

# Managing your company's exchange and interest rate risks





## Exchange risk

- Managing your company's exchange and interest rate risks .....10
- Forward foreign exchange contracts .....12
- Currency swaps .....14

## Interest rate risk

- Interest rate swaps .....16

**You're not working on an island, but in an open world economy in which everything is linked up with everything else. Events that take place in the international financial and monetary markets will have a major impact on your business.**

The substantial fluctuations of foreign currencies against the euro have rekindled awareness of the exchange risks among many business leaders. The exchange rates exert a direct influence on the price of raw materials, the value of foreign investments and sales and even on your company's competitiveness in markets at home and abroad.

But it's not just exchange rates; interest rates too have an impact on the value and profits of your business.

**If you want to make sure your balance sheet stays balanced, you will have to reduce your company's sensitivity to fluctuations in exchange and interest rates . UBB is the ideal partner to help you achieve this objective. We will make a thorough analysis of all risks you might be exposed to and develop appropriate**

**financial instruments to ensure those risks are properly managed. This will give you the freedom you need to do business in an international economy.**

This brochure gives you more insight into the various exchange and interest rate risks, and into risk management techniques. You can manage and hedge your exchange and/or interest rate risks with the aid of a number of financial instruments, the characteristics and risks of which are described below.

**If you have any questions,**

Don't hesitate to contact the UBB specialists. Our staff will be delighted to give you the benefit of their expertise. You can also call or e-mail:

+359 2 811 2449 [FXDMarkets@ubb.bg](mailto:FXDMarkets@ubb.bg)

The financial products used to mitigate the risks attached to economic positions are called **hedges**. For each financial product you will find a description and an overview of the risks associated with that product. A summary and description of the risks may be found in the table below. This will provide you with the necessary understanding to decide how certain risks should be hedged.

Risk definitions	
Credit risk – Counterparty risk	The risk that the financial counterparty in a professional transaction is unable to discharge his/her obligations for lack of funds or is unwilling to do so.
Liquidity risk	The risk that an instrument will have limited or no tradability in the market due to an imbalance between supply and demand, thereby adversely affecting the market price of the product.
Exchange risk	The risk that the value of a product is adversely affected by exchange rate changes.
Interest rate risk	The risk that the value of a product is adversely affected by interest rate changes.

**We draw a distinction between:**

- The risk that a client wants to hedge, i.e. the risks facing the client as a result of his/her own economic position (also referred to as **exposure**). Typical examples are exchange risk, interest rate risk and credit risk.
- The risk of the financial product used as a hedging instrument. A summary and description of the risks may be found in the table Hedging exchange rate risks on page 7.

UBB classifies these financial products by level of complexity, ranging from 1 (straight forward products) up to and including 3 (more complex products). A higher level of complexity does not necessarily mean that the financial product is also riskier. The complexity level is a measure for the comprehensibility of the product. More complex products are composed of various financial instruments (also known as building blocks), and therefore have a complicated structure.

UBB tests and assesses the knowledge and experience needed by the client in order to understand possible combinations of product classes and complexity. The relevant products are subdivided into three different complexity levels graded according to the required level of knowledge and experience.

This brochure is designed to provide support when making hedging decisions for a particular exposure. It should be noted that hedging is not the same as speculation.

- As noted above, **hedging** means the conclusion of an agreement to hedge an existing or future exposure. The hedge may be taken out for the entire exposure, i.e. for the same amount as the exposure, or for part of the exposure. The financial instruments rule out (wholly or partially) any potential negative effects on the results. The intention is for the client’s results to be less susceptible to market fluctuations (as regards exchange rates and interest rates, etc.) through the combination of the client’s own economic position and the hedging with a financial product. The partial hedging of an underlying risk position may also be labelled as active risk management. If the underlying risk position disappears, open risks may arise if the client retains the financial product that was originally taken out in order to hedge the risk position.
- **Speculation** is the conclusion of an agreement without an underlying exposure, with a view to making profits on market movements anticipated by the client. Since there is no compensating effect for the exposure, the speculator can suffer substantial losses if the market evolves unfavorably from his/her point of view. Speculation, it may be noted, is not permitted within UBB. If the

underlying exposure disappears, the position will be regarded as speculative and we would recommend dissolving it.

## General

- **OTC** (over the counter)

Financial instruments that are traded over the counter are instruments that are traded outside an organized market. They are traded bilaterally and privately between two parties.

- **Leverage**

The extent to which the price of a financial instrument changes due to a change in the value of the underlying risk is known as leverage.

- **Volatility**

The price volatility of the underlying security.

- **Deliverability**

The contract is settled by the delivery of the underlying currency/currencies (physical delivery).

- **Cash settled**

In contrast to the physical delivery of the underlying currency/currencies, the contract is settled in cash in a basic currency (generally euros).

## Description of the financial instruments

Since this range of financial instruments is regularly changing, this brochure contains no more than a selection of the available structures. More information and a more detailed risk description may be found in the product sheets for the available products. You can of course also always contact your account manager.

## Main risks per product

These are the most important factors that determine the market value of the product (also known as the mark to market), i.e. without the underlying exposure.

Hedging exchange rate risks					
	Forward foreign exchange contracts	Currency swaps			
Credit risk	x	x			
Liquidity risk	x	x			
Exchange risk	x	x			
Interest rate risk	x	x			

Hedging interest rate risks				
		Interest rate swaps		
Credit risk		x		
Liquidity risk		x		
Exchange risk				
Interest rate risk		x		

# Exchange risk

A man with dark hair, wearing a grey sweater and a large black headset, is shown in profile, looking intently at a computer monitor. He is sitting at a desk in what appears to be a trading or financial operations room. In the background, there are several other computer workstations with monitors and keyboards, and a green light is visible on a wall panel. The overall atmosphere is professional and focused.

## What is exchange risk?

Exchange risk is the risk of a change in the counter value of a foreign currency in terms of a domestic or basic currency (generally the euro) as a result of exchange rate fluctuations.

In other words, the value in euros, expressed in a foreign currency, of an amount shown on the books can fluctuate. As long as the amount remains unconverted into euros, you cannot be sure how much you will ultimately receive.

This is illustrated in the 'EUR/USD Trend' and 'EUR/GBP Trend' graphs on page 10. The key element is the exchange rate of the euro against another currency. At the moment when the amount to be paid is agreed, the exchange rate can be a good deal lower than at the moment when payment actually takes place. When actual payment is made, the counter value in euros could therefore be higher.



## What impact do exchange rates have on my business?

As a manager, monitoring or even just checking all the factors that affect your company is not necessarily straightforward. Apart from that, you're not working on an island: globalization involves an ever-growing number of contacts with other countries. Central and Eastern Europe, Asia and North and South America are steadily becoming familiar territory for the Belgian entrepreneur.

But apart from the complexity of foreign payment transactions, this activity often involves a new element, namely fluctuations in the exchange rate, i.e. the exchange risk. The introduction of the euro in 1999 eliminated a large part of those risks, but for companies exporting or importing outside the euro area the exchange risk remains an acute problem.

## The impact of exchange rates

Some examples:

- Suppose you are a timber wholesaler and you buy your raw materials in Poland. The amount you have to pay is specified in Polish zlotys and is payable within three months. Exchange rate fluctuations can affect the counter value of that amount in euros, so that you end up paying a totally different amount.
- A risk that is more difficult to manage is a quote. Not just a one-off quote but also a catalogue price in a foreign currency exposes a company to an exchange-rate risk. The minute the client commits him/herself, he/she is bound by the price stated.
- The exchange rate can be a major factor for a company headquartered in the euro area, but with branches elsewhere, when it consolidates its results at the end of the financial year. Translating the results into the accounting currency of the parent company necessarily involves an exchange rate and hence also a risk.

These examples are summarized below:

	A rise in the euro against other currencies means in my case:	A fall in the euro against other currencies means in my case:
<b>I need to pay an amount in foreign currency</b>	<b>Profit</b> As I need to pay less in euros for the same amount in foreign currency.	<b>Loss</b> As I need to pay more in euros for the same amount in foreign currency.
<b>I am to receive an amount in foreign currency</b>	<b>Profit</b> As I need to pay less in euros for the same amount in foreign currency.	<b>Profit</b> As I will receive more in euros for the same amount in foreign currency.
<b>I have submitted a quote in a foreign currency (one-off or included in a catalogue)</b>	<b>A possibility of a loss</b> For if my customer accepts the quote, I will be paid less in euros than I thought when I drew up the price.	<b>A possibility of a profit</b> for if my customer accepts the quote, I will be paid more in euros than I thought when I drew up the price.

# Managing your company's exchange and interest rate risks

## Which risk do we mean?

The first step has been taken: we know where the risks could be located. But how big are they? And what is the likelihood that they will arise?

## The volatility of the currency

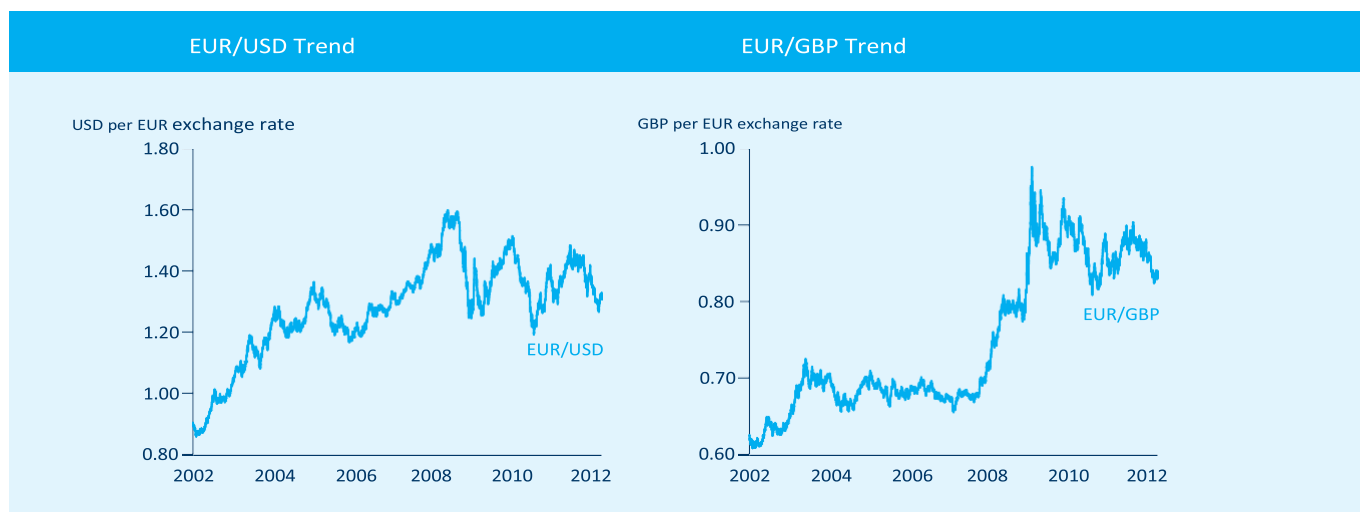
The graph below shows the trend in the US dollar and Sterling, expressed in euros, from 2002 to 2012.

From the peaks and troughs in the graph, you can see that the exchange rates of these currencies have undergone marked changes. The dollar has for example evolved from 0.82 US dollars per euro to 1.60 US dollars per euro.

There is therefore a very real risk that the exchange rate can spoil your plans. And the longer the interval between the determination of the amount and the actual payment, the more likely it is that the exchange rate will alter in the meantime.

## Foreign currency share of your sales

A second element that needs to be taken into account is the proportion of your activities that is not invoiced in euros. The bigger the share of your sales that is traded in a foreign currency, the bigger the potential impact on your result.



## Attitude towards exchange risks

Finally you need to take account of your company's strategy and vision concerning exchange rates.

There are two variants:

- You do not hedge the exchange rate risk and feel the effects of any exchange rate fluctuations.
- You do not take any risk whatever and ensure that every risk is properly hedged.

## How can you hedge exchange risks?

There are a number of 'natural' ways to deal with exchange risks. Unfortunately, they are not all equally feasible.

When you determine the price, you can also determine the amounts in your own currency. In this way, the exchange risk is shifted to the counterparty, which will feel the impact of a fluctuating exchange rate. Much will however depend on your powers of persuasion in the negotiations.

For example:

To purchase a consignment of timber from Poland, the buyer pays 320 000 zlotys. At the time of purchase that corresponds with approximately 75 000 euros. Payment will only be made six months later, however upon delivery of the timber. When the parties sign the contract, there are therefore two possibilities:

The contract states	The exchange risk lies with
75 000 euros	the vendor
320 000 zlotys	the buyer

One can also try as far as possible to state the incoming and outgoing flows in the same currency. If you receive and pay in the same currency, the positive and negative elements of the fluctuation will cancel one another out.

Unfortunately such solutions are often not readily available, which is why UBB offers a whole range of products so that you can always find a solution: no risk versus limited risk, premium or no premium, and various intermediate solutions.

These solutions are tailored to each client (i.e. are over the counter or OTC) and are therefore not traded on any exchange. The amounts and expiry dates can therefore be tailored precisely to the client's circumstances.

# Forward foreign exchange contracts

## Definition

A forward foreign exchange contract is a forward purchase or sale of an amount in a foreign currency at a pre-agreed exchange rate.

## Explanatory notes

A forward foreign exchange contract regulates the conversion of two amounts in different currencies at a specified future time at an exchange rate agreed upon when entering into the contract. The following elements are agreed upon when entering into the contract:

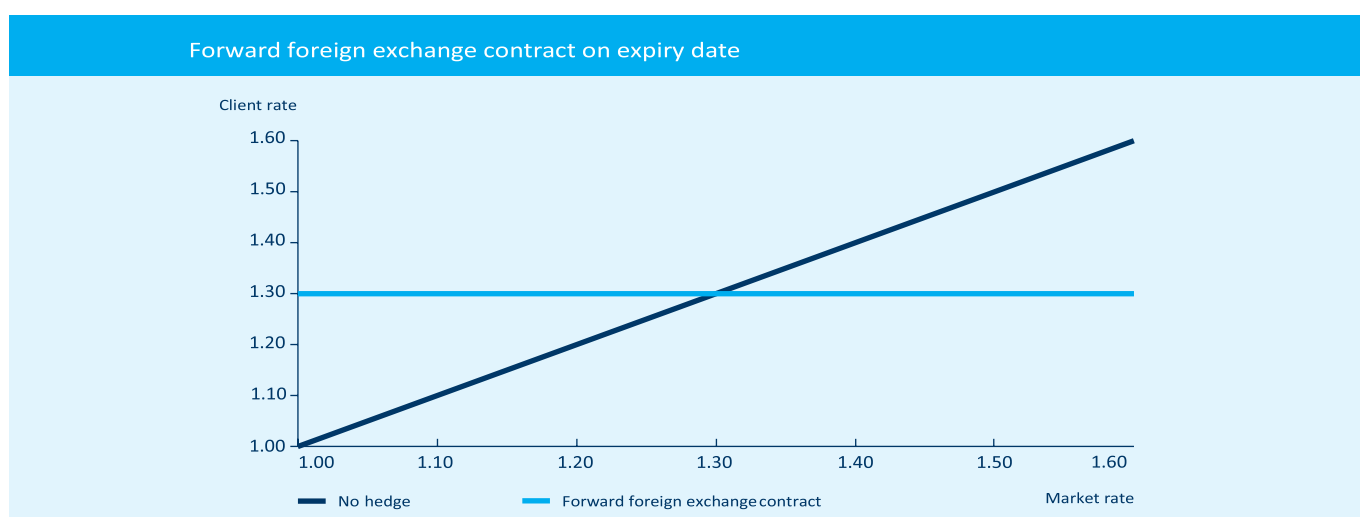
- the point at which the amounts are converted, i.e. the expiry date;
- the exchange rate;
- the amounts;
- the currencies;
- purchase or sale.

If you take out a forward foreign exchange contract, this gives you certainty as to the value in euros of an amount in foreign currency. You do not therefore have to wait until actual conversion is made.

Suppose the client has concluded a euro/US dollar forward foreign exchange contract at an exchange rate of 1.3000. On the expiry date – i.e. the date on which the amounts are converted – the client will always receive the exchange rate of 1.3000 irrespective of the market rate.

If the client has not entered into a forward exchange contract, he/she will then be required to exchange the amounts in question at the prevailing (spot) exchange rate.

The graph below indicates the exchange rate the client will receive on the expiry date, based on the market rate.



### The forward rate

If you ask the bank for a forward rate, you will be quoted a rate that differs from the current spot rate. This has to do with exchange rate gap between the two currencies.

Suppose you want to purchase 500 000 US dollars in three months' time (90 days) and to pay for this in euros. The bank wants to hedge that risk itself and immediately invests in US dollars, so that the amount plus interest over those three months will amount to 500 000 US dollars.

In order to make that investment, the bank first takes out a loan in euros. That amount is then converted at a spot rate to an investment in US dollars. On the expiry date, 500 000 US dollars is placed against the amount borrowed and the interest payable in order to determine the forward rate. This is illustrated by the calculation below. So that it can specify 500 000 US dollars in 90 days' time, the bank must – at an interest rate of 1.5% – now invest 498 132 US dollars. At a spot rate of 1.30 it has to borrow 383 178.47 euros for this purpose. On account of the euro interest rate of 1% the bank ultimately has to repay 384 136.41 euros. The forward rate is therefore 500 000 US dollars / 384 136.41 euros = 1.30162

### Evaluation

Advantages	Disadvantages
You can be certain of the future exchange rate	You are unable to benefit from a favorable evolution of the exchange rate
No premium	
Simple product with a predictable result	

You should also take account of the risks inherent in the product (see tables 'Main risks per product' on page 7).

### Possibilities

For more information about the possibilities, please contact the UBB specialists.

# Currency swaps

## Definition

A currency swap is a combination of a spot transaction (i.e. a currency swap at the spot rate) and a forward foreign exchange contract. The parties therefore exchange an amount in one currency for an amount in another currency and agree to reverse that exchange after a certain period.

## Explanatory notes

A currency swap is a treasury operation. The following are some examples of situations in which a swap is useful:

- The payment of an invoice (for which a purchase of foreign currency had been anticipated) is postponed. The sale of the foreign currency on the original contract date and the purchase on the new date resolve the problem.
- A company has cash balances in euros, but has a temporary requirement for US dollars. Instead of borrowing the dollars, the company will buy them for cash by selling its euros and immediately sell them again at a forward date so as not to be exposed to changes in the exchange rate of the dollar.

## Evaluation

Advantages	Disadvantages
Solid alternative to a loan depo operation	Calls for professional lines
Off-balance sheet	
Does not draw on credit lines	

You should also take account of the risks inherent in the product (see tables 'Main risks per product' on page 7).

## Possibilities

For more information about the possibilities, please contact the UBB specialists.



# Interest rate risks

## What is interest rate risk?

You run an interest rate risk if you face a cash deficit or surplus in your treasury management system. In those cases you will receive or need to pay interest, which means you leave yourself open to the uncertainties of interest rate movements. That financial result forms part of a company's overall results and as such needs to be managed. Some examples make that clear:

- A company that exports on a large scale to Germany is thinking of buying a storage depot there in order to support its activities. The decision is taken, but the actual investment does not take place until six months later. When the company approaches the bank for a loan, interest rates have gone up. This increases the investment costs and could potentially endanger the profitability of the project.
- A second company sells a plant and uses the proceeds to acquire a stake in another company. However, the company does not receive its money for the sale until two months after paying for the participating interest. During those two months, the company therefore has a large cash shortfall, which it wants to cover on the best possible terms.
- A large company issues bonds, offering a fixed rate of interest in order to attract investors. The company would, however, prefer to work with a floating rate of interest. Therefore, the bank provides an interest rate swap, i.e. a structured exchange of interest cash flows.

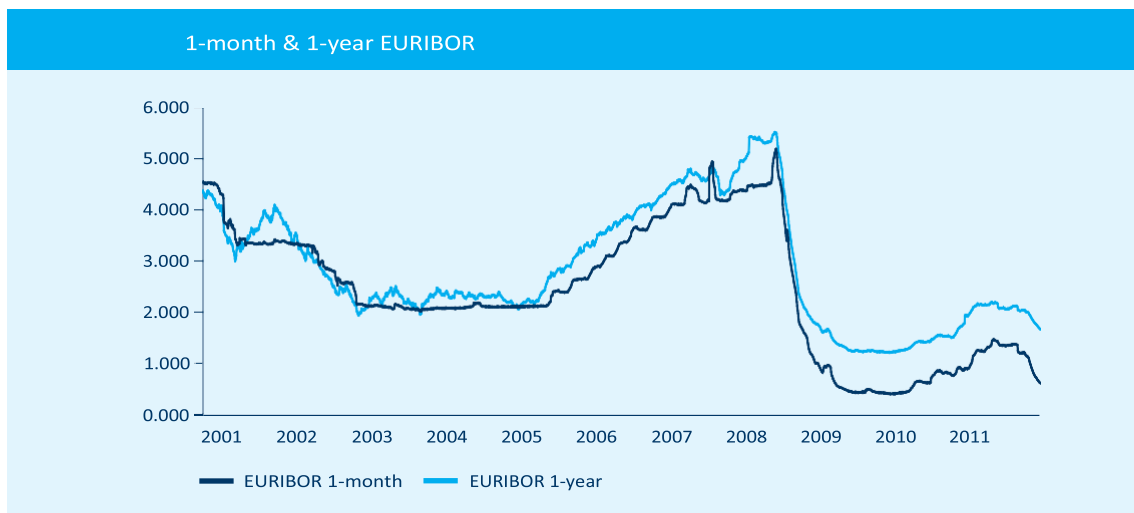


It may not be something that keeps you awake at night, but interest rates can regularly upset your plans. Needless to say the impact will not be equally as great or frequent for each company. It is therefore important to be able to identify the risk and its potential consequences.

### Is hedging still necessary?

Although interest rates have fallen in recent years, the graph below shows that things were different in the past, with alternating periods of rising and falling rates, sometimes with highly divergent rates of interest for the periods in question.

The graph therefore shows that it is certainly advisable to deal cautiously with the rate of interest and to provide for the necessary protection.



### What's the best way to go about it?

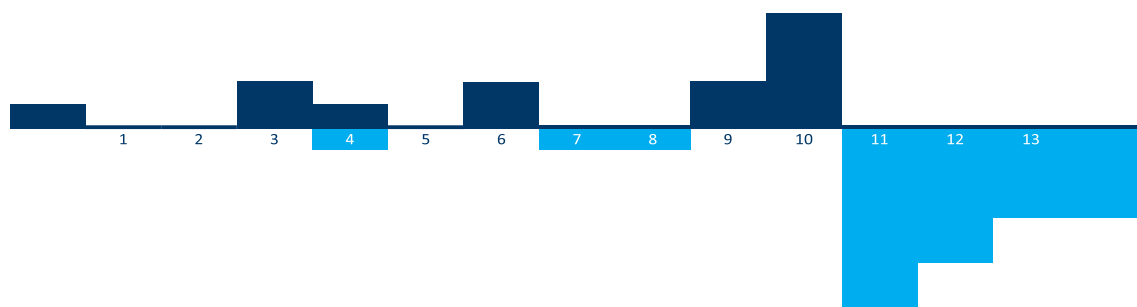
The best way to manage your interest rate risk is to follow the steps below. The table provides an overview.

1 Determining the interest rate risk	Survey of existing positions Impact of new projects
2 Analysis of the risk	Interest-rate scenarios
3 Strategy definition	Internal factors - risk appetite - financial instruments
4 Execution	For more information about the possibilities, please contact the UBB specialists.

**The first and probably most important step is the identification of the risk.** This can be done on the basis of the incoming and outgoing cash flows that you know and expect. You should however also take account of any plans of the company that could have an effect on your liquidity management: large investments for which a loan will need to be taken out, or large cash surpluses, for example from the sale of assets. For the purposes of this exercise, it is important to have the broadest view possible of the company and to have a view to the future. If you leave some of the flows out of the analysis this will diminish the effectiveness of the exercise.

Each manager will have his/her own way of identifying those cash flows. In order to help outline the position, a graphic representation of a treasury position is shown below.

Example



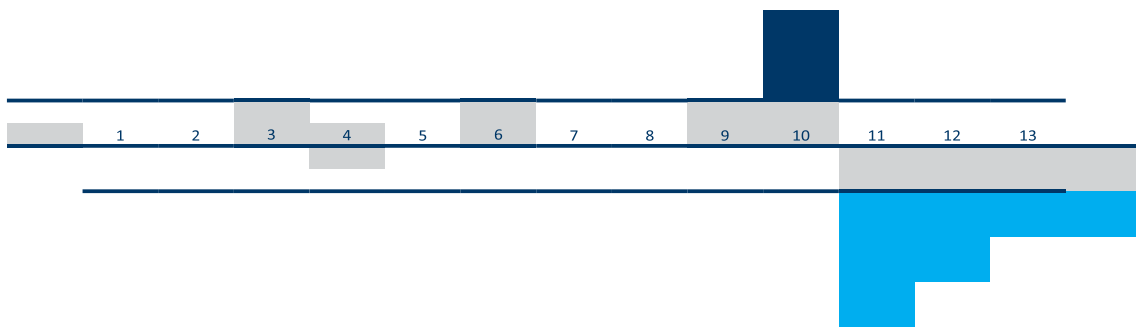
The figure shows the company's predicted cash flow, spread over a number of periods. The dark blue bars above the line denote surpluses and the light blue bars below the line, shortfalls. By way of illustration an investment in period 11 has been assumed. A certain build-up of cash in the preceding periods has also been assumed.

As soon as a company has a clear picture of where it stands and will stand, **the second step is to examine the impact of interest rate fluctuations in the case of a rise, fall or no change in the status quo.** How dependent is the company's result on the rate of interest? The above figure (or other diagram serving an equivalent purpose) is used for the analysis. General rule: the bigger the surpluses or shortfalls, the bigger the risks, as this increases the amount and the period for which it is necessary to borrow or invest.

**As a third step the company's attitude towards risk needs to be examined.** Some companies simply allow shortfalls/surpluses to arise and then decide on a daily basis how to deal with these. Others do take steps to prepare and try to hedge future situations as best they can. The most appropriate solution probably lies somewhere in between. Most companies follow a strategy as proposed below. They concentrate on the outliers, related to specific projects or otherwise. In the case of the current shortfalls and surpluses a solution is worked out, while for the outliers a customized approach is sought.



### Example



In the graph above that would mean that the company concentrates on the dark blue or light blue areas. If a company concentrates on the outliers (i.e. timing and size of the amounts) the appropriate course of action will generally be to work out a customized solution together with the bank. Timing, size of the amount and the currency can play a role in determining the optimal solution, and the bank can offer various instruments. Some potentially suitable products are shown below.

### Derivatives

The appropriate products for the management and protection of interest rate risks are derivatives. This means that there is no exchange of principals and that the interest is consistently offset (only the difference between the agreed rate of interest and the market rate is exchanged). Although derivative products are traded independently, both upon conclusion of the agreement and afterwards, the results thereof (in the case of hedging) must be regarded as a supplement to an underlying transaction. Credit margins may accordingly also be applied to the underlying transaction in question.

# Interest rate swaps

## Definition

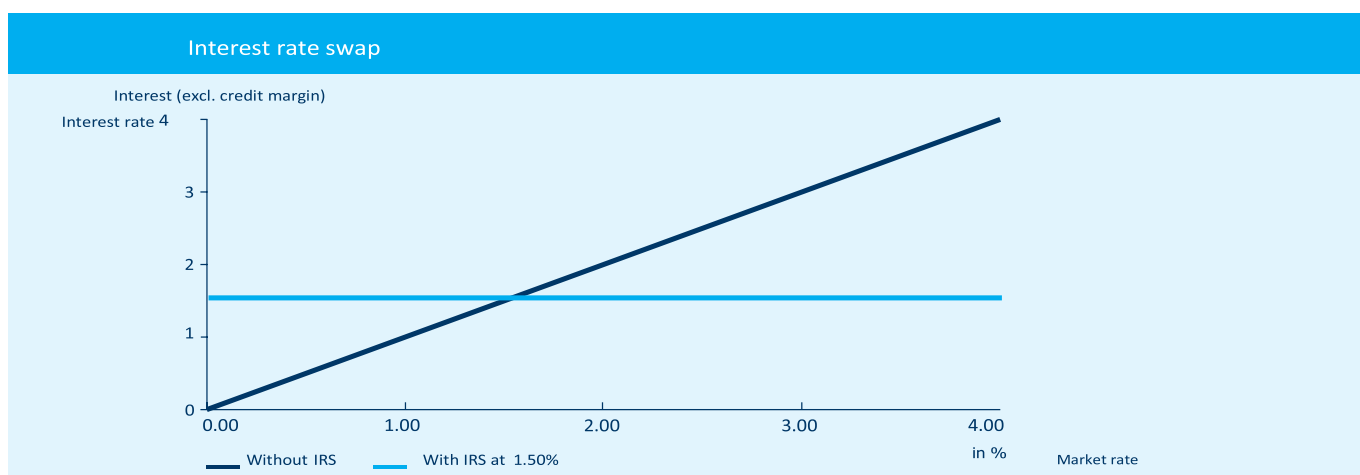
An interest rate swap (IRS) is a transaction between two parties who agree to exchange interest flows in the same currency for a given period and on certain conditions.

## Explanatory notes

An IRS is a structured exchange of various interest flows between the parties. Broadly speaking it therefore becomes possible to convert an interest rate flow from a loan or investment into another type of interest rate flow. This may be from fixed to variable or the other way round, or with an adjusted frequency. All sorts of combinations are possible. The most straightforward possibilities are examined below.

There follows an example of a simple IRS, under which two types of interest are exchanged. A floating rate of interest is received every three months, whereas a fixed rate is paid once a year.

Although each IRS relates to a particular principal, that sum is never exchanged. Only the interest flows are exchanged between the two parties. There are various possibilities, but an IRS may be modelled quite strongly. IRSs are offered in many forms. The basic principle is that the interest flows must be equivalent in both directions. On the basis of that principle numerous swap variants can then be worked out, often tailored to the specific needs of the company in question.



## Example

A company has taken out a long-term loan at a floating rate of interest, i.e. an interest rate that is brought into line each period with the market rate.

Hence, the company is susceptible to interest rate fluctuations. It can opt to convert the variable rate into a fixed rate with an IRS. To do so the company will approach a bank, which will determine an equivalent fixed rate. Once the swap has been concluded we find ourselves in the following situation: the company pays a fixed rate of interest to the bank, which pays a pre-agreed variable rate in exchange. The company then pays that rate on in order to pay off its loan.

On balance the company therefore pays a fixed rate of interest. Where appropriate the payment frequency (monthly, quarterly, six-monthly or annual) may be adjusted in line with the company's liquidity management.

The company wants to take out a hedge for a period of three years and a sum of 5 million euros, under a roll-over credit at a quarterly floating interest rate.

The following swap is agreed with the bank: the company pays fixed interest of 1.50% on a quarterly basis and receives the 3-month EURIBOR at the same periodicity for a sum of 5 million euros.

For the first quarter the 3-month EURIBOR has been set at 1.25%.

The company pays 1.25% + credit margin (under the loan), receives 1.25% (3-month EURIBOR) and pays 1.5% under the IRS.

On balance the 1.5% + credit margin is paid out.

For the second quarter the 3-month EURIBOR has been set at 1.75%.

The company pays 1.75% + credit margin (under the loan), receives 1.75% (3-month EURIBOR) and pays 1.5% under the IRS.

On balance the 1.5% + credit margin is paid out.

## Evaluation

Advantages	Disadvantages
A swap enables a company to adjust its interest flows so that they fit optimally into its liquidity management	As soon as a swap has been entered into, everything is fixed
An IRS does not in principle involve any costs; at the point at which the IRS is concluded, the market value of both 'legs' is the same	

You should also take account of the risks inherent in the product (see tables 'Main risks per product' on page 7).

## Possibilities

For more information about the possibilities, please contact the UBB specialists.





If you still have any questions after reading this brochure, don't hesitate to contact the UBB specialists. Our staff will be delighted to give you the benefit of their expertise. You can also call or e-mail us at:

**+359 2 811 2449**

[FXDMarkets@ubb.bg](mailto:FXDMarkets@ubb.bg)

*All UBB AD transactions are subject to the General Banking Terms and Conditions, a copy of which can be obtained from any UBB AD branch. Registered office: UBB AD, 89B Vitosha Boulevard, Sofia 1463, Bulgaria.*

*UIC: 000694959. Member of the KBC group*

*This brochure does not contain any investment advice, investment recommendations or investment research, just general information on financial instruments. Nothing at all in this brochure constitutes an offer to buy or sell, or any other transaction relating to any type of financial instrument. More detailed information on the financial instruments concerned, the terms and conditions and the attached risks is available from your UBB adviser. UBB AD offers no guarantee whatsoever as to – and is not liable for – the accuracy and contents of this brochure, and reserves the right to make changes to it at any time.*