, the Bank does not support the purchasing of RKO options for hedging underlying currency exposures in the case of clients who are subject to its Derivative Policy and are classified in MiFID as retail or professional clients, although it does make it possible to buy conventional KO options.

When do we recommend it?

- to clients who would like to reduce the option premium they pay and understand the termination risk of the transaction;
- to clients who, by paying the relevant option premium, wish to achieve a better strike price than would be achievable from a plain vanilla option available for the same premium and understand the termination risk of the transaction.

Advantages of knock-out options:

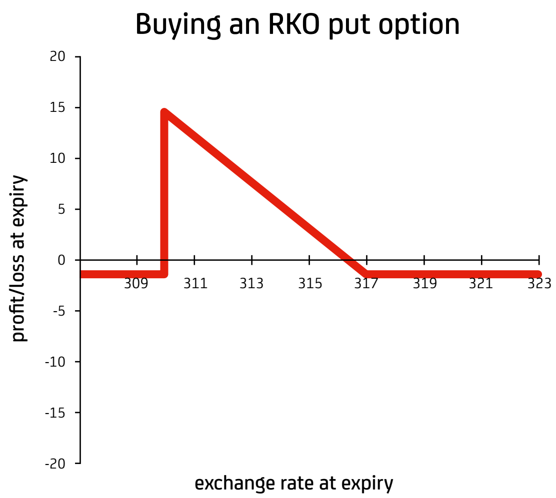
- the premium paid for a knock-out option is lower than the premium paid for a plain vanilla option with similar parameters;
- the option buyer enjoys protection from adverse changes in exchange rate until the knock-out level is reached;
- the product can be customised in terms of strike price and barrier rates as well as other parameters;
- the option fee represents the maximum loss possible from a purchased option.

Risks of knock-out options:

- if the KO level is reached, the option and thus the hedging will terminate;
- the option fee paid for the purchasing of the option is a cost payable when entering into the transaction;
- closing a purchased option during the term with a transaction in the opposite direction may incur a loss if the option fee received at closing is lower than the premium paid when entering into the transaction;
- the potential exchange loss from written options is unlimited;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the written option, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the market value of an option may be impacted negatively by movements on the spot currency markets, the interest rates for the particular currencies for the particular terms and the changes in volatility on the market.

An example of buying an RKO put option (Long KO Put) - for exporters:

A Hungarian exporter company expects EUR 100,000 revenues in two months' time and would like to convert this sum into HUF. The current spot rate is 322.00 and the forward exchange rate is 322.20. The company expects the EUR to appreciate further in the next few months but would also like to make sure that it is not forced to sell its euros at a rate below 317.00 even if the HUF appreciates in spite of the forecasts. It does not expect an exchange rate below HUF 310.00 under any circumstances. It therefore decides to buy an EUR put option at a strike price of 317.00, which has a knock-out (KO) level at 310.00. At the expiry of the two-month term, it may exercise its option right depending on the exchange rate prevailing at the time. If the prevailing exchange rate is below 317.00 but the exchange rate has not touched 310.00 during the term, the company sells its EUR 100,000 to the Bank at a rate of 317.00 If, however, the exchange rate prevailing at the end of the 2 months is higher than 317.00, then the company will sell its currency at the more favourable market rate and let its option right expire without exercising it. If the exchange rate has reached 310.00 during the term, then the option will have been knocked out and the protection ended.



4.2.7.2 Knock-in (KI) currency option:

Product description:

A knock-in currency option also stipulates a KI exchange rate level in addition to the strike price. The option is activated if the exchange rate reaches the KI exchange rate level during the term. In that case, the buyer of the option may exercise their option right in the same way as with a plain vanilla option. If the option is not activated (because the exchange rate did not reach the KI level), the buyer must not exercise the option right and nor does the seller have any obligation. The option premium, however, is payable to the option seller when writing the option, regardless of whether it is activated or not.

Given the conditionality of the option right, the option premium payable for the KI option is, in theory, always lower than the premium for a plain vanilla option for the same strike price, nominal value and term. The sum of the values of a knock-in and a knock-out with the same strike price, nominal value and term is, in theory, equal to the value of the plain vanilla option with the same parameters.

We distinguish between conventional knock-in (KI) and so-called reverse knock-in (RKI) options depending on where the barrier level is located compared to the exchange rate prevailing on the market. This distinction is the same as the relative positions of the strike and barrier levels described in the KO options section.

In a conventional KI:

- The barrier for the call option is always below the exchange rate at the time of writing an option.

- The barrier for the put option is always above the exchange rate at the time of writing an option.

This means that the market exchange rate must move in a direction opposite to the option buyer's expectations (out-of-the-money) for the option to be activated. In such cases the knock-in happens at a market rate that could otherwise be more favourable for entering into a hedge transaction.

In a reverse knock-in (RKI):

- The barrier for the call option is always above the exchange rate at the time of issuing and the strike price of the option.
- The barrier for the put option is always below the exchange rate at the time of issuing and below the strike price of the option.

This means that the market exchange rate must move in a direction matching the option buyer's expectations (in-the-money) for the option to be activated. In such cases the knock-in happens at a market rate that may position the option buyer in a plain vanilla option with sudden high profit.

Since there are no guarantees that the KI level will be achieved and, accordingly, the option activated, option buyers are not always able to exercise their option rights. As a result, buying KI options as such is not considered a prudent hedging instrument because the protection offered by the option does not get activated in the event of adverse movements in the exchange rate. With RKI options, lack of hedging due to adverse exchange rate movements will apply only in a limited exchange rate range: until the market rate reaches the barrier level. As a result, the Bank does not support the purchasing of conventional KI options for hedging underlying currency exposures in the case of clients who are subject to its Derivative Policy and are classified in MiFID as retail or professional clients, although it does make it possible to buy RKI options.

When do we recommend it?

- to clients who would like to reduce the option premium they pay and understand the risk that their options may not be activated;
- to clients who, by paying the relevant option premium, wish to achieve a better strike price than would be achievable from a plain vanilla option with the same premium and understand the risk that their option may not be activated.

Advantages of knock-in options:

- the premium paid for a knock-in option is lower than the premium paid for a plain vanilla option with similar parameters;
- the product can be customised in terms of strike price and barrier rates as well as other parameters;
- the purchased option represents limited loss, as the maximum loss is equal to the option fee.

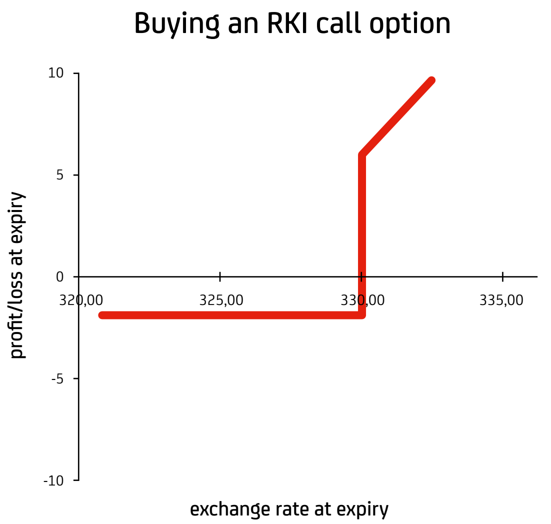
Risks of knock-in options:

- if the market rate does not reach the KI level, the hedging strategy will not be activated;
- the option fee paid for the purchasing of the option is a cost payable when entering into the transaction;
- closing a purchased option during the term with a transaction in the opposite direction may incur a loss if the option fee received at closing is lower than the premium paid when entering into the transaction;
- the amount of exchange loss is, in theory, unlimited in the case of written options;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the written option, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;

- the market value of an option may be impacted negatively by movements on the spot currency markets, the interest rates for the particular currencies for the particular terms and the changes in volatility on the market.

An example of buying an RKI call option (Long RKI Call) - for importers:

A Hungarian importer company expects to have to pay EUR 100,000 to a foreign partner in 3 months' time. The current spot rate is 322.00 and the forward exchange rate is 322.60. Fearing the appreciation of the EUR, the company decides to buy an RKI call option with a strike price of 322.50 and a KI barrier of 330.00. If the exchange rate does not reach 330.00 during the term, the option is not activated. Thus even in the worst-case scenario, the company can purchase the necessary euros at a level below 330.00 on the spot market. If the market rate reaches 330.00, the option is activated, and the buyer of the option now has a plain vanilla option with a strike price of 322.50, which provides it with protection against exchange rates above the strike.



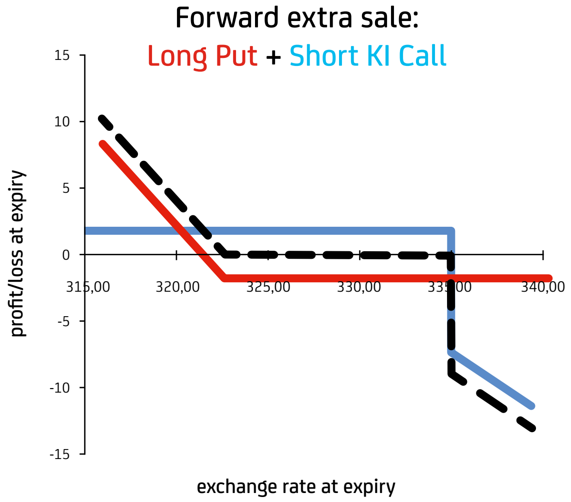
4.2.8 Forward extra

Product description:

A forward extra is a complex forward style zero-cost option structure that comprises the purchase of a plain vanilla currency option with a specified strike price and expiry and the sale of a KI currency option with the same strike price and expiry. The structure provides protection against adverse exchange rate movements at the level of the strike price of the purchased plain vanilla option. Above/below this strike price, it allows the client to profit from favourable changes in exchange rates within a certain exchange rate range. And above/below this range, the KI barrier option will be activated when the barrier is reached and the client will incur the obligation to contract a conversion at the original strike price.

An example of selling a Forward extra - for exporters:

A Hungarian exporter company expects EUR 100,000 revenues in one year's time. The current spot rate is 322.00 and the forward exchange rate is 324.00. In order to eliminate its currency risk, the company contracts a 12-month forward extra transaction with the Bank at a strike level of 323.00 and a KI barrier of 335.00. If the exchange rate closes below 323.00 one year later, the company exercises its option and sells its euros at 323.00. If the exchange rate closes above 323.00 and the KI option did not activate, then the company sells its foreign currency at the more favourable market rate. If the market rate has touched 335.00 during the term and the KI option was activated, the company must sell the EUR 100,000 at the exchange rate of 323.00.



When do we recommend it?

- if your company expects moderate positive changes in exchange rates over the forthcoming period and wishes to profit from this but does not consider a movement in exchange rates in the opposite direction impossible and wants to purchase protection against this at a specified exchange rate level.

Advantages of forward extra transactions:

- protection against adverse movements in exchange rates;
- the transaction is free of cost;
- the product can be customised in terms of strike price and barrier rates as well as other parameters.

Risks of forward extra transactions:

- if the KI level is reached, the KI option is activated and the client has no opportunity for taking advantage of favourable exchange rates, incurring an obligation at a level that is less favourable than the current market level;
- the strike price of the transaction tends to be less favourable than the simple forward exchange rate;
- closing the contract during the term with a transaction in the opposite direction may incur a loss;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential exchange loss from the transaction is unlimited.

5 INTEREST RATE RISK TRANSACTIONS

5.1 Interest rate swap (IRS))

Product description:

An interest rate swap (IRS) represents the swapping of a cash flow tied to a variable short-term reference rate with a cash flow with a fixed interest rate specified in advance, at the given nominal value. With an IRS, you can purchase protection against future rises in interest rates, thus fixing for the long term the interest costs of a particular loan, or you may fix the yields of your variable-interest investments for an extended period.

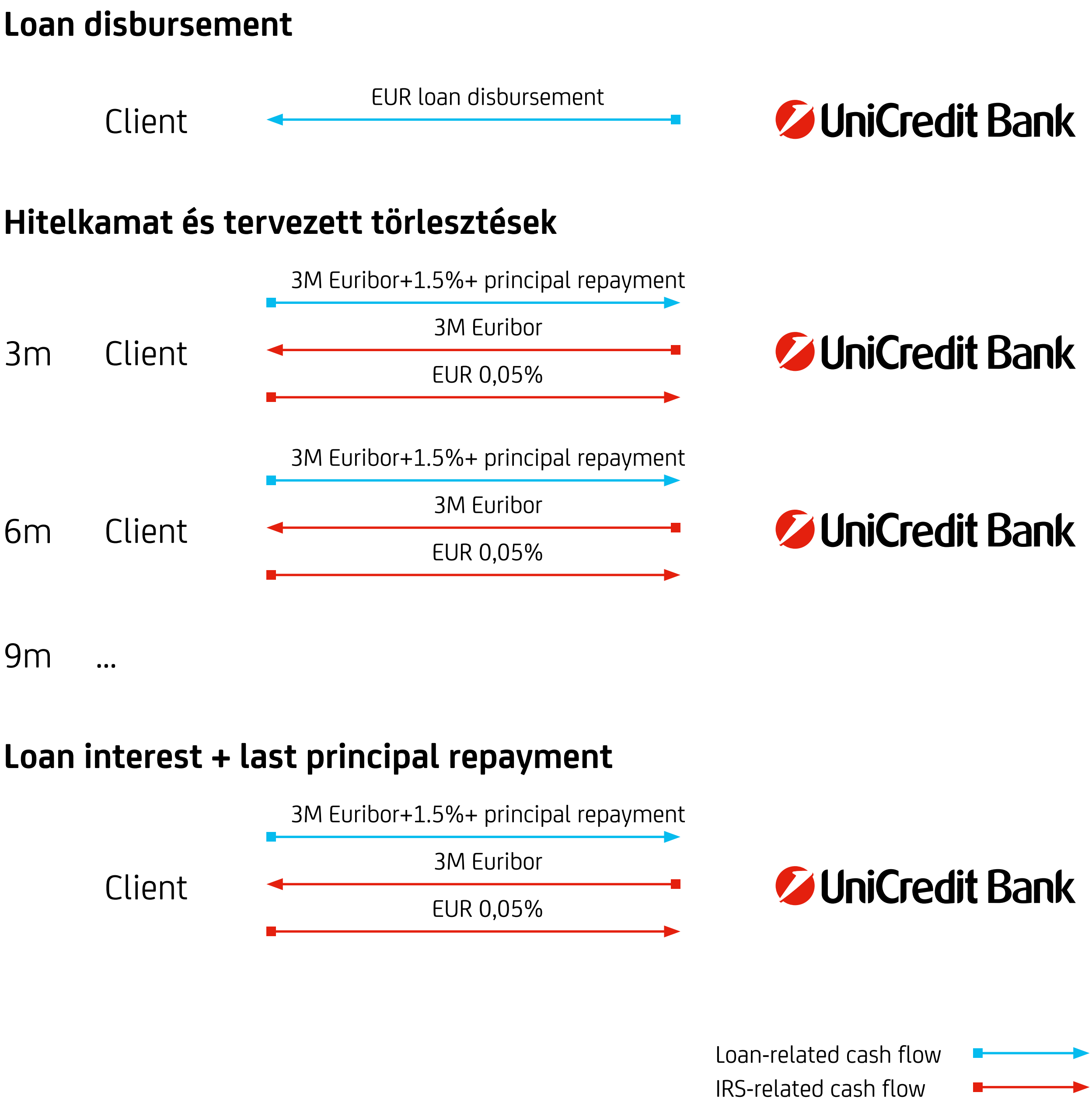
The most typical area of using IRS in corporate risk management is fixing the interest rates of long-term loans; we will therefore focus on this function of IRS. By contracting an IRS, your company can convert your variable-interest loan to fixed interest or your fixed-interest loan to variable interest without modifying your loan agreement. An IRS may be contracted for a permanent nominal value but also for a nominal value with amortisation of your choice defined in advance. You can contract an IRS when a planned loan is disbursed but at any time later as well: there is nothing stopping you from contracting an interest rate swap for a loan you have had for years, as long as the tenor outstanding is at least one year. Neither is it a condition for the loan to have come from our Bank. You can use IRS to fix the interest rates of loans from other banks or even loans from your shareholders or associated companies (intercompany loans).

Fixing the interest rate with an IRS gives greater flexibility than fixed-rate loans when it comes to the timing of the interest rate fixing and the fixed interest rate is not exposed to the interest rates prevailing on the market at the time the loan is disbursed. You may contract IRS for a loan in several phases if you wish, which allows you to take advantage of the favourable interest rates on the market: you may contract already before the disbursement or enter into the transaction in several phases after disbursement, when your interest rate target levels are reached.

If the loan is repaid early (and there is no refinancing for the same term), it is recommended to terminate early the related IRS as well. Early termination may incur costs, which will be equal to the prevailing present value of the IRS: depending on the interest rates at the time, this is either paid by the client to the Bank or by the Bank to the client.

An example of interest rate swaps:

You have a 10-year loan for EUR 10,000,000 nominal value, with variable interest and amortising with fixed three-monthly principal repayments, for which you pay interest at 3-month EURIBOR + 1.5%. In order to manage your interest rate risks, you contract a 10-year interest rate swap, for which you pay interest at a fixed rate of 0.05% and receive 3-month Euribor. With this contract, you have fixed your interest costs at 0.05% + 1.5% = 1.55% for the next 10 years, regardless of how the 3-month Euribor changes.



When do we recommend it?

- if you wish to mitigate or eliminate the interest rate risk of your longer-term loans or financing;
- if you worry that interest rates may rise (if you have borrowing) or fall (if you have investments);
- if you would like to borrow at a fixed interest rate and wish to have control over the level and the timing of the interest rate fixing or if you would like to schedule it in several steps;
- if you plan to borrow and find the current interest rate level attractive, wishing to take advantage of it.

Advantages of interest rate swaps:

- you can buy protection against increases in short-term interest rates by contracting an IRS;
- the contracting and potential closing of the IRS can be timed as a factor of interest rate expectations and allows for a flexible management of risks;
- hedging your interest expenditures makes your financial planning more transparent;
- you can even out your financing costs and financial results with fixed interest rates.

Risks of interest rate swaps:

- the market value of an IRS may change significantly as a result of yield curve changes;
- if interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the early repayment or restructuring of the loan may result in the closing of the IRS, which may entail significant closing costs if the market value of the IRS is negative from the client's perspective;
- the potential loss from the transaction is unlimited.

5.2 Cross Currency Interest Rate Swaps (CCIRS)

Product description: A cross currency interest rate swap (CCIRS) is a swap of the series of interest and notional payments in two different currencies. The interest rates may be fixed in both currencies or variable in both currencies, or fixed in one currency and variable in the other currency. In a CCIRS there is typically a notional exchange "there" at the start and a notional exchange "back" at maturity (if it is an amortising structure, the notional exchange "back" take place under the predefined schedule during the term). The notional amounts are swapped at a conversion rate agreed at the start of the transaction, which remains unchanged throughout the entire term.

A CCIRS allows you to change the currency, interest rate and interest base of the cash flows of a loan or an invested asset without modifying the contract of the underlying transaction. Its most typical area of use in corporate risk management is to create loans synthetically in a different currency from an existing loan in order to achieve better interest rates than if the company had directly borrowed from its bank in the other currency.

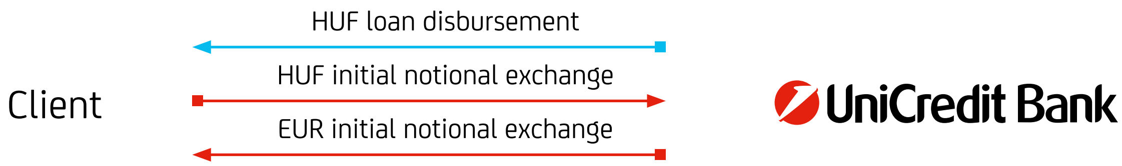
Direct EUR financing	Synthetic EUR financing via cross-currency swap	
EUR loan	HUF loan	EUR/HUF cross-ccy swap
EUR disbursement	HUF loan disbursement	Initial notional exchange: from HUF to EUR
EUR interest payments	HUF interest payments	Interest swaps: from EUR to HUF
EUR loan repayment	HUF loan repayment	Final notional exchange at expiry: from EUR to HUF

If the loan is repaid early (and there is no refinancing for the same term), it is recommended to terminate early the related CCIRS as well. Early termination may incur costs, which is equal to the prevailing present value of the CCIRS: depending on the interest rates and exchange rates at the time, this is either paid by the client to the Bank or by the Bank to the client.

An example of cross currency interest rate swaps:

An exporter company earning its revenues in EUR needs a 5-year loan for EUR 10 million to finance a planned investment project. At the same time, it has the opportunity to take out a HUF loan at the preferential fixed interest rate of 2.0%. Since it earns its revenues in EUR and wishes to take advantage of the attractive terms of the HUF loan without running a currency risk, it contracts a 5-year EURHUF CCIRS transaction at the same time as taking out the HUF loan for the same nominal amount. Under the CCIRS, the company receives, on every interest date, HUF interest at 2.0% plus the HUF repayment due in the particular quarter; this is equal exactly with the sum of the HUF interest and repayment payable by the company under its loan. At the same time, it pays the fixed EUR interest due for the particular interest period along with the repayment instalment, fixed at the start of the transaction at 1.5% for the entire term. Thus the company will have a net neutral HUF position: all its HU payment obligations under the loan will be offset exactly by the cash flows received in the CCIRS, and, at the net level, it will have only the EUR interest and notional payment obligations.

Loan disbursement + CCIRS initial principal swap:



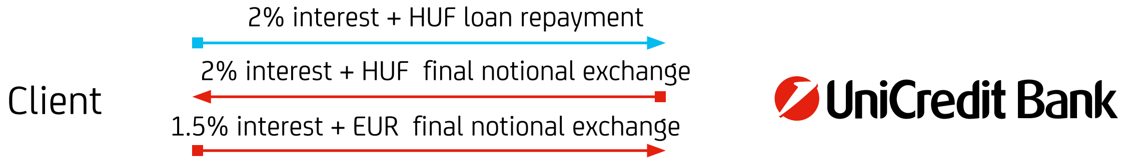
Loan and CCIRS interest payments

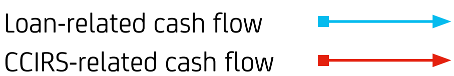
3 months

6 months

9 months ...

Loan and CCIRS interest payments + principal repayment + principal swap at CCIRS expiry





When do we recommend it?

- if you wish to change the currency and/or the interest rate of your planned or existing loan without modifying the loan agreement;
- if you can achieve attractive loan conditions in a currency that does not match your risk profile;
- if you earn your revenues in a currency other than the currency of the loan products you can access on the market or the loan product offering you the best terms.

Advantages of cross currency interest rate swaps:

- synthetically created financing may represent significant advantages in terms of cost compared to the financing directly available in the particular currency;
- a CCIRS allows you to hedge your currency and interest rate risks together;
- the contracting and potential closing of the CCIRS can be timed depending on interest rate and exchange rate expectations and allows for a flexible management of risks;
- hedging interest and currency exposures makes your financial planning more transparent.

Risks of cross currency interest rate swaps:

- the early repayment or restructuring of the loan may result in the closing of the CCIRS, which may entail significant closing costs if the market value of the CCIRS is negative from the Client's perspective;
- the market value of the CCIRS may change significantly in consequence of changes in currency spot rates, the yield curves of the two currencies and the basis swap spread between the two currencies;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential loss from the transaction is unlimited.

5.3 Forward rate agreement (FRA)

Product description:

A forward rate agreement means the swap of fixed and variable interests starting at a future date for a specified period (the payment is made at the start of the future period, in the form of the present value of the difference between the two interests). The FRA is an instrument for hedging the interest expenditures or interest revenues of a future period.

If you fear that interest rates will rise, you can purchase an FRA to fix the interest expenditures of a particular period. If you buy an FRA and the future variable interest rate (a reference rate, e.g. BUBOR) becomes higher than the FRA interest rate agreed at the time of contracting, you will receive the difference, whereas if it is lower, then you will pay it; as a result, the interest payable will always be equal to the fixed interest specified in the FRA.

If you fear that interest rates will decrease, you can use an FRA to fix the interest revenues of the period. If you sell an FRA and the future fixed interest rate becomes lower than the fixed interest rate in the FRA, you will receive the difference, whereas if it is higher, then you will pay it; accordingly, the interest received will always be equal to the fixed interest specified in the FRA.

Settlement is always on a net basis and in cash, executed at the start of the interest period.

The following notation is used for expressing the starting date and term of FRA's:

FRA t × n

where

t: the number of months until the start of the future interest period,

n: the number of months until the expiry of the future interest period, as calculated from the trade date.

for example: FRA 3 x 6 = a three-month interest rate starting in 3 months' time

An example of forward rate agreements:

A company has a loan with variable interest rate based on 3-month Bubor, where the remaining tenor is 9 months. 3-month Bubor is currently 0.25%, but you expect the central bank to raise interest rates in the last 3 months of the tenor and thus Bubor to rise as well. You therefore purchase a 6x9 FRA at 0.35% from the bank and fix in this way the variable component of the interest payable. If the 3-month Bubor fixing due in 6 months' time is higher than 0.35%, e.g. it fixes at 0.5%, then the company will receive the 15 bps difference from the bank. If, however, the 3-month Bubor fixing due in 6 months' time comes in lower, for instance at 0.25%, then the company will pay the 10 bps difference to the bank. This shows that the company will have fixed the reference rate for its loan at 0.35%, regardless of how the rate actually changes in the period in question.

When do we recommend it?

- if you wish to hedge against adverse interest rate volatility in a single future period.

Advantages of forward rate agreements:

- protection against adverse interest rate movements;
- ability to fix in advance your interest expenditures or interest revenues;
- also available with loans and deposits held with other financial institutions.

Risks of forward rate agreements:

- the client does not profit from favourable interest rate movements beyond the interest rate fixed in the FRA;
- the costs of closing the position may represent a loss, depending on the prevailing situation on the market of interest rates;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential loss from the transaction is unlimited.

5.4 Interest rate options

By contracting an interest rate option and paying the option premium, your company can enjoy protection against adverse movements on the interest rate markets while retaining the opportunity to take maximum advantage from favourable shifts in interest rates. The two main types of interest rate options are cap and floor options.

5.4.1 Cap

Product description:

A cap is an interest rate option that guarantees the buyer of the option a top interest rate level (strike) for the reference rate of the transaction (e.g. EURIBOR) against the payment of an option premium. Buying the option creates only rights and not obligations for the holder. The strike price of the option is the highest level of the reference rate, i.e. it can guarantee the maximum interest payable in the case of a variable-interest loan. As a result, the risk associated with increases in the reference rate are limited, while the Client can benefit fully from its decreases.

The interest expenditure on the entire loan transaction is thus maximised as the sum of the fixed interest rate in the cap and the margin stated in advance in the loan agreement, and is no longer influenced by the changes in reference rates.

An example of buying a Cap option:

A company has a 5-year loan for EUR 10 million nominal value, with variable interest, for which it pays interest at 3-month EURIBOR. The loan is repaid in a lump sum at maturity. The 3-month EURIBOR rate is currently -0.39%.The company fears a future rise in interest rates and would like to make sure that its financing costs do not exceed 0.50% per annum. It therefore buys a 5-year cap option at an option interest rate of 0.50%, for which it pays the lump sum of EUR 55,000. By entering into this contract, it makes sure that its interest expenditures on its loan will not be higher than an interest rate of 0.50%.

When do we recommend it?

- if you have or plan to take out in the near future a variable-interest loan and wish to purchase protection against rises in short-term interest rates.

Advantages of cap options:

- you can buy protection against increases in interest rates by contracting a cap option;
- the purchased cap option represents limited loss, as the maximum loss is equal to the option fee;
- the contracting and potential closing of the cap option can be customised precisely and timed as a factor of interest rate expectations and it therefore allows for a flexible management of risks;
- cap options may be contracted in most currencies for any loan repayment schedule;
- you do not need a limit for a purchased cap option.

Risks of cap options:

- given the option premium, the transaction has initial costs (or recurring costs payable regularly during the term). The option fee is not repaid (regardless whether the option is exercised or not), and it may therefore represent a loss;
- if the underlying transaction terminates (e.g. the loan is repaid early), the cap option must be closed. While the price of a purchased option will always be positive, the option may have to be sold below its earlier purchase price;
- an written option is not suitable for implementing a prudent hedging strategy, it does not provide protection in the event of adverse movements in the interest rate;
- if interest rates and/or interest rates shift in an unfavourable direction, the limit requirement of the written option, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential loss from written options is unlimited.

5.4.2 Floor

Product description::

A floor is an interest rate option that guarantees the buyer of the option a bottom interest rate level (strike) for the reference rate of the transaction (e.g. EURIBOR) against the payment of an option premium. Buying the option creates only rights and not obligations for the holder. The strike price is the lowest level of the reference rate of the underlying transaction, so that it will guarantee the minimum interest received for a variable-rate deposit. As a result, the risk associated with decreases in the reference rate are limited, while the Client can benefit fully from its increases.

An example of buying a floor option:

A company has a 5-year investment for HUF 100,000,000, with variable interest rate at 3-months BUBOR.

The 3-month BUBOR rate is currently 0.25%.The company fears a considerable decrease in HUF interest rates and therefore needs an option transaction offering it the chance to fix a floor for the interest rate for safety. Accordingly, the company buys a 5-year floor option at an option interest rate of 0.10%, the fee for which is HUF 1,000,000. This transaction guarantees for the company that the yield from its HUF investment will not fall below the fixed interest rate level of 0.10%

When do we recommend it?

- if you have or plan to make in the near future a variable-interest investment and wish to purchase protection against falls in short-term interest rates.

Advantages of floor options:

- you can buy protection against decreases in interest rates by contracting a floor option;
- the purchased floor option represents limited loss, as the maximum loss is equal to the option fee;
- the contracting and potential closing of the floor option can be customised precisely and timed as a factor of interest rate expectations and it therefore allows for a flexible management of risks;
- floor options may be contracted in most currencies for investments with any amortisation of your choice;
- you do not need a limit for a purchased floor option.

Risks of floor options:

- given the option premium, the transaction has initial costs (or recurring costs payable regularly during the term). The option fee is not repaid (regardless whether the option is exercised or not), and it may therefore represent a loss;
- if the underlying transaction terminates (e.g. the variable-interest investment is sold), the floor option must be closed. While the price of a purchased option will always be positive, the option may have to be sold below its earlier purchase price;
- a written option is not suitable for implementing a prudent hedging strategy, it does not provide protection in the event of adverse movements in the interest rate;
- if interest rates and/or interest rates shift in an unfavourable direction, the limit requirement of the written option, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- the potential loss from issued options is unlimited.

5.4.3 Collar

Product description:

A collar is the combination of buy and sell options: a purchased collar comprises buying an option and selling another option. It allows limiting the interest payable (or receivable) to within a floor and a cap. For example, a Client with a variable-interest loan will buy a cap and sell a floor. The interest payable is maximised at the level determined by the cap, and the floor is fixed in order to reduce the costs of the cap or even make the arrangement free of cost (zero-cost collar). For example, a Client with a variable-interest investment will buy a floor and sell a cap. The interest received is minimised at the level determined by the floor, and the cap is fixed in order to reduce the costs of the floor or even make the arrangement free of cost (zero-cost collar). These option transactions are for the same amounts and the same expiries but with different strike prices. The interest paid (or received) by the Client will move in the range determined by the strike prices during the term of the transactions.

An example of buying a collar:

A company has a 5-year loan for EUR 10 million nominal value, with variable interest, for which it pays interest at 3-month EURIBOR. The 3-month EURIBOR rate is currently -0.39%. The company expects interest rates to rise but also considers a minor decrease in interest rates possible in the next 5 years. It therefore contracts a zero-cost collar transaction, under which it sells a -0.70% floor option and, at the same time, buys a 0.50% cap option. The strike prices of the cap and the floor were selected in a way ensuring that the prices of the purchased and sold options were equal, so that the Client can contract this combined strategy free of cost. As long as the 3-month EURIBOR is between the cap and floor strike rates, there is no cash flow under the collar, as neither the Client nor the Bank exercises its option right. If Euribor fixes above 0.50%, the Client receives the interest differential between the prevailing Euribor and 0.50% calculated for the actual notional amount. If Euribor fixes below -0.70%, the Client must pay the Bank the interest differential between the prevailing Euribor and -0.70% calculated for the actual notional amount

When do we recommend it?

- if you have variable-interest loans or investments and wish to provide protection against adverse interest rate movements yet hope to benefit from favourable interest rate movements.

Advantages of collar transactions:

- a collar transaction allows you to buy protection at a certain level against adverse changes in interest rates and also benefit from favourable trends to a certain extent;
- the contracting and potential closing of the collar transaction can be customised precisely and timed as a factor of interest rate expectations and it therefore allows for a flexible management of risks;
- the collar transaction may be contracted in most currencies for loans or investments with any amortisation of your choice.

Risks of collar transactions:

- if the underlying transaction terminates (e.g. the loan is repaid early), the cap option must be closed, and closing a zero-cost structure before the end of the term may cost the client money;
- if exchange rates and/or interest rates shift in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may request additional collateral in such a case;
- by contracting the collar, the client forgoes the chance to benefit from interest rate levels below the floor;
- the market value of a collar may change significantly as a result of yield curve changes;
- the potential loss from the transaction is unlimited.

6 COMMODITY MARKET TRANSACTIONS

As from 3 January 2018, on the basis of Commission Delegated Regulation (EU) 2017/591, a new regulation applies to commodity derivatives, including the definition of risk-reducing positions, the position limits related to transactions and the conditions for exemption from position limits. These rules are directly effective, and are applicable to your activity as well.

6.1 Range of commodity market transactions available for trading

Commodity markets can be divided into three major groups: **oil and fuel, metal and agricultural** crops. In addition, it is also possible to hedge some special markets. The following chart provides an overview of the products available for trading:

Commodity price hedging

Industrial and precious metals	Fuels	Special markets	Agricultural crops	Carbon emission
Aluminium, Copper Nickel, Lead, Zinc Tin, Steel Billet Gold, Silver, Palladium Platinum, Molybdenum Cobalt, Iron ore	Crude oil, Heating oil Gas oil, Coal, Diesel Premium unleaded Jet Fuel, Propane Natural gas (TTF, NCG, Gas formula) Electricity (Phelix, Swiss, PUN, French)	Paper (NBSK, BHKP) Packaging materials Recycled paper Commodity baskets Metals & Oil distillates	Milling wheat Rape, Soy, Sugar Coffee, Cocoa, Maize Cotton	EUA-CER/ERU Spot EUA-CER/ERU Forward VER Spot

Not all of the products are immediately and directly available within the product range of UniCredit Zrt, but all of them are available from UniCredit AG.

Commodity market hedging transactions may be concluded at the **stock exchange** and also **over the counter**. Deals may only be concluded for certain products, with standard maturities and amounts in a regulated manner at the stock exchange, while hedging transactions may be carried out under flexible conditions over the counter (OTC).

The various stock exchanges and market price aggregators offer a wide range of benchmark indices applicable to commodity market products; however, continuous trading may not be carried out for all product specifications, or it cannot be deemed sufficiently liquid, thus it is recommended to consult in advance about the range of available hedging transactions, as well as about the costs and anticipated efficiency of the hedging in each case.

Let us see the most typical examples of the commodity market hedging transactions!

Oil products

In the case of oil market transactions, the most important market makers use the **ICE** (Intercontinental Exchange), while outside the stock exchange the benchmark prices of **Platts and Argus** are most often used.

Crude oil

The world's oil producer companies can easily hedge their exposure through the London **ICE Brent** crude oil contracts. By contrast, consumers use physical oil in a processed form. However, as stock exchange crude oil is extremely liquid, transparent and correlates well with oil products, it is a popular hedging possibility even for consumers. Over the counter we have the North Sea **Dated Brent** (which is typically measured based on the Platts quotes and traded in the form of the (monthly) average price). For example, for a carrier company the monthly average price – assuming regular refuelling – can effectively cover the risk.

Diesel, petrol and heating oil

The **ICE diesel oil** is another frequently traded, easily available benchmark product. The **ULSD** (Ultra Low Sulphur **Diesel**) specifications (e.g. 0.001%/10 ppm – parts per million – sulphur content) quoted by Platts, and the Argus or Platts **Gasoline** (petrol) products are extremely active players on the OTC market. Shipping companies usually hedge their diesel oil exposure by one of these instruments. In the case of road construction (bitumen) and industrial use, the by-products with high sulphur content are also usable products, such as the **heating oil** with a 3.5% or 1% sulphur content.

Gas

Gas is a commodity, which appears both in households and in business consumption. While in the case of households, it would not be efficient to hedge consumption in small volumes, the gas consumed by manufacturing companies may easily reach the volume deemed significant even by the company, in the case of which price shifts may raise the cost of production.

In Europe one of the most important benchmarks is the **TTF** Dutch gas specification, supplemented in Hungary by the increasing presence of the (Austrian) **VTP** gas, customary in Central Europe. The West European markets also rely on other benchmarks, e.g. the German NCG (NetConnect Germany) or the British NBP (National Balancing Point) and other indices. Typically, the calculation methods of the monthly indices is extremely wide-ranging; there are gas quotations for day ahead or month ahead delivery.

Metals

Industrial metals

The rise in the price of **aluminium** and **copper** represents a risk for manufacturing companies. A wide variety of these products is available at the London Metal Exchange (**LME**). In the case of aluminium, even the price of the physically immediately available (from the warehouse, without queuing) commodity premium can be hedged, and thereby the all-in price as well.

Precious metals

Under the hedging of precious metals we primarily mean the fixing of **gold** (XAU) and **silver** (XAG) prices. These and other precious metals may appear in the derivative markets both as commodity market products and as foreign exchange, most often traded against the dollar.

Agricultural crops

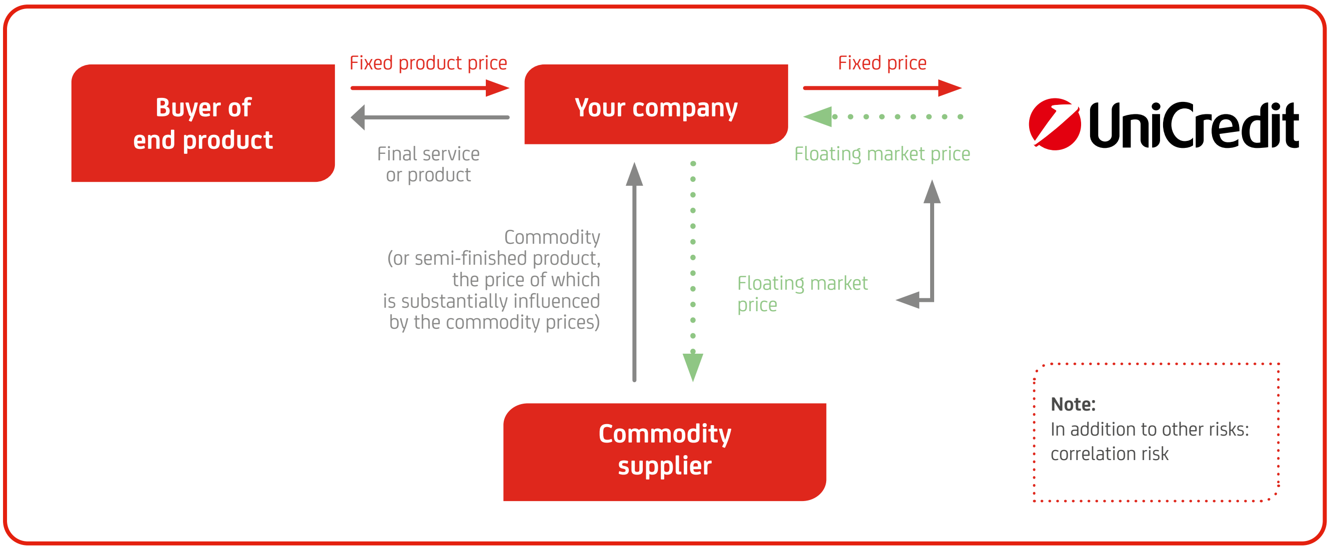
Agricultural crops are traded in the highest volume in Europe on the **Euronext** Paris/MATIF stock exchange. Here quotations are available for **milling wheat, rapeseed and maize**, being determinants in Hungary as well. In the United States the Chicago Board of Trade (**CBOT**) commodity exchange provides the platform for trading in **wheat, corn, soy** and other crops.

6.2 Management of commodity market risks

Commodity market transactions are categorised as **delivery** and non-delivery (**cash settlement**) transactions. The transactions concluded with the Bank are settled in cash, and usually represent contracts concluded on the OTC market, although stock exchange indices may also serve as benchmarks. Upon the settlement of hedging transactions it is important to ensure that some sort of physical transaction is linked to it, the cash movements of which provide joint protection against unfavourable price fluctuations. It is advisable to subject the price series of the physical and derivative transactions (when hedged indices are not accurate) to a **correlation check**, the result of which determines the efficiency of the hedging transaction.

The commodity risk of the underlying exposure is offset by the derivative transaction concluded with the Bank so that the Customer settles the underlying commercial transaction with its own counterparty at the current market prices, and **the loss/profit realised on the hedging transaction offsets the profit/loss realised** on the underlying exposure. The hedging will be highly efficient, if the settlement of the Customer's commercial transaction, representing the underlying exposure, and of the hedging transaction concluded with the Bank is based on the same benchmark or the **correlation** between those is sufficiently high. If the price setting of the underlying commercial transaction and the hedging transaction is based on different benchmarks, upon maturity the price of the hedging transaction may differ from the price of the underlying transaction, which may lead to extra profit/loss.

The chart below illustrates the physical exposure and the nature of the hedging on a commodity market product from the perspective of the consumer/user company.



6.3 Commodity swap

Product description:

The commodity swap – similar to interest rate swaps – represents the exchange of a commodity's floating benchmark price and a fixed price, and subsequently, upon the maturity of the transaction, the cash settlement of the difference. By concluding the swap transaction, the risk arising from price fluctuations can be eliminated and together with the physical underlying transaction it provides a fixed payment flow. The commodity swap is concluded for a fixed maturity and volume of commodity; upon maturity the difference between the benchmark price and the fixed price is **settled in cash** projected on the volume.

As mentioned before, several commodity types are also traded on the stock exchange. In the case of these commodities, the maturity is a specific day, typically the date listed monthly (**bullet swap** e.g. the third Wednesday of each month). In the case of hedging deals concluded on the OTC market, it is possible to fix the price of the reference product for the given period (e.g. daily average price). This kind of averaging is referred to as **Asian swap**. The average price Asian swaps are suitable for eliminating the risks originating from extreme price fluctuations within the day and thus a continuous, steady production/consumption price can be ensured.

Example of a commodity swap transaction: Your company needs to buy diesel fuel to fulfil a delivery order of significant volume due in 6 months. Hence, you decide to fix the world price of the fuel by a swap transaction concluded with the Bank. If six months later, upon maturity, the benchmark price of the diesel (and hence your acquisition cost) is higher compared to that of the deal date, the cash compensation paid by the Bank as a result of the swap settles your extra cost, paid to the diesel supplier based on the current market price. If six months later the benchmark price will be below the swap price fixed on the deal date, the physical procurement of the product will be cheaper, but the payment obligation to the Bank, arising from the swap, offsets the all-in cost. Thus, no matter what the outcome is, the all-in cost is known in advance and the shift in the commodity benchmark price can be neutralised.

You would like to hedge the procurement price of 500 tons of diesel fuel payable in 6 months. For this purpose you conclude a commodity swap with the Bank for the Gasoil lots quoted on ICE for a 6-month maturity, i.e. you purchase from the Bank 5 pieces of bullet swaps each tied to 100 metric tons Gasoil contracts at the price of USD 550/MT, taking the stock exchange spot benchmark price due in 6 months.

1. If 6 months later the price of gas oil quoted at the stock exchange increases to USD 565/MT:

Purchase of commodity

6 months Customer ← Delivery of 500 tons of gas oil — Physical partner

6 months Customer → Commodity value at benchmark price: 500 x 565 = USD 282,500 → Physical partner

Commodity swap cash flows (net settlement)

6 months Customer ← 500 x (565 - 550) = USD 7,500 — UniCredit Bank

On the whole the acquisition cost for the company is: USD 282,500 physical market cost – USD 7,500 hedge compensation = USD 275,000.

2. If 6 months later the price of gas oil quoted at the stock exchange drops to USD 535/MT:

Purchase of commodity

6 months Customer ← Delivery of 500 tons of gas oil — Physical partner

6 months Customer → Commodity value at benchmark price: 500 x 535 = USD 267,500 → Physical partner

Commodity swap cash flows (net settlement)

6 months Customer → 500 x (550 - 535) = USD 7,500 → UniCredit Bank

On the whole the acquisition cost for the company is: USD 267,500 physical market cost + USD 7,500 hedge cost = USD 275,000.

Cash flow of physical transaction →

Cash flow of swap transaction →

When is it recommended?

- when you wish to eliminate or reduce your commodity market risks;
- if you are afraid of the rise/fall in commodity prices;
- if you have a fixed plan for the purchase/sale of the input/output commodities;
- if you find the current commodity prices favourable, and you would like to fix this for future procurements/sales.

Advantages of commodity swaps:

- the price is known in advance and does not change upon a shift in the market rates, which allows you to eliminate the price risk in full and to plan your cash flow;
- the transaction can be concluded at no cost, the quoted price includes all transaction costs;
- the conclusion of the transaction may be scheduled depending on the changes in the market price and its distance from the budgeted price;
- if any change occurs in the planned delivery date, the maturity can be rolled over.

Risks of commodity swaps:

- settlement at the price specified in the swap transaction is mandatory even if the current market rates upon maturity would be more favourable;
- if the price moves in an unfavourable direction, the limit requirement of the transaction, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may send a margin call;
- a trading loss may be incurred on the transaction;
- the correlation between the physical exposure and the hedging products available in the derivative market is not necessarily perfect, hence it is recommended to examine this specifically before concluding the deal.

6.4 Commodity option

Product description:

A commodity option is a CALL/CAP or PUT/FLOOR option contract, where the option buyer acquires the right to exchange the commodity at a certain price level (strike price) for cash. However, in the case of hedging transactions, the commodity options are settled in cash, where in the case of a call option it provides a kind of protection against price hikes, while in the case of put options against price falls, in lieu of a premium. The option buyer has the right of, but not the obligation to exchange, thus options provide flexible hedging solutions in an uncertain market environment or for the hedging of less foreseeable exposures.

Commodity options are similar to currency options, thus it is possible to form cost-free structures by combining the options (e.g. the collar or cylinder options). Commodity options, just like commodity swaps, usually relate to a specific day or the average price of a given period.

When is it recommended?

Bought option:

- when you want protection against adverse movement in prices, but wish to benefit from favourable price movements;
- if your company has a planned target price for the commodity and, given the prevailing market prices, the option market provides the opportunity to buy protection against adverse shifts close to this price.

Sold option:

- if your company is not subject to the Bank's Derivative Policy, and you would like to earn income from option premiums and expect the prices to change in a way that the option will not be exercised.

Advantages of commodity market options:

- when buying the option, you can select the strike price and the term without any restrictions, and the flexible timing of the transaction will allow you to benefit from favourable conditions prevailing on the market;
- the purchased option provides full protection against prices less favourable than the strike price, while it leaves the opportunity open to take advantage of price movements favourable for the underlying transaction;
- the potential loss on purchased options is limited to the paid option premium;
- upon writing an option the seller receives an option premium and if it expires without being exercised, the seller will recognise the paid option premium as a profit.

Risks of commodity options:

- the option premium paid for purchasing the option is a cost payable upon concluding the transaction;
- closing a bought option during the term with a transaction in the opposite direction may incur a loss if the option premium received upon close-out is lower than the premium paid upon concluding the transaction;
- the potential trading loss from written options is unlimited;
- if the price moves in an unfavourable direction, the limit requirement of the written option, as calculated by the Bank, may increase and exceed the approved limit, and the Bank may send a margin call;
- the market value of the option may be influenced negatively by the commodity market forward rate movements and market volatility trends.

APPENDIX – TREASURY GLOSSARY

spot transaction: a foreign exchange transaction executed with a value date of T+2 from contracting

forward transaction: an over-the-counter forward transaction for a date beyond the T+2 value date

long position: buying a base currency against a variable currency, where the holder of the long position expects the base currency to appreciate against the variable currency

short position: selling a base currency against a variable currency, where the holder of the short position expects the base currency to depreciate against the variable currency

forward point: see swap point

FX swap: the counterparties in the transaction agree to exchange and then re-exchange two currency amounts on two future dates and at exchange rates agreed upon in advance

value date: the banking day when a transaction is executed

spot value date: the second banking day after contracting (T+2), when a transaction is executed

forward value date: a banking day, beyond the spot value date, when a transaction is executed

bid rate: the exchange rate at which the Bank buys the base currency from the Client

offer rate: the exchange rate at which the Bank sells the base currency to the Client

swap points (pips): the difference between the spot and forward rates of a given currency pair, calculated from the interest differential of the currencies

currency call option: a right to buy a base currency, which the client may buy (long call) or write/sell (short call)

currency put option: a right to sell a base currency, which the client may buy (long put) or write/sell (short put)

American option: an option strategy characterised by the fact that the option holder may exercise their option right any time before the expiry

European option: an option strategy characterised by the fact that the option holder may exercise their option right only at expiry

contango: the futures/forward price of a commodity is higher than the spot price

backwardation: the futures/forward price of a commodity is below the spot price

barrier option: an option contract in which the strike price is supplemented with a touch rate/rates, which may knock out or knock in the option

option expiry date: a banking day fixed in advance when entering into the option transaction: the option holder may exercise their option right up to this day in American style options and on this day in European style options

option settlement date: the second banking day after the expiry date (T+2), on which the transaction generated by the exercised option is executed

volatility: a measure of the changeability of exchange rates, which has an especially great effect on the value of option products

fixed interest rate: an interest rate that is fixed in advance and does not change during the term

variable interest rate: an interest rate tied to the interbank reference rate, which may change during the term

BUBOR fixing: Budapest Interbank Offered Rate, the money market reference rate used by the market as the reference rate for loan and deposit transactions. BUBOR is based on the credit interest rates quoted by Hungarian commercial banks to one another.

EURIBOR fixing: Euro Interbank Offered Rate, the money market reference rate used by the market as the reference rate for loan and deposit transactions. EURIBOR is based on the credit interest rates quoted by European commercial banks to one another.

Interest Rate Swap (IRS): a derivative interest rate transaction, in which the Client agrees with the Bank to swap their fixed- and variable-interest cash flows for a specific nominal value with one another.

Cross-currency Interest Rate Swap (CIRS or CCIRS): a derivative interest rate transaction (typically) involving the notional exchanges in the opposite direction, in which the Client agrees with the Bank to swap their fixed-/variable-interest cash flows denominated in a specific currency for fixed-/variable-interest cash flows denominated in another currency, at an exchange rate fixed in advance.

Forward Rate Agreement (FRA): a derivative interest rate transaction in which the Client is able to secure in the present the interest rate of their future loan or deposit. The parties to the contract settle the difference between the pre-fixed interest rate and the interest rate prevailing on the fixing date without principal movement, on the FRA's fixing value date.

cap: an interest rate option where the buyer of the cap pays an option premium in exchange for a protection on a specific nominal value for the event of the reference rate rising above the pre-fixed strike rate.

floor: an interest rate option where the buyer of the floor pays an option premium in exchange for a protection on a specific nominal value for the event of the reference rate falling below the pre-fixed strike rate.

collar: a (typically zero-cost) complex interest rate option where the buyer of the collar finances the purchase of the cap option with the sale of the floor option

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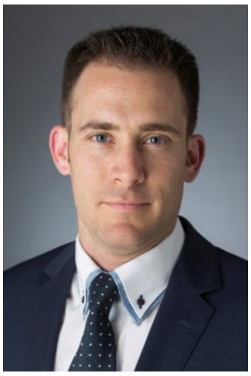

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