

**PRINCIPLE I
CONCERNING THE
CAPITAL OF INSTITUTIONS**

**Announcement of October 29, 1997 (Federal Gazette page 13555)
as last amended by the announcement of July 20, 2000 (Federal Gazette No. 160)**

Principle I

Contents

Part I: Adequacy of own funds

- S. 1 Scope
- S. 2 Adequacy of own funds
- S. 3 Consolidation
- S. 4 Risk assets
- S. 5 Market risk positions

Part II: Weighting of risk assets

- S. 6 Assessment basis
- S. 7 Asset items
- S. 8 Off-balance-sheet transactions
- S. 9 Swap transactions, futures contracts and option rights
- S. 10 Marking-to-market method
- S. 11 Original exposure method
- S. 12 Recognised bilateral netting agreements and contracts for novation
- S. 13 Risk weightings

Part III: Overall currency position

- S. 14 Calculation and weighting of the overall currency position
- S. 15 Asset and liability positions

Part IV: Commodities position

- S. 16 Calculation and weighting of the commodities position
- S. 17 Maturity band method

Part V: Trading book risk positions

- S. 18 Trading book risk positions
- S. 19 Net positions
- S. 20 General market risk net interest position
- S. 21 Time band method
- S. 22 Duration method
- S. 23 Specific market risk net interest position
- S. 24 General market risk net equity position
- S. 25 Specific market risk net equity position
- S. 26 Stock index positions
- S. 27 Settlement and counterparty risk positions of the trading book

Part VI: Options position

- S. 28 Inclusion of activities in options
- S. 29 Capital charge for the gamma factor risk
- S. 30 Capital charge for the vega factor risk
- S. 31 Scenario matrix analysis

Part VII: Internal risk models

- S. 32 Use of risk models
- S. 33 Determination of the capital charges
- S. 34 Quantitative standards
- S. 35 Risk factors to be included
- S. 36 Qualitative standards
- S. 37 Predictive quality

Part I:
Adequacy of own funds

1. Scope

(1) ¹This Principle establishes rules pursuant to sections 10 (1), 10a (1) of the Banking Act according to which the Federal Banking Supervisory Office will as a rule assess whether the overall own funds of an institution (including those of a building and loan association operated as legally dependent units) or the overall own funds of the enterprises belonging to a group (section 10a (1) sentence 1 of the Banking Act) are adequate. ²If an institution or a group fails to meet the requirements laid down in section 2 by more than an insignificant amount, or repeatedly, there is normally reason to suppose that the institution does not have the necessary own funds. ³When assessing the adequacy of the own funds of an institution or a group, special circumstances which warrant lower or higher requirements, as the case may be, can be taken into consideration subject to the limits specified in section 2.

(2) ¹This Principle does not apply to investment companies and financial service institutions other than those financial service institutions which

1. conduct trading for their own account (section 1 (1a) sentence 2 number 4 of the Banking Act)
2. are authorised as investment intermediaries (section 1 (1a) sentence 2 number 1 of the Banking Act), contract intermediaries (section 1 (1a) sentence 2 number 2 of the Banking Act) or portfolio managers (section 1 (1a) sentence 2 number 3 of the Banking Act) to obtain the ownership or possession of funds or securities of customers or which trade in financial instruments for their own account.

²The transactions concluded by securities trading houses organised in the form of a sole proprietorship or a partnership for the proprietor's or general partners' own account shall be included in this Principle.

(3) The provisions of Part V do not apply to non-trading book institutions (section 13 (1) sentence 1 of the Banking Act).

2. Adequacy of own funds

(1) The ratio of the liable capital of an institution (section 10 (2) sentence 2 of the Banking Act) to its weighted risk assets pursuant to section 4 must not fall below 8 % at the close of each business day.

(2) ¹The sum of the capital charges for the market risk positions and, in the case of section 28 (3) sentence 1, the capital charges for an institution's options business must not exceed the difference between the liable capital and 8 % of the sum of the weighted risk assets (risk asset capital charge), increased by the amount of tier 3 capital (section 10 (2c) sentence 1 of the Banking Act) at the close of each business day. ²The market risk positions referred to in sentence 1 are made up of

1. overall foreign currency position pursuant to section 5 (1)
2. the commodities position pursuant to section 5 (2)
3. in the case of institutions subject to the provisions of Part V, the trading book risk positions pursuant to section 5 (3).

³In the case of institutions which take up the option pursuant to section 32 to use internal risk models, market risk positions are composed of those positions referred to in sentence 2 numbers 1 to 3 whose risk content the institution has taken into account in its internal risk model; partial consolidation of the positions pursuant to sentence 2 numbers 1 to 3 is permissible.

(3) ¹On the last day of each calendar month, an overall ratio shall be computed which gives an institution's eligible own funds (numerator) as a percentage of the sum of weighted risk assets and the capital charges, multiplied by 12.5, for market risk positions and options pursuant to subsection (2) (denominator). ²The eligible own funds are composed of the liable capital available under this Principle and the tier 3 capital used to support market risk positions and options. ³In addition to the overall ratio, the ratio of tier 3 capital not at present used but included in the own funds and the denominator of the overall ratio pursuant to sentence 1 shall be stated as a memo item.

3. Consolidation

- (1) The capital requirements pursuant to section 2 apply as appropriate to groups for the ratios calculated for
1. total liable capital to total risk asset capital charges (the risk assets included in the deduction pursuant to section 10a (6) of the Banking Act shall not be taken into account),
 2. total liable capital less total risk asset capital charges plus total tier 3 capital to the sum of the capital charges for the market risk positions of all enterprises belonging to the group,
 3. total eligible own funds to the sum of the weighted risk assets, and the capital charges, multiplied by 12.5, for the market risk positions and options.
- (2) The computation of the capital requirements for the ratios pursuant to subsection (1) 2 may be based on the capital charges for market risk positions and options of the subordinated enterprises having their registered office outside the Federal Republic of Germany which are calculated in accordance with the market risk provisions applying in the home country concerned on the reporting dates specified in section 2 (3) if the market risk provisions are based on the provisions of Council Directive 93/6/EEC of March 15, 1993 or, in other G-10 countries outside the European Economic Area, on the Capital Accord of the Basle Committee on Banking Supervision.

4. Risk assets

¹An institution's risk asset capital charge shall be computed in accordance with the provisions of Part II. ²The following shall be regarded as risk assets:

1. asset items,
2. off-balance-sheet transactions other than those included in number 3 or 4,
3. swap transactions,
4. futures contracts and option rights,

to the extent that these items do not have to be taken into account when calculating the capital charges for the trading book risk positions. Gold bullion and asset items which are

1. included in the calculation of the commodities position,
2. deducted from the liable capital pursuant to section 10 (2) and (6) of the Banking Act, or
3. fully backed by liable capital

shall likewise be carved out.

5. Market risk positions

(1) ¹The capital charge for the overall currency position has to be calculated in accordance with the provisions of Part III from all the institution's items denominated in foreign currency or gold. ²Items which are deducted from the liable capital pursuant to section 10 (2) and (6) of the Banking Act or are fully backed by liable capital, as well as participating interests, including shares in affiliated undertakings recorded in foreign currency which are valued at historical costs (structural currency positions) may be excluded when calculating the overall currency position upon the institution's request and after obtaining the prior consent of the Federal Banking Supervisory Office .

(2) The capital charge for the commodities position shall be calculated in accordance with the provisions of Part IV from all the institution's assets denominated in commodities, including precious metals other than gold.

(3) The capital charges for the institution's trading book risk positions shall be calculated in accordance with the provisions of Part V

1. for the interest-rate-related and equity-price-related risk positions of the trading book:
from the sum of the partial capital charges for the general and specific market risks
2. for the settlement and counterparty risk positions of the trading book: as the sum of the capital charges for the settlement risk, the free deliveries risk, the principal risks inherent in repurchase agreements and lending operations and OTC instruments and other directly associated settlement and counterparty risks.

Part II:
Weighting of risk assets

6. Assessment basis

- (1) Subject to section 12, the basis of assessment for the weighting of the risks assets is as follows:
1. in the case of asset items and off-balance-sheet items pursuant to section 4 sentence 2 number 2 (other than guarantees for swaps, futures contracts and option rights): the book value plus the contingency reserves attributable to the individual asset items pursuant to section 340f of the Commercial Code recognised as liable capital pursuant to section 10 (2b) sentence 1 number 1 of the Banking Act, less fees booked but creditable to subsequent financial years and deferrals for loan discounts and less rentals paid by the lessee or a purchase of lease receivables, with the book value of the leased objects as the maximum deduction,
 2. in the case of swaps and the guarantees assumed in connection therewith: the effective principal amount or - in the absence of such principal amount - the current market value of the underlying instrument,
 3. in the case of futures contracts, option rights and the guarantees assumed in connection therewith: the institution's right to the delivery or purchase of the underlying instrument, on the assumption that the contracts are actually performed, converted at the current market price.

(2) ¹Risk assets denominated in a foreign currency shall be translated into the currency in which the report was made (currency of accounting) at the reference rate (ESCB reference rate) established by the ESB on the respective reporting date and published by the Deutsche Bundesbank; instead of the ESCB reference rate on the reporting date, the institution, in translating those participating interests (including shares in affiliated undertakings) which it does not treat as part of its foreign currency positions, may use the exchange rate obtaining at the time when such interests were first entered in its books. ²When translating currencies for which no ESCB reference rate is published, the middle rates derived from the determinable buying and selling rates quoted on the respective reporting day shall be applied.

7. Asset items

The following shall be regarded as asset items within the meaning of section 4 sentence 2 number 1:

1. balances with central banks and postal giro offices,
2. public sector debt instruments, and bills of exchange eligible for refinancing with central banks,
3. cash items in the course of collection, for which payments have already been advanced,
4. loans and advances to credit institutions and customers (including the trade receivables of credit institutions trading in goods),
5. debt securities and other fixed-interest securities other than those evidencing a right referred to in section 4 sentence 2 number 4,
6. shares and other variable-yield securities, other than those evidencing a right referred to in section 4 sentence 2 number 4,
- 6a. the stock-in-trade to the extent that this item is not taken into account when calculating the capital charges for the commodities position in accordance with the provisions of Part IV,
7. participating interests,
8. shares in affiliated undertakings,
9. tangible fixed assets
10. assets in respect of which leasing contracts have been concluded as the lessor, irrespective of how these assets are shown in the balance sheet,
11. other assets,
12. prepayments.

8. Off-balance-sheet transactions

The following shall be counted as off-balance-sheet transactions within the meaning of section 4 sentence 2 number 2

1. at 100 % of their basis of assessment:
 - (a) bills of exchange in circulation drawn by the credit institution, discounted and credited to borrowers,
 - (b) liabilities arising from the endorsement of rediscounted bills,
 - (c) guarantees for asset items,
 - (d) assets pledged as collateral for third-party liabilities,
 - (e) unconditional commitments by building and loan associations to fund interim and bridging loans granted by third parties to savers with such associations,
 - (f) assets purchased under outright forward purchase agreements,
 - (g) forward deposits,
 - (h) asset sales with recourse, where the credit risk remains with the selling institution,
 - (i) assets which a borrower has transferred to a lender subject to the condition that they must be retransferred or redeemed at the lender's request,
 - (j) unpaid portion of partly paid up shares and securities;

2. at 50 % of their basis of assessment:
 - (a) documentary credits issued and confirmed,
 - (b) warranties and guarantees other than those referred to in number 1 (c),
 - (c) obligations arising from note issuance facilities (NIFs) and revolving underwriting facilities (RUFs),
 - (d) undrawn credit facilities with an original maturity of more than one year which may not be cancelled by the institution unconditionally and without notice;

3. at 20 % of their basis of assessment:

documentary credits issued and confirmed in which the underlying shipment acts as the collateral.

9. Swap transactions, futures contracts and option rights

(1) ¹Institutions to which the provisions of Part V apply shall count swap transactions, futures contracts and option rights, and guarantees assumed in connection with these risk assets, according to the marking-to-market method pursuant to section 10. ²Non-trading-book institutions may count the transactions referred to in sentence 1, to the extent that the replacement cost is due entirely or partly to changes in interest rates, exchange rates or the price of gold, at the institution's discretion and on a consistent basis, by the original exposure method pursuant to section 11 rather than the marking-to-market method. ³The choice may differ for precisely specified and clearly defined segments; the segments may be defined according to different financial instruments or different organisational areas of the institution. ⁴The institution may switch at any time from the original exposure method to the marking-to-market method. ⁵

(2) The relevant maturity shall be

1. in the case of futures contracts and option rights for underlyings which have a specified maturity: the maturity of the underlying,
2. in the case of futures contracts and option rights in respect of variable-yield securities and single-currency floating-floating interest rate swaps: the period remaining until the next interest rate adjustment date,
3. in the case of other swap transactions, futures contracts and option rights: the maturity of the transaction.

10. Marking-to-market method

¹If the marking-to-market method is employed, the risk assets shall be counted, subject to the calculation method pursuant to section 12 if the requirements stipulated there have been met, at the potential replacement cost which, according to the daily valuation, would arise if the counterparty were to fail, plus the add-on specified in sentence 3 to reflect the potential future increase in risk; no add-on shall be applied to single-currency floating-floating interest rate swaps. ²The amount of the potential replacement cost shall be determined by the level of the additional expenditure or of the lower earnings which would arise in the event of contracting an equivalent position. ³The add-on is the relative percentage of the basis of assessment shown in Table 1. ⁴Risk assets whose replacement cost is based on the change in the prices of several categories shall be assigned to the category with the highest percentage prescribed in Table 1.

Table 1

Residual maturity	Interest-rate-related Transactions	Exchange-rate- and gold-price-Related Transactions	Equity-price-related transactions	Precious-metal- price-(except gold)-related transactions	Commodity-price-related and other transactions
1 year or less	0.0 %	1.0 %	6.0 %	7.0 %	10.0 %
More than 1 year but not exceeding 5 years	0.5 %	5.0 %	8.0 %	7.0 %	12.0 %
Over 5 years	1.5 %	7.5 %	10.0 %	8.0 %	15.0 %

11. Original exposure method

¹If the original exposure method is used, the risk assets shall be counted, subject to the calculation method pursuant to section 12 if the requirements stipulated there have been met, by applying the maturity-related percentages given in Table 2 to the relevant basis of assessment.

Table 2

Original maturity	Interest-rate-related transactions only (residual maturity)	Exchange-rate- and gold-price-related transactions (original maturity)
1 year or less	0.5 %	2.0 %
More than 1 year but not exceeding 2 years	1.0 %	5.0 %
Additional allowance for each additional year	1.0 %	3.0 %

12. Recognised bilateral netting agreements and contracts for novation

(1) Bilateral netting agreements and contracts for novation for swaps, forward contracts and option rights between the institution and its counterparty lead to a reduced weighting of the risk assets included pursuant to subsections (2) and (5), provided that the conditions referred to in the Regulation governing large exposures and loans of three million Deutsche Mark or more (*Großkredit-und Millionenkreditverordnung*) have been met and the Federal Banking Supervisory Office has recognised the risk-reducing effect of these agreements.

(2) ¹If under a bilateral netting agreement a single claim to the difference between the positive and negative market values of the transactions concluded with the counterparty and covered by the agreement is established pursuant to subsection (1) for the event of the counterparty's failure, the transactions included shall be counted either by the marking-to-market method or the original exposure method. ²If the marking-to-market method is applied, the transactions covered by the netting agreement shall be counted in the amount of the difference between the positive and negative market values, plus an add-on factor A.

A is determined using the equation

$$A=0.4*S + 0.6*R*S$$

from the sum S of the add-ons, pursuant to section 10 sentence 3, of the transactions covered by the netting agreement and the ratio R. R is the ratio of the potential replacement cost, which would be incurred in the event of a failure of the counterparty in the amount of the difference between the positive and negative market values of the transactions covered by the netting agreement with the counterparty, to the sum of the replacement costs individually determined by separate calculations for the transactions covered. If the original exposure method is used, the percentages given in Table 3 shall be applied. The market values shall be determined on a daily basis.

Table 3

Original maturity	Interest-rate-related transactions only (residual maturity)	Exchange-rate- and gold-price-related transactions (original maturity)
1 year or less	0.35 %	1.50 %
more than 1 year but not exceeding 2 years	0.75 %	3.75 %
additional allowance for each additional year	0.75 %	2.25 %

(3) ¹In the case of forward foreign exchange transactions or other comparable transactions where the nominal value equals the existing claim for payment and insofar as the claims arising from such transactions are accompanied by matching liabilities in the same currency and with the same value date, a basis of assessment reduced by netting may be used even if only a netting agreement has been concluded. ²The reduced basis of assessment is determined by the sum of the claims which would be due to the institution after netting of the matching claims and liabilities in the same currency and with the same value date. ³If the marking-to-market method is used, a uniform add-on, taking into account the reduced basis of assessment, may be calculated in deviation from subsection (2) sentence 3 which is to be added to the relevant capital charge. ⁴If the original exposure method is used, the maturity-related percentages pursuant to section 11 (Table 2) shall be applied to

the reduced basis of assessment.

(4) ¹The institution may take into account risk assets covered by the bilateral netting agreement pursuant to section 4 sentence 2 numbers 3 or 4, where the replacement cost is due entirely or partly to a change in exchange rates and the original maturity of the transaction is less than fifteen calendar days, if this is done consistently for all transactions concluded with the counterparty. ²The institution shall continue to take them into account even if the capital charge for the risk assets increases as a result.

(5) In the case of a contract for novation, under which the debt arising from a swap, other forward transaction or option right is converted directly in such a way that the claims and obligations arising therefrom are cancelled out in full or in part, the net amount of debt remaining after such novation shall be weighted.

13. Risk weightings

- (1) Subject to the provision in accordance with subsection (6), a zero weighting shall be applied to:
1. risk assets constituting claims on, or carrying the explicit guarantee of,
 - (a) the Federal Government, a Land Government, a legally dependent special fund of the Federal Government or of a Land Government, a local authority or local authority association or a legally independent promotional institution that operates non-competitively in the area of validity of the Banking Act which is operated by one or more of the above-mentioned central or regional governments or local authorities and for which the latter have assumed liability equivalent to an explicit guarantee for the fulfilment of the institution's payment obligations,
 - (b) a zone A foreign central government or central bank,
 - (c) the European Communities,
 - (d) a zone B central government or central bank, if the risk assets are denominated and funded in the national currency of the borrower or issuer,
 - (e) a regional government or local authority in another member state of the European Communities or a state being a party to the Treaty on the European Economic Area, if such risk assets are not taken into account in that state, the state notifies the European Commission accordingly and the Commission has publicised this fact;
 2. risk assets insofar as they are secured, to the satisfaction of the competent authorities, by collateral in the form of
 - (a) securities of a zone A central government or central bank, or securities issued by the European Communities,
 - (b) securities issued by a Land Government, a local authority, a local authority association, a promotional institution within the meaning of subsection (1) 1a or a special fund of the Federal Government or of a Land Government in the area of validity of the Banking Act,
 - (c) securities issued by a regional government or local authority in another member state of the European Communities or a state being a party to the Treaty on the European Economic Area, if the risk assets secured in this way are not taken into account in that state, the state has notified the European Commission accordingly and the Commission has publicised this fact,
 - (d) certificates of deposit or similar instruments issued by and lodged with the lending institution,
 - (e) cash deposits lodged with the lending institution;
 3. risk assets in accordance with section 4 sentence 2 number 3 or number 4, whose replacement cost is

due entirely to changes in exchange rates, if the original maturity of the transaction is less than 15 calendar days and if they are not taken into account in accordance with section 12 (4);

4. risk assets according to section 4 sentence 2 number 4 which are subject to daily margin requirements (margin system) and which constitute claims on, or carry the explicit guarantee of, a stock exchange or futures exchange, and the guarantees assumed in connection with the settlement of such risk assets;
5. until December 31, 2006 risk assets within the meaning of section 4 sentence 2 number 3 or 4 which are settled through a clearing agency domiciled in a member state of the European Communities or a contracting state of the European Economic Area. The clearing agency must act as a central counterparty and, with regard to the precautions taken to exclude the current and potential replacement cost of all risk assets included, has to have been recognised as a clearing agency by the Federal Banking Supervisory Office.

(2) A 10 % weighting shall be applied to debt securities which meet the requirements of Article 22 (4) sentences 1 and 2 of the UCITS Directive.

(3) Subject to the provision in accordance with subsection (6), a 20 % weighting shall be applied to:

1. risk assets constituting claims on, or carrying the explicit guarantee of,
 - (a) a zone A foreign regional government or local authority, subject to subsection (1) 1 (e),
 - (b) a public corporation operated as a non-profit body by one of the entities referred to in subsection (1) 1 (a) or a non-profit enterprise wholly owned by one or more of these central, regional or local authorities,
 - (c) a public corporation operated as a non-profit body in another zone A country other than those bodies for which the appropriate banking supervisory authorities in the home country have fixed a higher counterparty risk weighting,
 - (d) the European Investment Bank,
 - (e) a multilateral development bank within the meaning of Article 2 (1) seventh indent of the Council Directive of December 18, 1989 on a solvency ratio for credit institutions (89/647/EEC) (Solvency Ratio Directive),
 - (f) an institution (including a branch within the meaning of section 53 of the Banking Act) to which this Principle applies, provided that the risk assets are not counted towards the institution's own funds,
 - (g) a foreign institution within the meaning of Article 2 point 3 of the Council Directive 93/6/EEC of March 15, 1993 on the capital adequacy of investment firms and credit institutions (Capital Adequacy Directive - CAD) and recognised third-country investment firms within the meaning of

Article 2 point 4 of the Capital Adequacy Directive, if they are domiciled in zone A and are subject to capital requirements corresponding to those prescribed in Article 4 (1) of the Capital Adequacy Directive, provided that the risk assets of the institution are not own funds within the meaning of the Council Directive of April 17, 1989 on the own funds of credit institutions (89/299/EEC) (Own Funds Directive) or similar own funds,

- (h) a zone B credit institution, provided that the original maturity of the risk assets does not exceed one year and that they do not constitute own funds,
 - (i) zone A foreign non-profit administrative institutions placed under the management of central governments, regional governments or local authorities, and non-profit enterprises owned by zone A central governments, regional governments or local authorities or zone A institutions which perform the same functions as regional governments or local authorities, if the weightings applied to the risk assets constituting claims on, or carrying the explicit guarantee of, these administrative institutions or enterprises in the home country do not exceed 20 %,
 - (j) ecclesiastical public-law bodies which are constituted throughout the Federal Republic of Germany and which collect taxes by virtue of Article 140 of the Constitution of the Federal Republic of Germany and Article 137 (6) of the Weimar Constitution or which participate in the tax revenue of tax-collecting ecclesiastical bodies;
2. risk assets insofar as they are secured, to the satisfaction of the competent authorities, by collateral in the form of
- (a) securities issued by the European Investment Bank,
 - (b) securities issued by a multilateral development bank,
 - (c) securities issued by a zone A foreign regional government or local authority, subject to the provisions of subsection (1) 2 (c),
 - (d) cash deposits lodged with a zone A institution other than the lending institution,
 - (e) certificates of deposit or similar instruments issued by a zone A institution other than the lending institution;
3. asset items within the meaning of section 7 number 3.

(4) A 50 % weighting shall be applied to:

1. risk assets as defined in section 4 sentence 2 numbers 3 and 4, unless they qualify for a lower weighting,
2. mortgage loans within the meaning of section 14 (2) sentence 3 number 5 of the Banking Act which are secured by mortgages on residential property which is or will be occupied or let by the borrower,
3. until December 31, 2006 mortgage loans within the meaning of section 14 (2) sentence 3 number 5 of the Banking Act secured by mortgages on office accommodation or commercial property with a variety of potential uses situated in the area of validity of the Banking Act or the territory of another member state which has availed itself of the option provided for in Article 11 (4) of the Solvency Ratio Directive,
 - if the amount of the loan exceeds neither 50 % of the market value of the property nor 60 % of its loan value,
 - if the loan value and, in particular, the underlying assumptions about the development of the market in question are evaluated at least every three years or are re-evaluated if the market value falls by more than 10 %,
 - the property is currently being used or let or will be used or let by the owner,
4. securities secured by mortgages whose principal and interest yield is fully and directly covered by a pool of loans secured by mortgages, if it is ensured that the mortgages are held for the buyers,
5. prepayments as defined in section 7 number 12 where a credit institution is unable to determine the counterparty.

(5) A 70 % weighting shall be applied to the following loans granted by building and loan associations to savers unless they come under subsections (1) and (3):

1. loans granted by building and loan associations under allocated savings contracts (including loans as defined in subsection (4) 2,
2. interim and bridging loans granted by building and loan associations to savers with them pending receipt of a building loan,

if at least 60 % of these loans are granted in compliance with the loan-to-value ratio pursuant to section 7 (1) sentence 3 of the Building and Loan Associations Act (*Gesetz über Bausparkassen*) and are secured by mortgages on real estate.

(6) A 100 % weighting shall be applied to

1. risk assets which are counted towards the own funds of an institution to which the provisions of the Solvency Ratio Directive are applicable and the weighting of 20 % is applied,
2. all other risk assets.

Part III:
Overall currency position

14. Calculation and weighting of the overall currency position

(1) ¹The overall currency position shall be established at the close of business on any day separately for each currency (unmatched individual currency positions) and for gold (unmatched gold position) from the differences, translated into the currency of accounting, between the asset and liability positions. ²Section 6 (2) applies as appropriate; asset and liability positions in gold shall be translated into the currency of accounting at the rate quoted on the market which is to be regarded as representative in terms of the volume of turnover.

(2) ¹The unmatched positions in each currency shall be summed separately to form the total of the net short positions and the total of the net long positions. ²The higher of these two totals (net currency position) together with the unmatched gold position constitutes the institution's overall currency position.

(3) If the overall currency position exceeds 2 %, or the higher of the two sums to be calculated separately of all asset and liability positions in all foreign currencies translated into the currency of accounting exceeds 100 %, of the own funds, an 8 % weighting shall be applied to the overall currency position to determine the capital charge.

(4) ¹When determining the capital charge for the overall currency position an institution may, at its discretion and on a consistent and permanent basis, carve out opposite positions of equal amounts after translation into the currency of accounting (matched currency position) in demonstrably closely correlated currencies when calculating the unmatched individual currency positions as defined in subsection (1) and instead add 50 % of the amount of the matched currency position to the net currency position determined in accordance with subsection (2). ²An 8 % weighting shall be applied to the overall currency position to determine the capital charge; subsection (3) shall not apply.

(5) Foreign currencies may be deemed to be demonstrably closely correlated if the probability - based on daily exchange rate data for the preceding three or five years - that any loss occurring on matched positions in such currencies over the following ten working days will not exceed 4 % of the value of the matched position in question is at least 99 %, when an observation period of three years is used, or 95 %, when an observation period of five years is used.

15. Asset and liability positions

(1) ¹Asset positions are

1. assets to be shown on the asset side of the balance sheet, including accrued income, even if it has not yet been allocated to the relevant balance sheet items, unless these assets are to be included in asset positions numbers 4 or 5,
2. delivery and payment rights arising under spot and forward contracts and rights to the payment of principal amounts under financial swaps, unless these rights are included in asset position number 1,
3. contingent rights under sale and repurchase agreements to the redelivery of items listed under asset position number 1,
4. delivery or payment rights of the institution, arising when exercising its own option rights or when third parties exercise option rights, under foreign exchange or gold options pursuant to section 28,
5. own option rights not included in number 4,
6. irrevocable guarantees and similar instruments that are certain to be called, if this increases the asset positions numbers 1 to 5.

²Expected receipts other than accrued income may be counted towards asset positions, at the institution's discretion and on a consistent and permanent basis, if the competent authorities have satisfied themselves that such receipts have been hedged by one or more of the liability positions numbers 1 to 5.

(2) ²Liability positions are

1. debts to be shown on the liability side of the balance sheet, including accrued charges, even if these have not yet been allocated to the relevant balance sheet items,
2. delivery and payment obligations arising under spot and forward contracts, and obligations to pay principal amounts under financial swaps, unless these obligations are included in liability item number 1,
3. contingent liabilities under sale and repurchase agreements to redeliver items listed under asset position number 1,
4. delivery or payment obligations of the institution, arising when exercising its own option rights or when third parties exercise option rights, under foreign exchange and gold options pursuant to section 28,
5. third-party option rights not included in number 4,
6. irrevocable guarantees and similar instruments that are certain to be called, if this increases the liability positions numbers 1 to 5.

²Expected expenses other than accrued charges may, at the institution's discretion and on a consistent and

permanent basis, be counted towards the liability positions, if the competent authorities have satisfied themselves that such expenses have been hedged by one or more of the asset positions numbers 1 to 5.

(3) ¹The asset and liability positions numbers 1, 3 and 6 shall be included in the amount of their book values, the asset and liability positions number 5 in the amount of their market values, the other asset and liability positions in their nominal amounts. ²Notwithstanding sentence 1, the delivery and payment obligations arising from forward foreign exchange and forward gold transactions and to be included in the asset and liability positions number 2 may be included on a discounted cash flow basis at the institution's discretion and on a consistent and permanent basis. ³Irrespective of how the loss provisions on asset items have been made, they shall be deducted from these items.

(4) Asset or liability positions denominated in units of account whose exchange rate is computed from the exchange rates of other currencies may, at the institution's discretion and on a consistent and permanent basis, be treated as a foreign currency or broken down into the component currencies on the basis of which their exchange rate is established.

Part IV:
Commodities position

16. Calculation and weighting of the commodities position

(1) ¹The commodities position shall be calculated at the close of each business day from the differences between the asset and liability positions, based on the spot market prices of the commodities and translated into the currency of accounting (unmatched individual commodity positions), separately for each commodity.²Section 6 (2) applies as appropriate. ³ When calculating the commodities position, a zero weighting may be given to transactions which constitute a matched position for the entire duration of the transaction as a result of firm agreements on the acceptance or delivery of the commodity in question up to the time of performance, if an institution decides to do so on a uniform and permanent basis and if the Federal Banking Supervisory Office has given its approval.

(2) Asset positions are

1. commodity stocks to be shown on the asset side of the balance sheet,
2. delivery rights in respect of swap, spot and forward transactions,
3. delivery rights due to the institution pursuant to section 28 arising when exercising its own option rights or when third parties exercise option rights,
4. contingent rights under sale and repurchase agreements to the redelivery of items listed under asset position number 1.

(3) Liability positions are

1. delivery obligations in respect of swap, spot and forward transactions,
2. delivery obligations to be met by the institution pursuant to section 28, arising when exercising its own option rights or when third parties exercise option rights,
3. contingent liabilities under sale and repurchase agreements to redeliver items listed under asset position number 1.

(4) ¹To determine the capital charge, the unmatched individual commodity positions shall be aggregated, irrespective of whether they are positive or negative, and assigned a 15 % weighting. ²The asset and liability positions in the individual commodities shall be aggregated, irrespective of whether they are positive or negative, and 3 % of this sum shall be added to the total calculated in accordance with sentence 1.

17. Maturity band method

(1) Notwithstanding the provisions of section 16 (4), the institution may, at its discretion on a permanent basis, determine the capital charge for the commodities position from the partial capital charges for the unmatched individual commodities positions, using a risk measurement system with different time bands and established for each commodity separately, for the seven consecutive weighting areas (time bands) given in Table 4.

Table 4

Time band
up to 1 month
over 1 up to 3 months
over 3 up to 6 months
over 6 up to 12 months
over 1 year up to 2 years
over 2 years up to 3 years
over 3 years

(2) ¹To determine the partial capital charges for the unmatched individual commodities positions, the asset and liability positions shall be slotted into the time bands of the risk measurement system in accordance with their maturity and opposite positions of the same amount in each time band (matched time band positions) and the remaining differences between asset and liability positions (unmatched time band positions) shall be calculated. ²The matched time band positions shall be assigned a 3 % weighting and shall be aggregated to yield the partial capital charge.

(3) ¹The unmatched time band position in each time band, beginning with the first time band listed in Table 4, shall be aggregated with the unmatched time band position of each subsequent time band, and the matched and unmatched time band positions deriving from this aggregation and to be slotted into the next following time band shall be determined. ²Each unmatched time band position included in the aggregation shall be assigned a 0.6 % weighting in each time band and be added to the partial capital charge pursuant to subsection (2) sentence 2. ³The matched time band positions deriving from the aggregation shall be assigned a 3 % weighting and added to the partial capital charge pursuant to subsection (2) sentence 2. ⁴The remaining unmatched time band position shall be assigned a 15 % weighting and be added to the partial capital charge pursuant to subsection (2) sentence 2.

**Part V:
Trading book risk positions**

18. Trading book risk positions

- (1) Trading book risk positions are
1. net positions arising from
 - (a) interest-rate-related financial instruments pursuant to section 1 (11) of the Banking Act (net interest positions),
 - (b) equity-price-related financial instruments pursuant to section 1 (11) of the Banking Act (net equity positions)
 2. settlement and counterparty risk positions in the trading book.
- (2) When determining the net positions within the meaning of subsection (1) 1, the weightings listed in Table 5 shall be assigned to the underwriting of interest or equity-price-related securities on the basis of the time, expressed in working days, from the date of the initial commitment, provided that the securities underwritten are not already included in the institution's portfolio. ² By contrast, guarantees and commitments, undertaken by third parties, to assume the institution's interest-rate-related or equity-price-related securities are to be included as short positions.

Table 5

Working days elapsed since the initial commitment	Percentage
Zero	0
One	10
Two	25
Three	25
Four	50
Five	75
six or more	100

- (3) Financial instruments transferred as part of sale and repurchase agreements or securities lending, which have to be included in the net positions pursuant to subsection (1) 1, shall be ascribed to the transferor or lender.
- (4) Investment fund certificates shall not be included in the calculation of the trading book risk positions.

19. Net positions

- (1) ¹Net positions are the differences arising from
1. holdings of the same securities, delivery rights and delivery obligations arising from spot, forward and option transactions and swap transactions relating to the same securities as underlying instruments or which contractually relate to the same securities,
 2. closely matched opposite derivative transactions to the extent that they are included in the net interest position.

²Index-related transactions shall be treated like securities. ³ When applying the provisions in accordance with Part V, trading book assets are to be treated in the same way as securities.

(2) ¹When calculating the net positions, the forward, option and swap transactions pursuant to subsection (1) sentence 1 number 1 and the derivative transactions pursuant to subsection (1) sentence 1 number 2 shall be split up into components in accordance with their interest rate effect on the basis of the associated cash flows and shall be included with their relevant amounts. ²The components of the forward, option and swap transactions pursuant to subsection (1) sentence 1 number 1 which are not related to securities shall be regarded as derivative transactions after the splitting and included in the calculation of the net position in accordance with subsection (1) sentence 1 number 2. ³In the case of the net positions pursuant to subsection (1) sentence 1 number 1, the relevant amounts are the current market prices of the securities, and in the case of the net positions according to subsection (1) sentence 1 number 2 the discounted values, translated into the currency of accounting in each case; section 6 (2) applies as appropriate. ⁴Options shall be included in accordance with the provisions of section 28.

- (3) Securities shall be deemed to be the same if
1. they were issued by the same issuer,
 2. they are denominated in the same currency and traded in the same national market,
 3. in the event that they are included in the net interest position, they have the same repayment profile,
 4. in the event that they are included in the net equity position, they give the holder the same status in terms of voting rights,
 4. in the event of insolvency of the issuer, they have the same rank.

- (4) Positions arising from derivative transactions shall be deemed to be closely matched if
1. they have the same nominal value and are denominated in the same currency,
 2. in the event that they are included in the net interest position, their nominal yield in terms of their coupon or the same variable reference rate does not differ by more than 0.15 percentage points,
 3. the residual maturity or next interest fixing date corresponds to the limits set out in Table 6:

Table 6

Next interest fixing date or residual maturity	Limit
less than one month	same calendar day
between one month and one year	seven calendar days
over one year	30 calendar days

20. General market risk net interest position

(1) In order to calculate the partial capital charge for the general market risk, the net interest positions shall be allocated, with the relevant amounts, to the appropriate time bands in accordance with the time band method based on their residual maturity or next interest fixing date, separately for each currency and for long or short positions and broken down by their coupon, and assigned the relevant weightings.

(2) Notwithstanding subsection (1), the institution may, at its discretion and on a consistent and permanent basis, use the duration method instead of the time band method.

21. Time band method

(1) ¹If the time band method is used, the time bands for net positions with a coupon of less than 3 % (coupon category A) comprise the periods listed in column A of Table 7. ²For coupons of 3 % or more (coupon category B) the time bands comprise the periods listed in column B of Table 7. ³The time bands, which are measured from the respective calculation date, are assigned the weightings listed in column C of Table 7. ⁴The time bands are grouped into the following zones:

1. the first four time bands to form the short-term maturity zone,
2. the following three time bands to form the medium-term maturity zone,
3. the other time bands to form the long-term maturity zone.

Table 7

Column A Time band for coupon category A	Column B Time band for coupon category B	Column C Weighting in %
up to one month over one month up to three months over three months up to six months over six months up to twelve months	up to one month over one month up to three months over three months up to six months over six months up to twelve months	0.00 0.20 0.40 0.70
over one year up to 1.9 years over 1.9 years up to 2.8 years over 2.8 years up to 3.6 years	over one year up to two years over 2 years up to 3 years over 3 years up to 4 years	1.25 1.75 2.25
over 3.6 years up to 4.3 years over 4.3 years up to 5.7 years over 5.7 years up to 7.3 years over 7.3 years up to 9.3 years over 9.3 years up to 10.6 years over 10.6 years up to 12.0 years over 12.0 years up to 20.0 years over 20.0 years	Over 4 years up to 5 years Over 5 years up to 7 years Over 7 years up to 10 years over 10 years up to 15 years over 15 years up to 20 years over 20 years	2.75 3.25 3.75 4.50 5.25 6.00 8.00 12.50

(2) After the net interest positions have been assigned to the appropriate time bands and weighted in accordance with section 20 (1), the weighted net interest positions of the two coupon categories shall be aggregated for each time band separately for long and short positions.

(3) For each time band the matching amounts of the weighted long and short net positions (matched time band positions) and the remaining unmatched amounts (unmatched time band positions) shall be calculated.

(4) ¹The matched positions for each time band shall be aggregated to yield the total sum of the matched time band positions. ²For each maturity zone the unmatched time band positions in that zone shall be aggregated separately for long and short positions.

(5) ¹For each maturity zone the matching amounts of the unmatched long and short time band positions, aggregated according to subsection (4) sentence 2 (matched zone positions) and the remaining unmatched amounts (unmatched zone positions) shall be calculated. ²The unmatched zone positions of all maturity zones shall be netted with one another individually, taking account of whether they are long or short, in order to determine the matched net zone positions and the unmatched net zone positions, and the remaining unmatched net zone position shall be calculated; this shall be done by, firstly, netting the unmatched zone position of the short-term zone with the unmatched zone position of the medium-term zone, and then the remaining unmatched zone position of the medium-term zone with the unmatched zone position of the long-term zone and the remaining unmatched zone position of the long-term zone with the remaining unmatched zone position of the short-term zone.

(6) The partial capital charge for the general market risk shall be calculated as the sum of

1. 10 % of the total sum of the matched band positions,
2. 40 % of the matched zone position of the short-term zone,
3. 30 % of the matched zone position of the medium-term zone,
4. 30 % of the matched zone position of the long-term zone,
5. 40 % of the matched net zone position derived from netting the short-term and medium-term zones,
6. 40 % of the matched net zone position derived from netting the remaining unmatched zone position of the medium-term zone with the unmatched zone position of the long-term zone,
7. 150 % of the matched net zone position derived from netting the remaining unmatched zone positions of the short-term and long-term zones,
8. the remaining unmatched net zone position.

22. Duration method

(1) ¹If the duration method is used, the net interest positions shall be slotted into the time bands shown in Table 8, which comprise the periods starting from the relevant calculation date, in accordance with their duration.
²Section 21 (1) sentence 4 applies as appropriate.

(2) In order to determine the weightings to be applied to the net positions to be slotted into the maturity zones, the assumed yield changes listed in Table 8 shall be multiplied by the "modified duration", a discounted cash flow ratio to be determined for each net position.

Table 8

Time band	Assumed yield change in %
up to one month	1.00
over one month up to three months	1.00
over three months up to six months	1.00
over six months up to 12 months	1.00
Over one year up to 1.9 years	0.90
Over 1.9 years up to 2.8 years	0.80
Over 2.8 years up to 3.6 years	0.75
Over 3.6 years up to 4.3 years	0.75
Over 4.3 years up to 5.7 years	0.70
Over 5.7 years up to 7.3 years	0.65
Over 7.3 years up to 9.3 years	0.60
Over 9.3 years up to 10.6 years	0.60
over 10.6 years up to 12.0 years	0.60
over 12.0 years up to 20.0 years	0.60
over 20.0 years	0.60

(3) Section 21 (2) to (6) applies as appropriate with the proviso that, notwithstanding section 21 (6) 1, the total sum of the matched band positions shall be assigned a 5 % weighting.

23. Specific market risk net interest position

(1) In order to calculate the partial capital charge for the specific market risk, the relevant amounts of the net interest positions shall be aggregated and assigned an 8 % weighting.

(2) Net positions pursuant to section 19 (1) sentence 1 number 1 (security net interest positions) constituting claims on, or carrying the explicit guarantee of, entities defined in section 13 (1) 1 (a) to (c) and (e), and net positions arising from components as defined in section 19 (2) sentences 1 and 2, where the underlying instrument involves no credit risk (derivative net interest positions), are not to be included in the aggregation pursuant to subsection (1).

(3) ¹In the aggregation pursuant to subsection (1), security net interest positions in qualifying paper shall be weighted according to their residual maturity. ²Qualifying paper are securities constituting claims on, or carrying the explicit guarantee of, entities as defined in section 13 (3) 1 (a) to (g) and (i) and (j), as well as securities which

1. are traded on at least one regulated market within the meaning of Article 1 (13) of the Council Directive 93/22/EEC of May 10, 1993 on investment services in the securities field (Investment Services Directive) in a member state of the European Union or on a recognised stock exchange in another zone A country and
2. which are considered sufficiently liquid by the institution according to its own general criteria designed for permanent application, which on request shall be disclosed to the Federal Banking Supervisory Office, and are assigned a counterparty risk that is comparable with or lower than that of risk assets as defined in section 13 (3) 1 (a) to (g) and (i) and (j).

³The following weightings shall be applied to qualifying assets with a residual maturity of

- | | | |
|----|---------------------------------|----------|
| 1. | up to six months | 3.125 % |
| 2. | over six months up to two years | 12.500 % |
| 3. | over two years | 20.000 % |

24. General market risk net equity position

The difference between the aggregated relevant amounts of the net long (increasing the holding) and short (reducing the holding) equity positions shall be included, with an 8% weighting, separately for each national equity market, as a partial capital charge for the general market risk.

25. Specific market risk net equity position

(1) ¹In order to determine the partial capital charge for the specific market risk, the relevant amounts of the net equity positions shall be aggregated (regardless of whether they are long or short) and assigned a 4 % weighting, subject to sentence 2. ²Net positions arising from forward contracts on a commonly used stock index shall be assigned a zero weighting.

(2) ¹Net positions pursuant to section 19 (1) sentence 1 number 1 in qualifying highly liquid equities shall be included in the aggregation pursuant to subsection (1) with only 50 % of their relevant amount provided that they do not account for more than 5 % each of the value of the total net positions. ²The limit referred to in sentence 1 clause 2 is 10 %, if the total value of the net positions is 50 % or less of the value of the total net positions. ³Equities are considered to be highly liquid if they have been included, to the satisfaction of the competent authorities, in a widely used stock index. ⁴Equities are considered to be qualifying equities if they have been listed, to the satisfaction of the competent authorities, on a stock exchange pursuant to section 1 (3e) of the Banking Act in a country with a liquid equity market and if the issuer is not the debtor of securities included in the net interest position that are not qualifying assets as defined in section 23 (3).

26. Stock index positions

In determining net equity positions, net positions deriving from stock index transactions may, at the institution's discretion and on a consistent and permanent basis and notwithstanding section 19 (1) sentence 2, be broken down completely into net positions in the individual equities underlying the stock index in accordance with the current index composition.

27. Settlement and counterparty risk positions of the trading book

(1) The capital charge for the settlement and counterparty risk positions of the trading book shall be based on the following:

1. in the case of transactions in which financial instruments are unsettled after their due delivery dates: the difference to which the institution would be exposed between the agreed settlement price for the underlying debt instrument or equity and its current market value (settlement risk),
2. in the case of free deliveries by the institution as part of transactions with financial instruments: the value of the securities or cash owed to the institution; in the case of cross-border transactions a capital charge shall be made for free deliveries if more than one day has elapsed since that payment or delivery has been made (free delivery risk),
3. in the case of securities repurchase agreements and securities lending and borrowing,
 - (a) in the case of the transferor or lender: the amount by which the current market value of the financial instruments transferred exceeds the amount of money received or the current market value of the collateral received, including accrued interest, provided that the transferee or borrower has undertaken to retransfer the financial instruments transferred to it temporarily by the transferor or lender against payment of cash or provision of collateral in cash or securities,
 - (b) in the case of the transferee or borrower: the amount by which the amount of money provided or the current market value of the collateral provided, including accrued interest, exceeds the market value of the financial instruments received,

and if the conditions specified in subsection (3) have been met,

4. in the case of derivative instruments which are not subject to daily margin requirements (margin system) and not constituting claims on, or carrying the guarantee of, a stock exchange or futures exchange, or to which the exemption pursuant to section 13 (1) 5 does not apply: the underlying principal or, assuming actual performance, the institution's right to delivery or receipt of the underlying instrument,
5. in the case of claims in the form of fees, commissions, interest, dividends and margins which are directly related to trading book items: the book value, unless the claims are included in the asset items within the meaning of section 7 or deducted from own funds.

² When determining the counterparty risk positions of the trading book, commodities are to be regarded as financial instruments.

(2) The capital charges are as follows:

1. for the settlement risk, at the institution's discretion and on a consistent and permanent basis: the sum of the differences between the agreed settlement price and the current market value of the transaction, weighted with the time-dependent percentages listed in column A of Table 9, or the sum of the settlement prices of the underlying financial instruments multiplied by the graded weightings listed in column B of Table 9; if more than 45 business days have elapsed since the agreed settlement date, the difference to which the institution is exposed between the agreed settlement price and the current market value shall be included in full,

Table 9

Number of business days after due settlement date	Column A in %	Column B in %
5 – 15	8	0.5
16 – 30	50	4.0
31 – 45	75	9.0
46 or more	100	

2. for the free delivery risk: 8 % of the value of the securities or cash owed to the institution multiplied by the risk weighting applicable to the relevant counterparty pursuant to section 13,
3. for the counterparty risk arising from securities repurchase agreements and securities lending and borrowing: 8 % of the amounts to be included pursuant to subsection (1) 3, multiplied by the risk weighting applicable to the relevant counterparty pursuant to section 13, subject to the provisions of subsection (3),
4. for the settlement and counterparty risk arising from derivative instruments referred to in subsection (1) 4: 8 % of the capital charge to be determined in accordance with the method prescribed in section 10, multiplied by the risk weighting applicable to the relevant counterparty pursuant to section 13,
5. for the settlement and counterparty risk in respect of other claims as defined in subsection (1) 5: 8 % of the relevant risk asset capital charge.

(3) ¹The calculation of the capital charge pursuant to subsection (2) 3 is subject to the condition that

1. the institution's risk positions are marked to market on a daily basis,
2. the collateral is adjusted to changed market conditions,
3. the transactions are terminated and settled in the event of an insolvency of a counterparty,
4. no artificial transactions have been concluded.

²If these requirements are not met, the capital charge shall be calculated in accordance with the relevant provisions of Part II.

Part VI:
Options position

28. Inclusion of activities in options

(1) In determining the overall currency position, the commodities position and the trading book risk positions, the institution's delivery or payment rights or delivery or payment obligations arising from activities in options to be included on the assumption that the contracts are actually performed shall be included in the amount of their delta-equivalent.

(2) If the provisions of Part V are applicable to the institution, further capital charges for gamma factor risk and vega factor risk pursuant to sections 29 and 30 (delta-plus method) shall be added to the capital charges for the overall currency position and the commodities position and the partial capital charges for the general market risk arising from trading book risk positions.

(3) ¹An institution to which the provisions of Part V apply may, at its discretion and on a consistent and permanent basis upon request and with the prior approval of the Federal Banking Supervisory Office, separately determine, pursuant to section 31, the capital charge for its activities in options (scenario matrix analysis). ²In that case, notwithstanding subsection (1), options shall not be included when determining the capital charges for the overall currency position and the commodities position and the partial capital charges for the general market risk arising from trading book risk positions. ³The institution may, when calculating the capital charge for its activities in options, additionally include the other asset or liability items or net positions verifiably hedged by the options, provided that these have to be included in the overall currency position, the commodities position or the trading book risk positions, and exclude them when calculating the capital charges for the overall currency position and the commodities position as well as the partial capital charges for the general market risk arising from trading book risk positions. ⁴The Federal Banking Supervisory Office may request an institution, which uses the delta-plus method, to switch to the scenario matrix analysis for some or all types of activities in options within a reasonable transitional period if this seems appropriate, in view of the type, size or structure of such activities in options of the institution, for the adequate recording and capital backing of the risks involved in these activities.

(4) ¹The delta-equivalent of a right or obligation or an asset or liability-side component shall be determined by multiplying the relevant nominal amount by the delta factor established for the option. ²The delta factor of an option measures the change in the option price in terms of the change in the price of the underlying of the option which is assumed to be only very small. ³The gamma factor of an option measures the change in the delta factor in terms of the change in the price of the underlying of the option which is assumed to be only very small; a negative gamma factor denotes the gamma factor of a third-party option right. ⁴The vega factor of an option measures the change in the option price in terms of the change in volatility which is assumed to be very small; a negative vega factor denotes the vega factor of a third-party option right. The volatility measures the variation in the price of the underlying of the option.

(5) ¹When determining the sensitivity factors referred to in subsection (4) sentences 2 to 4 and the volatility and when using the scenario matrix analysis, the institution shall use consistently for options of the same type,

paying due regard to market practices, suitable computer-aided option pricing models in accordance with scientific methods. ²Section 36 (3) sentence 1 and sentence 2 clause 1 apply as appropriate. ³The Federal Banking Supervisory Office shall be informed of the methods and option pricing models referred to in sentence 1 and concurrently given a detailed and comprehensive description. ⁴The Federal Banking Supervisory Office may prohibit the use of an unsuitable option pricing model by an institution and require the use of a suitable option pricing model, if this seems appropriate in view of the type, size or structure of the institution's activities in options for the adequate recording and capital backing of the risks involved in these transactions.

29. Capital charge for the gamma factor risk

(1) If the option involves the delivery or receipt of shares, other equities, stock indices, foreign currency or gold, the gamma factor risk for a unit of the underlying of the option shall be determined by multiplying one-half of the gamma factor of the option by the square of 8 % of the currency-of-accounting-denominated market value of a unit of the underlying.

(2) If the option involves the delivery or receipt of commodities, the gamma factor risk of a unit of the underlying of the option shall be determined by multiplying one-half of the gamma factor of the option by the square of 15 % of the currency-of-accounting-denominated market value of a unit of the underlying.

(3) ¹If the option involves the delivery or receipt of a debt instrument, the gamma factor risk shall be determined by multiplying one-half of the gamma factor of the option by the square of the currency-of-accounting-denominated market value of the debt instrument weighted with the relevant weighting factor shown in Table 7. ²If the duration method pursuant to section 20 (2) is applied, the weighting calculated in accordance with section 22 (2) shall be used.

(4) ¹If the option involves the delivery or receipt of an interest-rate-related financial instrument other than those referred to in subsection (3), the gamma factor risk shall be determined by multiplying one-half of the gamma factor of the option by the square of the weighted currency of accounting-denominated market value of the underlying. ²The determination of the weighting to be used in sentence 1 shall be based on the yield changes shown in Table 8.

(5) ¹The gamma factor risks of options involving the delivery or receipt of shares, other equities or stock indices shall be aggregated to the extent that the shares, other equities or stock indices are traded in the same national market. ²The gamma factor risks of options which involve the delivery or receipt of foreign currency or gold shall be aggregated for all options involving the same currency pairs or the same currency/gold pairs. ³The gamma factor risks of options which involve the delivery or receipt of commodities shall be aggregated separately for each group of options involving the same commodities. ⁴The gamma factor risks of options involving debt instruments or other interest-rate-related instruments shall - if the time band method is used - be aggregated separately for all time bands shown in Table 7 or - if the duration method is used - for all time bands shown in Table 8.

(6) The capital charge for the gamma factor risk is the absolute value of the sum of all gamma factor risks calculated in accordance with subsections (1) to (4) and aggregated in accordance with subsection (5) which have a negative sign.

30. Capital charge for the vega factor risk

¹The vega factor risk shall be determined for each individual option using the vega factor of the option for a relative change in the current volatility of 25 %, expressed in the currency of accounting. ²The vega factor risks shall be aggregated in accordance with section 29 (5) for options involving the same underlying. ³The capital charge for the vega factor risk shall be determined as the absolute amount of the vega factor risks aggregated in accordance with sentence 2.

31. Scenario matrix analysis

(1) ¹If the scenario matrix analysis is used, options involving the same underlying shall be aggregated to form option classes pursuant to section 29 (5). ²Notwithstanding sentence 1, the institution may, at its discretion and on a consistent and permanent basis, itself determine the option classes for the aggregation of debt instruments and other interest-rate-related instruments based on the time bands shown in Tables 7 and 8; the options must be divided into at least six option classes and not more than three of the time bands shown in Tables 7 and 8 may be combined into one option class.

(2) ¹The capital charge for an option class shall be determined by revaluing all options included in the aggregation and their additionally included collateral pursuant to section 28 (3) sentence 3 for various combinations of simultaneous changes in the price of the underlying and its volatility and by determining the difference compared with the price of the option if the price of the underlying and its volatility had remained unchanged. ²These calculations shall be based on

1. a relative increase and a relative decrease in volatility of 25 % of the current level of volatility and
2. a relative increase and a relative decrease in the price of the underlying for
 - (a) underlyings involving foreign currency, gold, equities, stock indices and similar underlyings of 8 %
 - (b) underlyings involving commodities of 15 %,
 - (c) underlyings involving interest-rate-related financial instruments amounting to the highest assumed change in yield according to Table 8 for the time band to which the respective class has to be assigned;

at least six equally spaced intervals shall be used for the change in the price of the underlying pursuant to number 2. ³The capital charge for the option class shall be determined as the absolute amount of the largest loss resulting from the calculation pursuant to sentence 2 for all combinations. ⁴For determining the capital charge for all options (section 28 (3) sentence 1) the capital charges for the individual option classes shall be aggregated. ⁵Section 6 (2) applies as appropriate.

Part VII:
Internal risk models

32. Use of risk models

(1) ¹With the prior consent of the Federal Banking Supervisory Office, institutions may, instead of complying with the provisions of Parts III, IV, V and VI, use suitable internal risk models for determining the capital charges or partial capital charges for the market risk positions as defined in section 2 (2) sentence 2, provided that the Federal Banking Supervisory Office has confirmed their suitability in writing upon the institution's request.

²Institutions may temporarily restrict the use of suitable risk models to the calculation of individual or several capital charges or partial capital charges. In individual cases the Federal Banking Supervisory Office may restrict the use of internal risk models pursuant to sentence 1 by time, locality or according to other criteria.

(2) ¹Risk models are time-based stochastic representations of the changes in market rates, prices or interest rates and their effects on the market value of individual financial instruments or groups of financial instruments (value at risk) based on the sensitivity of these financial instruments or groups of financial instruments to changes in the factors determining the risk inherent in them. ²Risk models contain mathematical-statistical structures and distributions for the calculation of numbers describing risk, notably the degree and correlation of variations in rates, prices and interest rates (volatility and correlation) and the sensitivity of financial instruments or groups of financial instruments, which numbers are calculated by means of suitable computer-aided methods, in particular time series analyses.

(3) ¹Risk models shall be deemed to be suitable only if the calculation of the numbers describing the risk is based on the quantitative variables as defined in section 34, captures at least the risk factors defined in section 35, meets the qualitative standards set out in section 36 and if the predictive quality of the model is satisfactory. ²Compliance with the suitability requirements pursuant to sentence 1 shall be checked by the Federal Banking Supervisory Office in conjunction with the Deutsche Bundesbank; if necessary, these checks may be repeated even after a confirmation of suitability has been issued (follow-up checks). ³Material changes to risk models require a renewed confirmation of suitability pursuant to subsection (1).

(4) Institutions which, after having obtained the consent of the Federal Banking Supervisory Office, use internal risk models, may revert to calculating the capital charges or partial capital charges for the market risk positions in accordance with the provisions of Parts III, IV, V or VI only if the Federal Banking Supervisory Office has revoked in writing its confirmation of the suitability of the risk model or for other major reasons that have been accepted by the Federal Banking Supervisory Office.

33. Determination of the capital charges

- (1) ¹The relevant capital charge or partial capital charge shall be the higher of the following amounts:
1. the value-at-risk number for the financial instruments or groups of financial instruments (portfolio) held by the institution at the close of business on the previous day,
 2. the average of the daily value-at-risk numbers for the financial instruments or groups of financial instruments held by the institution at the close of business on each of the preceding sixty business days, multiplied by a scaling factor to be set by the Federal Banking Supervisory Office.

²If the risk model is used for determining the partial capital charge for the special price risk, the value-at-risk number given to the special price risk is to be included when determining the value-at-risk number pursuant to sentence 1 number 1 and when determining the weighted average of the value-at-risk numbers pursuant to sentence 1 number 2; this does not apply if the risk model is capable of recording all of the credit risk component contained in the special price risk.

(2) ¹The scaling factor to be used in accordance with subsection (1) 2 is 3. ²The Federal Banking Supervisory Office may prescribe, however, that in individual cases a plus factor shall be applied. ³The Federal Banking Supervisory Office will set the additional factor to be used in the light of the qualitative standards pursuant to sections 36 and 37 (1) and the predictive quality of the risk model pursuant to section 37 (2).

34. Quantitative standards

In calculating the value-at-risk

1. the financial instruments or groups of financial instruments held in the portfolio at the close of business shall be assumed to be held for another ten business days (holding period),
2. a one-tailed 99th percentile confidence interval and
3. an effective historical observation period of at least one year shall be used.

35. Risk factors to be included

(1) ¹In calculating value-at-risk, all material market risk factors shall be taken into account in a way which is appropriate to the size and structure of the institution's business. ²Concentration risks are to be given appropriate weighting when determining the partial capital charge for the special price risk.

(2) The risks inherent in the options included which do not have a linear connection to the volatility of rates, prices or interest rates shall be adequately taken into account.

(3) ¹Specific interest rate risks for the non-linear movement of short and long-term interest rates (term structure risks) and the non-linear movement of the interest rates of different interest-rate-related financial instruments denominated in the same currency and with a comparable residual maturity (spread risks) shall be taken into account separately in an appropriate way. ²When determining the term structure risks, a number and distribution of interest rate risk time zones appropriate to the size and structure of the institution's business shall be distinguished; not less than six interest rate risk zones must be used.

(4) In calculating the equity market risks and commodity market risks, differences in the movements of the rates or prices of product groups or products and differences in the movements of spot and forward prices shall be duly taken into account.

36. Qualitative standards

(1) The institution's organisation of its work and operations shall be designed in such a way that an up-to-date calculation of the value-at-risk, in particular a full inclusion of all its positions carrying a market price risk, is ensured; this shall be documented in detail.

(2) The task of constructing, maintaining and further developing the risk models, of the daily calculation, analysis and annotation of the value-at-risk and compliance with the requirements pursuant to subsections (3) to (5) and section 37 (1) shall be entrusted to a unit within the institution which is organisationally independent of the trading unit. ²Independence is to be ensured up to the managerial level of the institution.

(3) ¹The mathematical-statistical methods for calculating value-at-risk shall be documented in detail. ²They must be consistent with the methods used for current risk management; only departures from the quantitative requirements set out in section 34 and section 35 (3) sentence 2 are permissible.

(4) The adequacy of the mathematical-statistical methods for calculating value-at-risk and the quantitative variables on which they are based shall be checked at regular intervals; the check shall be documented in detail and the risk model adjusted if necessary.

(5) ¹Potential exceptionally large losses in the value of the individual financial instruments or groups of financial instruments included in the model calculation, which may arise as a result of exceptionally large or small changes in the market parameters determining their value and their correlations, shall be calculated at regular intervals appropriate to the scale and structure of the institution's business, and at least monthly in all cases (crisis scenarios). ²The losses in value pursuant to sentence 1 are to be calculated for all financial instruments as well as for the classes of individual financial instruments and categories of financial instruments (portfolios) defined in an appropriate manner by the institution. ³The assessment of the adequacy of the limits pursuant to subsection (6) shall be based on the results of the crisis scenarios.

(6) The ceilings for exchange rate, interest rate, equity price and commodity-price-related risks (limits) to be set by the institution shall be made dependent on the value-at-risk appropriately calculated by the model to the satisfaction of the competent authorities.

(7) The empirical data on the movement of prices, rates and interest rates and their correlations used for the time series analyses shall be updated at regular intervals, but at least every three months or without delay, if necessary.

(8) Compliance with the requirements pursuant to subsections (1) to (7) and section 37 (1) shall be checked by the internal audit division at regular intervals, but at least once a year.

(9) Management shall make sure that it is directly and meaningfully informed to its satisfaction by the unit referred to in subsection (2) of the results of the adequacy check of the risk model variables and procedures pursuant to subsection (4), the results of the crisis scenarios according to subsection (5) and the internal audit results pursuant to subsection (8); it shall take such information into due account when formulating the institution's business policy.

37. Predictive quality

(1) ¹The predictive quality of a risk model shall be checked, to the satisfaction of the competent authorities, by means of a daily comparison of the value-at-risk as calculated by means of the risk model on the basis of a holding period of one business day with the actual change in value of the individual financial instruments or groups of financial instruments included in the model calculation ("back-testing"). ²For this purpose, the financial instruments or groups of financial instruments included in the institution's portfolio at the close of business on the previous day shall be revalued using current market prices at the close of business, and the negative difference between that value and the previous day's valuation result shall be established. ³If the absolute amount of the change in value calculated in accordance with sentence 2 exceeds the value-at-risk calculated by the model, the Federal Banking Supervisory Office and the Deutsche Bundesbank shall be notified without delay of this exception, its size and its cause.

(2) ¹For the purposes of calculating the additional factor pursuant to section 33 (2) sentence 2, the Federal Banking Supervisory Office uses the number of exceptions during the previous 250 business days in accordance with Table 10. ²In measuring the additional factor, the Federal Banking Supervisory Office may disregard individual exceptions if it is satisfied by the institution that the exception was not due to an inadequate predictive quality of the model.

Table 10

Number of exceptions	Higher factor
less than 5	0.00
5	0.40
6	0.50
7	0.65
8	0.75
9	0.85
10 or more	1.00