ACCOUNTING OF CURRENCY OPTIONS

Ing. Eleonóra Vajdová

Before dealing with currency options specifically, we will introduce the basic conditions of accounting for options. According to Decree of the Ministry of Finance of the Slovak Republic (MF SR) laying down details on accounting procedures in banks, options are in general accounted for in the accounting group 39: Options, in the classification for: options for interest rate instruments, options for currency instruments, options for equity instruments, options for commodity instruments and options for credit instruments.

In these accounts the option premiums and revaluing of the option to a realistic value of the call or put options is monitored in individual analytical accounts. It is appropriate to administer analytical accounts also according to purchased and sold call and put options. The classification, or grouping, according to various types of options in the stated accounting groups is set by the bank according to its own requirements and needs.

The accounting group 96: Receivables and Liabilities from Option Operations is used for the accounting of off-balance sheet receivables and liabilities.

The analytical accounts of the off-balance sheet register are administered in the same classification as in the case of the accounting group 39: Options.

At present the most traded options are currency and interest rate options.

Currency options

A currency option gives the buyer the right to buy or sell one currency for another, where the date and exchange rate are agreed. The buyer of the option has the right, though however not the obligation, to realise the agreed deal. For this right the buyer pays an option premium.

In concluding a currency option trade the contracting parties agree the particulars that are necessary also for accounting the currency option:

– underlying asset – the volume of the trade and the currencies to be traded – the currency pairs

– realisation price – the exchange rate between the individual currencies,

– type of the trade – the purchase, sale of the currency option,

– type of the option – a call, put currency option,

– settlement term,

– option type – European, American currency option,

– option price – the option premium.

A financial markets trader may take one of the following positions:

– long option – an option's buyer

– short option – an option's seller

We can divide options into two basic types:

1. a call (buy) option – the buyer has the right to buy and the seller has the obligation to sell.

2. a put (sell) option – the buyer has the right to sell and the seller has the obligation to buy.

A call option serves as insurance against exchange rate risk (an increasing exchange rate), whereby the maximum (strike) limit of the main currency's purchase is guaranteed. It entitles the buyer to purchase one currency for another on the realisation day at the realisation price. A call option is realised only in the case where the spot exchange rate on the expiry date is higher than the option's realisation price. In the opposite case it is not worth realising the option, since the buyer can purchase the necessary currency on the spot market at a more advantageous exchange rate.

The seller is in the opposite position. If on the realisation date the spot exchange rate is higher than the realisation price of the option, it must sell the main currency at a lower exchange rate than it would on the spot market. If however the spot exchange rate is lower the seller makes a profit on the debit of the option premium.

Example of accounting currency call options in banks:

A non-bank client will pay to a foreign supplier EUR 1 000 000 in one month's time. The client secures itself

1. Accounting in the case of the buyer:

Date	Text	Amount in FX	Amount in SKK	MD	Account title	D	Account title
20. 7.	Accounting of the underlying asset	1 000 000 EUR	43 100 000	96	Receivables from purchased call options	99	Register account
20. 7.	Accounting of the underlying liability		42 600 000	99	Register account	96	Liabilities from purchased call options
22. 7.	Date of paying the option premium		150 000	39	Purchased call options – option premium	22	Client's current account
22. 7.	First revaluation to the real (market) value balance sheet – negative difference		17 000	61	Negative differences from revaluation of purchased call options	39	Negative differences from revaluation of purchased call options

23. 7. – 20. 8.	Daily revaluation – increase of the negative difference (revaluation on the option's expiry date – real value = 0)		133 000	61	Negative differences from revaluation of purchased call options	39	Negative differences from revaluation of purchased call options
20. 8.	Settling of analytical accounts accounting group 39		150 000	39	Negative differences from revaluation of purchased call options	39	Purchased call options – option premium
20. 8.	Posting of the underlying asset (NBS exchange rate SKK/EUR 42.500)	1 000 000 EUR	42 500 000	99	Register account	96	Receivables from purchased call options
20. 8.	Posting of the underlying liability		42 600 000	96	Liabilities from purchased call options	99	Register account
20. 8.	The client does not exercise the call option, since the NBS exchange rate is lower than the purchased strike – 42.600				We do not account		We do not account
20. 8.	The client settles its liability in respect of the foreign supplier (purchases EUR at the spot exchange rate)	1 000 000 EUR	42 500 000	22	Client's current account	13	Bank's current account (mirror to the nostro account)

2. Accounting in the case of the seller

Date	Text	Amount in FX	Amount in SKK	MD	Account title	D	Account title
20. 7.	Accounting of the underlying asset		42 600 000	96	Receivables from sold call options	99	Register account
20. 7.	Accounting of the underlying liability	1 000 000 EUR	43 100 000	99	Register account	96	Liabilities from sold call options
22. 7.	Date of paying the option premium		150 000	22	Client's current account	39	Sold call options – option premium
22. 7.	First revaluation to the real (market) value balance sheet – positive difference		17 000	39	Positive differences from revaluation of sold call options	71	Positive differences from revaluation of sold call options
23. 7. – 20. 8.	Daily revaluation – increase of the positive difference (revaluation on the option's expiry date – real value = 0)		133 000	39	Positive differences from revaluation of sold call options	71	Positive differences from revaluation of sold call options
20. 8.	Settling of analytical accounts in the accounting group 39		150 000	39	Positive differences from revaluation of sold call options	39	Sold call options – option premium
20. 8.	Posting of the underlying asset		42 600 000	99	Register account	96	Receivables from sold call options
20. 8.	Posting of the underlying liability (NBS exchange rate SKK/EUR 42.500)	1 000 000 EUR	42 500 000	96	Liabilities from sold call options	99	Register account

against exchange rate risk through purchasing a call option with a one month maturity and a strike at the level of 42.900, which the bank sells to it. The client pays the bank for the option an option premium in the amount of SKK 150 000. The NBS exchange rate on the trade date is 43.10 SKK/EUR. The trade lasts from 20.7.2003 to 20.8.2004.

A put option serves as insurance against exchange rate risk (a decreasing exchange rate), whereby the minimum limit of the main currency's sale is guaranteed. It entitles the buyer to sell the agreed currency at the set realisation date for an agreed realisation price. A put option is realised only in the case where the spot exchange rate on the realisation date is lower than the realisation price.

The buyer of a put option can purchase the main currency in the spot market at a more advantageous rate and by means of the option sell at a more advantageous price.

Example of accounting put options in banks:

A bank purchases a put option – the right to sell to another bank on the expiry date EUR 1 000 000 at the agreed exchange rate of 42.600 (strike). The bank pays for the option an option premium in the amount of SKK 150 000. The NBS exchange rate on the trade date is 43.10 SKK/EUR. The trade is concluded for the period from 20.7. to 20.8.2003.

1. Accounting in the case of the buyer

Date	Text	Amount in FX	Amount in SKK	MD	Account title	D	Account title
20. 7.	Accounting of the underlying asset		42 900 000	96	Receivables from purchased put options	99	Register account
20. 7.	Accounting of the underlying liability	1 000 000 EUR	43 100 000	99	Register account	96	Liabilities from purchased put options
22. 7.	Date of paying the option premium		150 000	39	Purchased put options – option premium	13	Bank's current account (mirror account to the nostro account)

22. 7.	First revaluation to the real (market) value balance sheet – negative difference		17 000	61	Negative differences from revaluation of purchased put options	39	Negative differences from revaluation of purchased put options
23. 7. – 20. 8.	Daily revaluation – increase of the negative difference (revaluation on the option's expiry date – real value = 0)		133 000	61	Negative differences from revaluation of purchased put options	39	Negative differences from revaluation of purchased put options
22. 7.	Settling of analytical accounts in the accounting group 39		150 000	39	Negative differences from revaluation of purchased put options	39	Purchased put options – option premium
20. 8.	Posting of the underlying asset		42 900 000	99	Register account	96	Receivables from purchased put options
20. 8.	Posting of the underlying liability (NBS exchange rate SKK/EUR 42.500)	1 000 000 EUR	42 500 000	96	Liabilities from purchased put options	99	Register account
20. 8.	The counterparty (bank) exercises the put option, since the NBS exchange rate (SKK/EUR 42.500) is lower than the purchased strike – 42.900. The bank sells to the client EUR at the agreed exchange rate of 42.900, i.e. the calculation is SKK 42 900 000 – 150 000 premium = SKK 42 750 000. In selling at the NBS exchange rate the bank would sell EUR 1 000 000 for SKK 42 500 000. In exercising the option the bank has a profit of SKK 250 000.	1 000 000 EUR	42 500 000	35	Settlement account for foreign currency conversion	13	Courterparty's (bank's) current account in SKK – loro account
20. 8.	FX conversion at the NBS exchange rate		42 900 000	13	Bank's current account (mirror account to the nostro account)	35	Settlement account for foreign currency conversion
20. 8.	Exchange rate profit from the conversion after exercising the option.		400 000	35	Settlement account for foreign currency conversion	71	Revenues from exercised options (derivative operations)

2. Accounting in the case of the seller

Date	Text	Amount in FX	Amount in SKK	MD	Account title	D	Account title
20. 7.	Accounting of the underlying asset	1 000 000 EUR	43 100 000	96	Receivables from sold put options	99	Register account
20. 7.	Accounting of the underlying liability		42 900 000	99	Register account	96	Liabilities from sold put options
22. 7.	Date of paying the option premium		150 000	39	Sold put options – option premium	13	Bank's current account – loro account
22. 7.	First revaluation to the real (market) value balance sheet – positive difference		17 000	39	Positive differences from revaluation of sold put options	71	Positive differences from revaluation of sold put options
23. 7. – 20. 8.	Daily revaluation – increase of the positive difference (revaluation on the option's expiry date – real value = 0)		133 000	39	Positive differences from revaluation of sold put options	71	Positive differences from revaluation of sold put options
20. 8.	Settling of analytical accounts in the accounting group 39		150 000	39	Positive differences from revaluation of sold put options	39	Sold put options – option premium
20. 8.	Posting of the underlying asset (NBS exchange rate SKK/EUR 42.500)	1 000 000 EUR	42 500 000	99	Register account	96	Receivables from sold put options
20. 8.	Posting of the underlying liability		42 900 000	96	Liabilities from sold put options	99	Register account
20. 8.	The counterparty exercises the put option		42 900 000	35	Settlement account for foreign currency conversion	13	Bank's current account (mirror account to the nostro account)
20. 8.	Conversion at the NBS exchange rate	1 000 000 EUR	42 500 000	13	Bank's current account in SKK – loro account	35	Settlement account for foreign currency conversion
20. 8.	Exchange rate loss from the conversion after exercising the option.		400 000	61	Expenses from exercised options (derivative operations)	35	Settlement account for foreign currency conversion

In conclusion it is necessary to note that the accounting in the analytical accounts in the accounting group 39 – Options following maturity of the option trade it is correct, if these accounts exhibit zero balances for the completed trade. The result of the option trade should be in the accounting recorded on the income and expenditure accounts in the accounting groups 61 – Expenses for Derivative Operations and 71 – Income from Derivatives Operations, where this means that not only the option premium and revaluation belong to these expenses and incomes, but also the expenses and incomes that the bank has incurred following the exercising of an option. At the same time

in exercising an option on the expiry date the real value of the option becomes a component of valuing the derivative trade that follows.

It is necessary to ensure the monitoring of the profitability or losses made on option trades in the bank in an operative register, or software application. It is not possible and from the aspect of accounting principles not necessary to administer all the details on option trades in the accountancy. The bank registers option trades in the trading book at their real value individually and at the same time in the accounting system in a partial and summary manner, so that these data may be regularly monitored and their accuracy checked.