CALCULATING CAPITAL REQUIREMENTS FOR FOREIGN EXCHANGE RISK

A credit institution must calculate the net foreign exchange position arising on its entire business activities (i.e. trading and banking books) in accordance with the procedure in this Annex.

Furthermore, a credit institution has to ensure compliance with any limits that could be set by the authority from time to time in relation to assets that credit institutions could hold in foreign currencies. Such limits may be set by the authority for prudential reasons as appropriate on a case-by-case basis.

I.1.0 Procedure for Calculating the Net Foreign Exchange Position - Basic Method

The net open position in each currency (excluding base currency used[1]), calculated in the local currency, shall consist of the following elements:-

(i) net spot position: all assets less all liabilities, including accrued interest, in the currency in question;

(ii) net forward position: all amounts to be received less all amounts to be paid under forward exchange transactions, including currency futures and the principal on currency swaps not included in the spot position;

(iii) irrevocable guarantees (and similar instruments) which are certain to be called;

(iv) net future income/expenses not yet accrued but already fully hedged (with the prior consent of the authority, net future income/expenses not yet entered in accounting records but already fully hedged by forward foreign exchange transactions may be included);

(v) the net delta (or delta-based) equivalent of the foreign currency options book (paragraph I.6.0 below);

(vi) the market value of other (i.e. non-foreign currency) options; and

Any positions which the credit institution has deliberately taken in order to hedge against the adverse effect of the exchange rate on its capital ratio, or any position which relates to items that are already deducted in the calculation of Own Funds, may be excluded from the calculation of net open currency positions. Such positions should be of a non-trading or structural nature and their exclusion, and any variation of the terms of their exclusion requires the consent of the authority.

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[1] *For a credit institution whose share capital is designated in €, its base currency is € while for an institution whose share capital is designated in a currency* ***other*** *than the €, its base currency would therefore be* ***this other currency****.*

Where specific provisions are held in a different currency to that of the relevant asset, the specific provision shall be included as a liability in the calculation of the net open position for the currency of the provision and the asset provided for shall be included in the calculation of the net open position for the currency of the asset.

For the purposes of the calculation referred to in the next paragraph, in respect of Collective Investment Undertakings (CIUs) the actual foreign exchange positions of the CIU shall be taken into account. Institutions may rely on third party reporting of the foreign exchange positions in the CIU, where the correctness of this report is adequately ensured. If an institution is not aware of the foreign exchange positions in a CIU, it shall be assumed that the CIU is invested up to the maximum extent allowed under the CIU's mandate in foreign exchange and institutions shall, for trading book positions, take account of the maximum indirect exposure that they could achieve by taking leveraged positions through the CIU when calculating their capital requirement for foreign exchange risk. This shall be done by proportionally increasing the position in the CIU up to the maximum exposure to the underlying investment items resulting from the investment mandate. The assumed position of the CIU in foreign exchange shall be treated as a separate currency according to the treatment of investments in gold, subject to the modification that, if the direction of the CIU's investment is available, the total long position may be added to the total long open foreign exchange position and the total short position may be added to the total short open foreign exchange position. There would be no netting allowed between such positions prior to the calculation.

Having calculated the net short or long positions in each foreign currency (i.e. excluding the base currency), these shall be converted at spot rates into the reporting currency. The net short positions and the net long positions, respectively must then be summed separately. The higher of these two totals shall be the institution's overall net foreign exchange position. The overall net foreign position, calculated after excluding positions covered in paragraphs I.2.0 to I.4.0 below, carries a requirement of 8%.

Net positions in composite currencies may either be broken down into the component currencies according to the quotas in force and included in the net open position calculations for individual currencies, or treated as a separate currency. However, the mechanism for treating composite currencies must be applied consistently.

I.2.0 Procedure for calculating the Net Foreign Exchange Position - Backtesting Method

With the prior approval of the authority, a credit institution may apply a backtesting method to calculate the capital requirements for either all or a subset of the currencies (including gold) comprising an institution's foreign exchange position.

The currencies to be included in the backtesting method should be agreed in advance with the authority and, where option risks other than delta are included in the backtesting model, it will require prior recognition by the authority. (Occasionally, it will be appropriate for the position in one pre-determined currency to be split, with only a proportion of it included in the backtesting method. Such a treatment should be agreed in advance with the authority.)

The capital requirement produced by the backtesting method for the portfolio is determined as follows:-

(i) Losses, which would have occurred in at least 95% of ten-working-day periods rolled on a daily basis over the preceding five years, are calculated. The 95% loss quantile will, where the observation period covers 1,300 valuations, correspond to the 65th largest loss;

or

Losses, which would have occurred in at least 99% of ten-working-day periods rolled on a daily basis over the preceding three years, are calculated. The 99% quantile will, where the observations cover 780 valuations, correspond to the 8th largest loss. (The losses must be calculated by assuming that the current portfolio of net open positions in the designated currencies was held at the start of each rolling period.);

(ii) The requirement is the higher of the losses calculated in (i) above, and 2% of the overall net foreign exchange position as calculated by applying the basic method to the net open positions in the portfolio of designated currencies.

If the backtesting method is used, the net open position in gold can be incorporated into the same model as a position in foreign currency.

I.3.0 Closely Correlated Currencies

With the prior written approval of the authority, a credit institution may provide a lower capital requirement of 4% on the matched position in two closely correlated currencies. A credit institution seeking the authority's approval must prove to the satisfaction of the authority that the currencies in question satisfy one of the following conditions:-

(i) the likelihood of a loss, calculated on the basis of daily exchange rate data for the preceding three years, occurring on equal and opposite positions in the currencies in question over the following ten working days, which is 4% or less of the value of the matched position in question (valued in terms of the reporting currency) has a probability of a least 99%; or

(ii) that the likelihood of such loss on such positions, calculated on the basis of daily exchange rate data for the preceding five years, has a probability of at least 95%.

I.4.0 Gold

When the backtesting method is not used, gold should be treated separately. In this case the capital requirement is 8% of the gross total of all net open positions (whether long or short).

I.5.0 Capital Requirement

The capital requirement on unmatched positions in closely correlated currencies and all positions in other currencies shall be 8% multiplied by the higher of the sum of the net short or the net long positions in those currencies after the removal of matched positions in closely correlated currencies. To the resultant balance the capital requirements on the matched positions in closely correlated currencies, the capital charge for gold, and capital charges for options if the simple carve out approach or model based approach is used, must be added.

I.6.0 Options (General)

Options (and their associated hedges) can be entirely omitted from the net open position, and capital charges calculated using either the simple carve out approach (set out in **Appendix I - D**) or a model based approach. In the latter case, the authority must review and recognise the model prior to its use. Note that, subject to authority approval, for the purposes of the Rule, netting of back-to-back option positions is permitted. **Appendix I - D** sets out the Simple Method for Options (Carve Out).

I.7.0 Calculating the Net Open Position

Appendix I - A sets out an example on the calculation of the Net Open Position in each currency (including gold) subject to the following:

(a) Coverage

All on and off balance sheet positions including irrevocable guarantees. Net future income/expenses not yet entered in accounting records, but already fully hedged by forward foreign exchange, may be included where it is part of the credit institution's written policy and is done on a consistent basis.

(b) Valuation:

All Assets/Liabilities (whether on- or off-balance sheet) should be converted into the reporting currency at closing mid-market spot rates. Mark-to-market items should be calculated on the basis of the current market value of the positions, converted at the same closing spot rates. Where a credit institution has a trading book (and is therefore obliged to mark-to-market daily for the purposes of the Rule), it may record the net forward position at net present value without further reference to the authority.

(c) Composite Currencies

Net positions in composite currencies may either be broken down into the component currencies according to the quotas in force and included in the net open position calculations for individual currencies, or treated as a separate currency. However, the mechanism for treating composite currencies must be applied consistently.

(d) Swaps

Currency swaps should be treated as a combination of a long position in one currency and a short position in the second currency.

(e) Options

A number of approaches are possible. First, options (and their associated hedges) can be entirely omitted from the net open positions, and capital charges calculated using either the simple carve out approach (set out in **Appendix I - D**) or a model based on the scenario matrix approach to option risk. In the latter case, the authority must review and recognise the model prior to its use. Second, the option delta value can be incorporated into the net open position, and capital charges for other option risks calculated separately using a model based on the buffer approach to option risk. Such a model will also need to be reviewed and recognised by the authority prior to use. Third, where a credit institution has chosen to use the backtesting method to measure overall foreign exchange exposure (see paragraph I.2.0 above), the model used may include several option risks. Where it is not only delta that is incorporated, the model must be reviewed and recognised by the authority. Extra capital charges will apply for those option risks that the model does not capture.

Note that, subject to the authority's approval, netting of back-to-back option positions is permitted.

(f) Structural Positions

Certain positions of a structural, or non-banking nature, as set out below, may be excluded, from the calculation of the net open position:

- positions taken deliberately to hedge against the effects of exchange rate movements on the Own Funds of a credit institution;

- investments in overseas subsidiaries which are fully deducted from a credit institution’s Own Funds for capital adequacy purposes.

Appendix I - B sets out the calculation of the Capital Requirement for Foreign Exchange Risk.

Appendix I - C and **Appendix I - E** set out the Foreign Exchange returns with the information that needs to be submitted by every credit institution in terms of the Foreign Exchange Capital Requirement under the Rule.

Appendix I - D sets out the simple carve-out approach for calculating the capital requirements for market risk on options and related hedges.