

The stock index is covered by the equity treatment.

c. In the case of futures-related arbitrage strategies, the 2.0 percent specific risk charge applicable to broad diversified equity indices may be applied to only one index. The opposite position is exempt from a specific risk charge. The strategies qualifying for this treatment are:

i. When the bank takes an opposite position in exactly the same index at different dates; or

ii. When the bank has an opposite position in different but similar indices at the same date, subject to FDIC review.

d. If a bank engages in a deliberate arbitrage strategy, in which a futures contract on a broad diversified equity index matches a basket of securities, it may exclude both positions from the standardized approach on condition that the trade has been deliberately entered into and separately controlled and the composition of the basket of stocks represents at least 90 percent of the market value of the index. In such a case, the minimum measure for market risk is 4.0 percent (that is, 2.0 percent of the gross value of the positions on each side) to reflect risk associated with executing the transaction. This applies even if all of the securities comprising the index are held in identical proportions. Any excess value of the securities comprising the basket over the value of the futures contract or excess value of the futures contract over the value of the basket is treated as an open long or short position.

e. If a bank takes a position in depository receipts<sup>32</sup> against an opposite position in the underlying equity, it may offset the position.

#### C. Foreign Exchange Risk

1. The measure for market risk in foreign exchange covers the risk of holding or taking positions in foreign currencies, including gold, whether or not those positions are in the trading portfolio.<sup>33</sup> The measure is calculated as 8.0 percent of the sum of the greater of a bank's total net open long positions or net open short positions in each currency and the net open position in gold.

2. When calculating a bank's net open position in each currency and gold, positions in composite currencies, such as the ECU, may be either treated as a currency in their own right or split into their component parts on a consistent basis. Positions in gold (including futures and forwards) should be converted to U.S. currency at current spot rates. The bank's net open position in each currency is the sum of:

a. The net spot position (i.e., all asset items less all liability items, including accrued interest earned but not yet received and accrued expenses, denominated in the currency in question);

b. The net forward position.<sup>34</sup> All foreign exchange derivative instruments and other off-balance-sheet positions that are affected by changes in exchange rates are included in the measurement system under this section IV.C. (except for options and their associated underlyings, which are included in the measurement system under the treatment discussed in section IV.E. of this appendix C). Forward currency positions should be valued at current spot market exchange rates, but for a bank in which the basis of its normal management accounting is to use net present values, forward positions may be discounted to net present values as an acceptable way of measuring currency positions for regulatory capital purposes;

c. Guarantees (and similar instruments) that are certain to be called and are likely to be irrecoverable;

d. At the discretion of the bank, net future income/expenses not yet accrued but already fully hedged. A bank that includes future income and expenses must do so on a consistent basis without selecting expected future flows in order to reduce the bank's position; and

e. Any other item representing a profit or loss in foreign currencies.

3. The measure for market risk of foreign exchange is determined by converting the net open position in each foreign currency at spot rates into U.S. currency. The risk measure is 8.0 percent of the overall net open foreign exchange position, which is determined by summing:

a. The greater of the sum of the net long open positions or, the sum of the net short open positions; and

b. The absolute value (that is, regardless of whether it is long or short) of the net open position in gold.<sup>35</sup>

4. If a bank is assessing its foreign exchange risk on a consolidated basis, it may be technically impractical in the case of some marginal operations to include the currency positions of a foreign branch or subsidiary of the bank. In such cases, the branch or subsidiary's internal limit in each currency may be used as a proxy for the positions, provided there is adequate *ex post* monitoring of actual positions complying with such limits. In these circumstances, the absolute value of the limits should be added to the net open position in each currency.

#### D. Commodities Risk

1. *Measurement Methods.* The measure for market risk in commodities is calculated by either the simplified method or the maturity method. These methods are only appropriate for banks that conduct a limited amount of commodities business. All other banks must

adopt an internal model measurement system conforming to the criteria in section III. of this appendix C.

2. *Base Measure.* Under both the simplified and maturity methods, each long and short commodity position (spot or forward) is expressed in terms of the standard unit of measurement (such as barrels, kilos, or ounces). The positions are then converted at current spot rates into U.S. currency, with long and short positions in each category of commodities offset to arrive at the net open position in each commodity. Positions in different categories of commodities may not, generally, be offset. However, offsetting is permitted between different sub-categories of the same commodity if the sub-categories are deliverable against each other. Under the simplified or maturity method, the base measure for market risk is 15.0 percent of the absolute value (i.e., neither long nor short) of the net open position in each commodity.<sup>36</sup>

3. *Simplified Method.* To protect a bank against basis risk, interest rate risk, and forward gap risk, the measure of market risk under the simplified method includes an additional 3.0 percent of the bank's gross positions, long plus short, in each commodity. In valuing gross positions in commodity derivatives for this purpose, a bank should use the current spot price. The total measure for commodities risk is thus the sum of the 15.0 percent base charges for each net commodity position and the 3.0 percent requirements on the gross commodity positions.

4. *Maturity Method.* a. Under this method, a bank must allocate each long and short commodity position (converted into U.S. currency at current spot rates) into a maturity ladder with time bands as set out in table 4. A separate maturity ladder is used for each category of commodity. Physical commodities are allocated to the first time band:

TABLE 4.—COMMODITY TIME BANDS

Time Bands
0–1 month
1–3 months
3–6 months
6–12 months
1–2 years
2–3 years
Over 3 years

b. In order to capture forward gap and interest rate risk within a time band (together sometimes referred to as curvature/spread risk), offsetting long and short positions in each time band are subject to an additional charge. Beginning with the shortest-term time band and continuing with subsequent time bands, the amount of the matched short

<sup>32</sup> Generally, depository receipts are instruments issued by a trust company or other depository institution evidencing the deposit of foreign securities and facilitating trading in such instruments on U.S. stock exchanges.

<sup>33</sup> Gold is treated as a foreign exchange position rather than a commodity because its volatility is more in line with foreign currencies and banks manage it in a manner similar to foreign currencies.

<sup>34</sup> Where gold is part of a forward contract (quantity of gold to be received or to be delivered), any interest rate or foreign currency exposure from the other side of the contract should be reported as set out in section IV.A. (treating gold as a zero-coupon instrument) and this section.

<sup>35</sup> For example, a bank has the following net currency positions: Yen=+50, DM=+100, GB=+150, FFR=+20, US\$=−180, and gold=−35. The bank would sum its long positions (total=+300) and sum its short positions (total=−200). The bank's capital requirement for foreign exchange market risk would be: (300 (the larger of the summed long and short positions)+35 (gold))×8.0%=\$26.80.

<sup>36</sup> When the funding of a commodity position opens a bank to interest rate or foreign exchange exposure the relevant positions should be included in the measures of interest rate and foreign exchange risk described in sections IV.A. and IV.C. of this appendix C. When a commodity is part of a forward contract, any interest or foreign currency exposure from the other side of the contract should be appropriately included in sections IV.A. and IV.C. of this appendix C.