CREDIT SUISSE

Unofficial translation of the Swiss Federal Banking Commission's „Rundschreiben der Eidg. Bankenkommission: Eigenmittelanforderungen für Kreditrisiken (Kreditrisiken)"

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Swiss Federal Banking Commission Circular: Capital Adequacy for Credit Risks (Credit risks) of 29 September 2006

Contents

I. Object

Rz

This Circular clarifies Art. 18–65 CAO (Capital Adequacy Ordinance). 1

II. Basel minimum standards

These regulations are based on the revised capital accord published by the Basel Committee on Banking Supervision (the Basel minimum standards). The underlying text is referred to (in the format "[§ ...]") and can be found in "International Convergence of Capital Measurement and Capital Standards: – A Revised Framework / Comprehensive Version" published in June 2006. References in the format [Annex ..., §...] relate to the Annex of that document. 2

III. Multilateral development banks (Art. 53 CAO)

[§59] The development banks listed in Appendix 1 shall receive a preferential risk weighting. 3

IV. External ratings (Art. 50–52 CAO)

A. Recognised rating agencies (Art. 52 CAO)

[§90] The supervisory authority shall publish a list of recognised rating agencies whose ratings shall be permitted for use in determining risk weightings. 4

B. Risk weighting using ratings (Art. 50 CAO)

[§68] The supervisory authority shall be entitled to refuse a bank the right to alternate between using and not using external ratings in accordance with Art. 50 (4) CAO where the supervisory authority takes the view that the bank's principal aim in so doing is to seek to reduce its capital requirement. 5

[§§96–98] Where there are two or more ratings with differing risk weightings, those ratings that correspond to the two lowest risk weightings shall be taken into account and the higher of these two shall be applied. 6

[§107] External ratings given for one entity within a corporate group shall not be used to determine risk weighting for other entities within the same group. In the same way, a rating for a financial group or financial conglomerate shall not be used to determine the risk weighting for a single subsidiary thereof, unless the financial group in question is a bank subject to consolidated supervision. 7

C. Issuer-specific and issue-specific ratings

[§99, 102] Securities with an issue-specific rating assigned by a recognised rating agency must be risk-weighted using that rating. If a bank's exposure does not have an issue-specific rating, the following shall apply: 8

- Where a borrower has had a rating assigned to a specific issue but the bank's exposure does not exactly match that issue, the issue-specific rating (which gives a lower risk weighting than for an unrated claim) may only be applied to the bank's unrated exposure if the latter is not subordinate to the rated issue. Otherwise, the rating shall not be used and the unrated exposure shall be assigned the appropriate risk weighting (i.e. that for unrated claims). 9

- Where unrated exposures in accordance with Rz 9 are risk-weighted based on comparably rated exposures, the general rule is that foreign currency ratings shall be used for exposures in the same foreign currency. Domestic currency ratings – where separately available – shall only be used to risk-weighting assets likewise denominated in the domestic currency. 10

- Where the borrower has an issuer rating, this typically applies to senior unsecured claims on that issuer. Other exposures to an issuer with a good rating shall be treated as if they were unrated claims. If the issuer has a poor rating (attracting a risk weighting at least equal to that for unrated claims), an unrated claim on the same borrower shall be assigned the same risk weighting as applies to that particular poor rating. 11

[§100] Irrespective of whether a bank takes the issuer-specific or issue-specific rating as its basis, it shall ensure that a customer's entire liability is factored into the risk-weighting assessment. 12

D. Short-term ratings

[§103] For risk-weighting purposes, short-term ratings shall be deemed to be issue-specific. They shall only be used to derive risk weightings for exposures to which that rating has been assigned. 13

E. Unrated short-term claims

[§104] Where a rated short-term exposure is allocated a 50% risk weighting, unrated short-term claims shall not be allocated a risk weighting lower than 100%. If an issuer has a short-term rating warranting a 150% risk weighting, all unrated claims, whether long-term or short-term, shall also receive a 150% risk weighting unless the bank holds recognised forms of collateral for such exposures. 14

F. Use of external ratings

[§94] Where a bank uses ratings provided by external rating agencies to determine risk weightings, the bank must be consistent in its application of such ratings in its internal risk management procedures. 15

V. Derivatives (Art. 42–45 CAO)

A. Mark-to-market method: add-on rates (Art. 43 CAO)

With the mark-to-market method under SA-CH and SA-BIS/IRB, add-ons (as described in more detail in Rz 27–48 or 49–63) shall be calculated using the following add-on rates: 16

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	Underlying value of contract	Add-on rate in %, with respect to residual term to maturity		
		≤ 1 year	> 1 year ≤ 5 years	> 5 years
1.	Interest rates	0.0	0.5	1.5
2.	Currencies and gold	1.0	5.0	7.5
3.	Equity securities	6.0	8.0	10.0
4.	Precious metals (except gold)	7.0	7.0	8.0
5.	Other commodities	10.0	12.0	15.0
6.	Credit derivatives (with reference instrument in the category "Central government and central banks" or "Qualifying interest rate instruments" as per Art. 4 (e) CAO)	5.0	5.0	5.0
7.	Credit derivatives (with reference instrument in the category "Other" as per Annex 6 CAO)	10.0	10.0	10.0

If there is any doubt as to the suitability of assigning the contract to one of categories 1 to 7 above as a function of the underlying, the contract shall be treated as a contract on "Other commodities" (category 5). 18

[§708] Add-on rates for first-, second- and n^{th}-to-default swaps: In the case of first-to-default swaps, the 19

add-on rate depends on the highest-risk reference instrument in the basket. By analogy, for second-to-default swaps the second riskiest reference instrument and for n^{th}-to-default swaps the n^{th} riskiest one in the basket shall determine the add-on rate.

For contracts whose replacement value can never be positive, the add-on shall be no more than the amount which, when added to the contract's replacement value, produces a credit equivalent of zero. Accordingly, a credit equivalent of zero can be used for contracts whose replacement value can never be positive. 20

The rule for the mark-to-market method under SA-CH is: 21

- For interest rate contracts the residual life to maturity of the underlying asset is the key factor, whereas for other contracts it is the residual life to maturity of the contract. 22

The rule for the mark-to-market method under SA-BIS/IRB is: 23

- For contracts in which the nominal amounts are exchanged several times, the add-on rates must be multiplied by the number of payments that remain to be made under the contract. 24

- With contracts that are structured in such a way that open exposures are closed out on defined payment dates, and whose conditions are always amended so that the market value of the contract on these days equals zero, the time to the next redefinition date is used as the residual term to maturity. For interest rate contracts with a residual term to maturity of more than one year that fulfil the above criteria, the lower limit for the add-on rate is 0.5%. 25

- The add-on rate shall be 0% (i.e. no add-ons shall be calculated) for floating/floating interest rate swaps in a single currency. Therefore the credit equivalent from these contracts shall be calculated only on the basis of the relevant replacement value. 26

B. Mark-to-market method under SA-CH: credit equivalent (Art. 43 CAO)

Calculation of add-ons: The add-on shall be calculated by multiplying the applicable add-on rate as specified in Rz 16–22 by the calculation basis for the relevant contract type. This is defined as follows: 27

- in the case of forward rate agreements, interest rate swaps and comparable instruments: the nominal value of the contract or the present value of the receivable consisting of principal and interest; 28

- in the case of currency swaps: the nominal value of the claim, i.e. the calculation basis on which incoming interest payments are determined, or the present value of the receivable consisting of principal and interest; 29

- in the case of equity index swaps, precious metal swaps, non-ferrous metal swaps and commodity swaps: the agreed nominal consideration or, if no nominal consideration has been agreed, using the formula "quantity × fixed price", or using the market value of the underlying, or the present value of the receivable consisting of principal and interest; 30

- in the case of other forward contracts: the market value of the monetary receivable or the underlying; 31

- in the case of options: using the same methodology as for other forward contracts, but with an appropriate delta weighting. 32

Waiver of add-ons: Add-ons can be waived in the case of: 33

- contracts with an original maturity not exceeding 14 calendar days; 34

- contracts traded on a regulated exchange on which they are subject to daily margin calls (with the exception of bought options); or 35

- contracts traded OTC which 36

    - are traded on a representative market; 37

    - are secured against cash deposits or a pledge or other form of security, which is at least equivalent, consisting of securities, precious metals or commodities; and 38

    - together with their collateral are marked to market on a daily basis and subject to daily margin calls. 39

Netting of add-ons and replacement values: It shall be possible to net up to the full amount of the add-on against the negative replacement value of a given contract when calculating the credit equivalent under Art. 42–43 CAO. It shall likewise be permissible positive replacement values and all add-ons, on the one hand, against negative replacement values, on the other, in respect of derivatives with the same counterparty, providing this is permitted under Art. 47 CAO and Rz 44–47 and a suitable bilateral agreement has been signed with the counterparty in question and is demonstrably recognised and enforceable in the following jurisdictions: 40

- the country in which the counterparty has its registered office and, if the foreign branch of a company is involved, the jurisdiction in which the branch has its registered office; 41

- the jurisdiction whose law governs the individual transactions covered by the agreement; and 42

- the jurisdiction whose law governs the netting agreements required to effect the netting. 43

Netting shall be permitted in the following cases: 44

- for all transactions covered by a netting agreement that only entitles/obliges the bank to receive/pay the difference between unrealised gains and losses on transactions covered by the agreement if the counterparty defaults as a result of insolvency, bankruptcy, liquidation or similar circumstances, (close-out netting); 45

- for all offsetting receivables and payables maturing on the same day and in the same currency as set out in a debt substitution agreement between the bank and the counterparty. Such agreement shall result in a single net amount thus creating a new legally binding contract replacing previous contractual arrangements (netting by novation); or 46

- for closed out contracts governed by an agreement whereby offsetting payment obligations are expressed on a net basis by currency, and only the net balance is paid (payment netting). 47

Netting in accordance with Art. 47 CAO shall not be permitted if the agreement contains a provision that allows the non-defaulting party to make only limited payments or no payments at all to the defaulting party, even if the latter is a creditor on a net basis (walk-away clause). 48

C. Mark-to-market method under SA-BIS/IRB: credit equivalent (Art. 43 CAO)

Calculating the credit equivalent: The calculation of the credit equivalent will generally be very much dependent on whether netting takes place with a counterparty in accordance with Art. 47 CAO or not. Rz 50–52 contain provisions for cases without netting, and Rz 53–63 contain provisions for cases with netting. 49

1) Credit equivalent without netting as per Art. 47 CAO: 50

Calculation of add-ons: Generally, the add-on is derived by multiplying the applicable add-on rate as per Rz 16–20 and Rz 23–26 by the contract's nominal value as calculation basis. If the nominal value undergoes a leverage effect or is increased as a result of the transaction's structure, the actual nominal value must be used as the calculation basis. 51

Netting of add-ons and replacement values: It shall not be permitted to net the add-on against the negative replacement value of a given contract. Therefore, negative replacement values shall be treated as zero. 52

2) Credit equivalent with netting as per Art. 47 CAO: 53

As described below, subject to the conditions stipulated in Rz 55, positive and negative replacement values of derivatives contracts with the same counterparty may be netted to produce a net replacement value and the attendant add-ons may be netted to produce a net add-on. The credit equivalent pursuant to Art. 43 CAO after netting in accordance with Art. 47 CAO shall be the sum of these two net values. 54

For netting to be permissible under Rz 54, a bilateral agreement to that effect must exist with the counterparty concerned and such agreement must be demonstrably recognised and enforceable in the jurisdictions specified in Rz 41–43. In addition, the netting must be permissible pursuant to Rz 44–46. 55

Netting in accordance with Rz 54 shall not be permissible in the cases specified in Rz 47–48. 56

Positive and negative replacement values of derivative contracts with the same counterparty shall be netted to produce a net replacement value. A negative net replacement value shall count as zero. 57

The net add-on shall be the sum of 58

- 40% of the sum of the individual add-ons under Rz 50–52; and 59
- 60% of the product of the following two values: 60
    - the sum of the individual add-ons under Rz 50–52; 61
    - the ratio of the net replacement value under Rz 57 to the sum of the positive replacement values. 62

The individual add-ons shall be the add-ons determined in accordance with Rz 50–52 for the derivatives contracts covered by the bilateral netting agreement with a counterparty under Art. 47 CAO . 63

D. Standardised method (Art. 44 CAO)

[Annex 4, §69] Where a bank uses the standardised method for the calculation of credit equivalents or EADs associated with derivatives transactions, it shall determine exposure as follows: 64

$$\text{Credit equivalent or EAD} = 1.4 \cdot \max\left(CMV - CMC; \sum_j \left| \sum_i RPT_{ij} - \sum_l RPC_{lj} \right| \cdot CCF_j \right)$$

where

CMV = current market value of the portfolio of transactions within the netting set with a counterparty, gross of collateral, i.e. $CMV = \sum_i CMV_i$, where CMV_i is the current market value of transaction i.

CMC = current market value of the collateral assigned to the netting set, i.e. CMC =

$\sum_i CMC_i$ where CMC_i is the market value of collateral i.

i = the transaction index

j = the index designating supervisory hedging sets. These hedging sets correspond to risk factors for which risk positions of opposite sign can be offset to yield a net risk position on which the position measure is then based.

l = the collateral index

RPT_{ij} = risk position from transaction i with respect to hedging set j

RPC_{lj} = risk position from collateral l with respect to hedging set j. Collateral received from the counterparty has a positive sign, collateral pledged to the counterparty has a negative sign.

CCF_j = supervisory credit conversion factor with respect to the hedging set j.

[Annex 4, §70] Where a derivative with a linear risk profile (e.g. a forward, future or swap) stipulates the exchange of a financial instrument (e.g. a bond, equity or commodity) for a payment, the payment part of the transaction is referred to as the payment leg. Transactions that stipulate the exchange of payment against payment (e.g. interest rate swap or currency swap) consist of two payment legs. The payment legs consist of the contractually agreed gross payments. 65

[Annex 4, §70] Interest rate risks for payment legs with a residual term to maturity of less than one year may be disregarded. 66

[Annex 4, §70] Transactions consisting of two payment legs denominated in the same currency may be treated as a single aggregate transaction. 67

[Annex 4, §71] Transactions with linear risk profiles that have equity, gold, other precious metals or other commodities as the underlying financial instruments shall be mapped to a corresponding equity instrument or commodity (including gold and other precious metals) within a respective hedging set. 68

[Annex 4, §71] The payment legs of transactions referred to in Rz 68 shall be mapped to the interest rate risk position within the appropriate hedging set. 69

[Annex 4, §71] Where the payment leg of a transaction referred to in Rz 68 is denominated in a foreign currency, the transaction shall also be mapped to a foreign exchange risk position in the respective currency. 70

[Annex 4, §72] Transactions with linear risk profiles that have a debt instrument as the underlying shall be mapped to two appropriate interest rate risk positions, with one risk position for the debt instrument side and one for the payment leg side. 71

[Annex 4, §72] Transactions with linear risk profiles which stipulate an exchange of payments (including foreign exchange forwards) shall be mapped to an interest rate risk position for each of the payment legs. 72

[Annex 4, §72] Where the debt instrument is denominated in a foreign currency, it shall also be mapped to the appropriate foreign exchange risk position. 73

[Annex 4, §72] Where a payment leg is denominated in a foreign currency, it shall also be mapped to the appropriate foreign exchange risk position. 74

[Annex 4, §72] The position assigned to a foreign exchange basis swap transaction is set at zero. 75

[Annex 4, §§73–77] Size of the risk exposure: 76

- for transactions with a linear risk profile, with the exception of interest rate instruments: effective notional value (market price multiplied by quantity) of the underlying, converted into Swiss Francs.

- for interest rate instruments with a linear risk profile and for the payment legs in all transactions: effective notional value of the outstanding gross payments (including the notional amount) converted into Swiss Francs and multiplied by the modified duration of the interest rate instrument or payment leg. 77

- for credit default swaps: notional value of the reference debt instrument multiplied by the remaining time to maturity of the credit default swap. 78

- for derivatives with non-linear risk profiles (including options and swaptions): delta equivalent of the effective notional value of the underlying, except if the underlying is an interest rate instrument. 79

- for derivatives with non-linear risk profiles (including options and swaptions) with an interest rate instrument as the underlying: delta equivalent of the effective notional value of the underlying or payment leg multiplied by the modified duration of the interest rate instrument or payment leg. 80

[Annex 4, §78] The size and sign of a risk position may be determined as follows: 81

- For interest rate instruments and payment legs:

  effective notional amount, or value of the delta equivalent, multiplied by the modified duration = $\frac{\delta V}{\delta r}$

  where

  V = value of the financial instrument (in the case of options: the option price, in the case of transactions with a linear risk profile: the value of the underlying itself or its payment leg)

  r = interest level

  Where V is denominated in a currency other than the domestic currency, the derivative must be converted into the domestic currency.

- For all other instruments: effective notional amount or delta equivalent = $p_{ref} \cdot \frac{\delta V}{\delta p}$ 82

  where

  p_{ref} = price of the underlying, expressed in the reference currency,

  V = value of the financial instrument (in the case of options: the option price, in the case of transactions with a linear risk profile: value of the underlying) p = price of the underlying, expressed in the same currency as the value of the financial instrument

[Annex 4, §79] Risk positions may be grouped into hedging sets. For each hedging set, the absolute amount of the sum of the resulting risk positions, being the net risk position, shall be calculated as follows: 83

$$\left| \sum_i RPT_{ij} - \sum_l RPC_{lj} \right|$$

where

RPT_{ij} = risk position from transaction i with respect to hedging set j

RPC_{lj} = risk position from collateral l with respect to hedging set j

[Annex 4, §80] Interest rate risk positions from debt instruments of low specific risk are to be mapped into one of six hedging sets for each currency as described in Rz 87. Debt instruments are classified as being of low specific risk if they qualify for a capital charge of 1.6% or lower under the standardised approach to market risks. 84

[Annex 4, §80] Interest rate positions arising from the payment legs are to be assigned to the same hedging sets as interest rate risk positions from debt instruments of low specific risk. 85

[Annex 4, §80] Interest rate positions arising from money deposits used as collateral are to be assigned to the same hedging sets as interest rate risk positions from debt instruments of low specific risk. 86

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[Annex 4, §80] The six hedging sets per currency are shown in the following table: Remaining maturity or time until next rate adjustment	Reference interest rate	
	Sovereign debt	other
1 year or less		
More than 1 year, and up to 5 years		
more than 5 years		

[Annex 4, §81] For underlying interest rate instruments (e.g. floating rate notes) or payment legs (e.g. floating rate legs from interest rate swaps), for which the interest rate is linked to a reference interest rate that represents a general market interest level (e.g. government bond yield, money market rate, swap rate), the rate adjustment frequency is the length of time until the next re-adjustment of the reference interest rate. 88

[Annex 4, §81] Otherwise, the residual term to maturity is the remaining life of the underlying debt instrument, or, in the case of a payment leg, the remaining life of the transaction. 89

[Annex 4, §82] A separate hedging set must be used for each issuer of a reference debt instrument that underlies a credit default swap. 90

[Annex 4, §83] A separate hedging set must be used for each issuer of a debt instrument of high specific risk i.e. a debt instrument to which a capital charge of more than 1.6% applies under the standardised approach to market risk. 91

[Annex 4, §84] Underlying financial instruments other than debt instruments (i.e. equities, precious metals, commodities and other instruments) are assigned to the same respective hedging sets only if they are identical or similar instruments. Such similar instruments include: 92

- for equity instruments: equity instruments of the same issuer (equity indices to be treated as separate issuers); 93

- for precious metals: instruments of the same metal (precious metal indices to be treated as separate precious metals); 94
- for commodities: instruments of the commodity (commodity indices to be treated as separate commodities); 95
- for electric power: delivery obligations and rights that refer to the same peak or base load period within a 24-hour interval. 96

[Annex 4, §85] The credit conversion factor to be applied to a net risk position from a hedging set depends on the supervisory classification set out in Rz 98–100. 97

[Annex 4, §86] With the exception of interest rate instruments as the underlying, the following credit conversion factors shall apply: 98

- Foreign currency: 2.5%
- Gold: 5.0%
- Equities: 7.0%
- Precious metals with the exception of gold: 8.5%
- Electricity: 4.0%
- Commodities other than precious metals: 10.0%

[Annex 4, §87] For risk positions from debt instruments, the following credit conversion factors shall apply: 99

- 0.6% for risk positions from debt instruments or reference debt instruments with a rating of 5–7;
- 0.3% for risk positions from reference debt instruments underlying credit default swaps and having a rating of 1–4;
- 0.2% for all others.

[Annex 4, §88] Derivatives which cannot be classified in any of the above classes must be assigned to separate individual hedging sets for each class of underlying. A credit conversion factor of 10% is to be applied to the notional amount. 100

[Annex 4, §89] There may be transactions with non-linear risk profiles where a bank is unable to determine the delta using a model approved by the Banking Commission for determining the minimum capital requirements for market risk. There may also be payment legs and transactions with debt instruments as the underlying where a bank is unable to determine the modified duration. In such cases, the mark-to-market method pursuant to Art. 40 CAO must be used. 101

E. EPE modelling method (Art. 45 CAO)

The provisions with respect to the EPE modelling method as contained in the Basel minimum standards (Rz 2) shall apply. 102

VI. Risk mitigation measures (Art. 47 CAO)

A. General provisions

[§114] Where an issue-specific assessment already takes into account the effects of risk mitigation measures, these may not be taken into account again in the calculation of capital requirements. 103

[§113] If a position in which risk mitigation measures are taken into account is assigned a capital re- 104

quirement higher than an otherwise identical position where these measures are not used, the effects need not be taken into account.

[§206] Where a bank uses multiple credit risk mitigation (CRM) techniques for a single exposure, the bank is required to sub-divide the exposure into single portions covered by each CRM technique, and the risk weighting of each portion must be calculated separately. Where credit protection provided by a single protection provider is comprised of separate maturities, it must also be sub-divided. 105

[§§122, 124, 125] Capital requirements may be reduced by using collateral, provided that: 106

- a reduction in the credit quality of the counterparty does not have a significantly negative effect on the value of the collateral; and 107
- the bank has procedures for the timely liquidation of collateral. 108

[§127] A capital requirement will be applied to both banks on either side of a collateralised transaction. For example, both repos and reverse repos are subject to capital requirements. Explicit capital requirements will also apply to both sides of securities lending transactions, as will the depositing of securities in connection with a derivative exposure or other transaction where the bank is exposed to credit risk. 109

[§128] Where a bank, acting as agent, arranges a repo or repo-style transaction between a customer and a third party, and provides a guarantee to the customer that the third party will meet its obligations, then the capital requirements must be observed as if the bank were the principal itself. 110

B. Maturity mismatches

[§203] The effective maturity of a claim should be viewed as the longest possible remaining time before the counterparty is scheduled to have fulfilled its obligation. The effective maturity of the hedge should be viewed as the shortest possible remaining maturity, taking into account any implicit options and termination rights. 111

[§204] Hedges with maturity mismatches will only be recognised if the original maturity of the underlying hedge is greater than or equal to one year. Notwithstanding the above, hedges with maturity mismatches will not be recognised where the residual maturity of the hedge is less than or equal to 3 months. 112

[§205] Where there is a maturity mismatch with credit risk mitigants (collateral, legally enforceable netting, guarantees and credit derivatives), the following adjustment shall apply: 113

$$P_a = P \times (t - 0.25) / (T - 0.25)$$

where:

P_a = value of the credit protection adjusted for the maturity mismatch

P = value of the credit protection adjusted for other haircuts

T = min (5; residual maturity of the claim), expressed in years

t = min (T; residual maturity of the credit protection), expressed in years

VII. On-balance-sheet netting (Art. 47 (1)(a) CAO)

[§188] Where a bank is able to monitor at all times those assets and liabilities with the counterparty which are subject to a netting agreement, and if the bank monitors and controls the roll-off risks and the relevant positions on a net basis, it may use the net position of loans and deposits as the basis for its calculation of capital adequacy in accordance with the formula shown in Rz 144. Assets are treated as loans and liabilities as collateral. The haircut H will be set to zero unless there is a currency mismatch. When marking to market is conducted daily, there must be a holding period of ten business days and all 114

requirements set out in Rz 111-113, 148 and 165 shall apply.

VIII. Contractual netting (Art. 47 (1)(a) CAO)

[§174] Netting across positions in the banking and trading book shall only be recognised if the netted transactions fulfil both of the following requirements: 115

- all transactions are marked to market on a daily basis; and
- the collateral instruments used in the transactions are recognised as financial collateral in the banking book.

IX. Recognition of collateral

A. Possible approaches

[§121] Banks may elect either a simple or a comprehensive approach. Banks shall use either approach in the banking book, but shall not use both approaches simultaneously. This restriction shall not apply to collateral loans or to securities lending, repos and repo-style transactions. In the trading book, only the comprehensive approach may be used, subject to the provisions of Art. 61 (2) CAO. 116

[§121] Partial collateralisation is permitted in both approaches. Maturity mismatches between the underlying debt instrument and the collateral are only permitted under the comprehensive approach. 117

X. Recognition of collateral under the simple approach (Art. 47 (1)(d) CAO)

A. Eligible forms of collateral

[§145] The following forms of collateral are recognised under the simple approach:

- Cash on deposit with the lending bank, including certificates of deposit or similar instruments issued by the lending bank, as well as fiduciary deposits with the lending bank or with another bank, and unrestricted life policies with a surrender value (Swiss 'Pillar 3b'). 118
- Gold 119
- Debt securities rated by a recognised external rating agency with a minimum rating of: 120
  - 5, if issued by central governments and other public-sector entities which are treated in the same way as the central government by national supervisory authorities;
  - 4, if issued by other entities (including banks and securities firms); or
  - 5, for short-term debt securities.
- Debt securities without any rating from a recognised rating agency, provided that: 121
  - they were issued by a bank;
  - they are traded on a recognised exchange;
  - they are classified as senior debt; and
  - all other rated senior debt instruments issued by the same bank have a rating from a recognised rating agency of at least rating category 4, or rating category 3 for short-term debt.
- Equity instruments (including convertible bonds) that are included in a main index 122

- Mutual funds and UCITS[1], on condition that: 123
  - The unit price is published on a daily basis, and
  - the mutual funds and UCITS are restricted to investments in instruments mentioned in this paragraph. The use of derivative instruments by mutual funds and UCITS solely for the purpose of hedging instruments mentioned in this paragraph and Rz 134 shall not prevent units in that mutual fund and UCITS from being recognised as financial collateral.

B. Calculation

[§§194, §145] Where a bank issues credit linked notes against exposures in the banking book, they will be treated as cash collateralised transactions. 124

If cash on deposit, certificates of deposit or similar instruments issued by the lending bank are held as collateral with a third-party bank, if they are openly pledged/assigned to the lending bank, and if this occurs unconditionally and irrevocably, the exposure amount covered by the collateral (after any necessary haircuts for currency risks) will receive the risk weighting of the third-party bank. 125

Any portion of a debt collateralised by fiduciary deposits at another bank will receive the risk weighting of the bank at which the fiduciary deposit was placed. 126

[§182] For collateral to be recognised under the simple approach, the collateral must be pledged for at least the life of the exposure, or otherwise secured, and its market value must be calculated at least every six months. Cash deposits, fiduciary deposits, medium-term notes and unrestricted life policies with a surrender value may be exempted from the requirement for market valuations. Those portions of claims collateralised by the market value of recognised collateral will receive the risk weighting of the issuer of the collateral. The risk weighting of the collateralised portion will be subject to a floor of 20% under the international standardised approach, and 25% under the Swiss standardised approach, with the exception of the cases described in Rz 128–132. The remaining portion of the claim will receive the risk weighting of the corresponding counterparty. 127

[§183] Repo and repo-style transactions fulfilling the criteria described in Rz 182–190 and 192–197 shall receive a risk weighting of 0%. If the counterparty is not a core market participant (Rz 149), the transaction shall be risk-weighted at 25% under SA-CH and at 10% under SA-BIS. 128

[§184] OTC derivatives marked to market on a daily basis which are secured against cash in the same currency shall receive a risk weighting of 0%. Where they are secured against government bonds or bonds issued by other government entities assigned a 0% risk weighting under the standardised approach, they shall receive a risk weighting of 25% under SA-CH and 10% under SA-BIS. 129

[§185] Instead of the minimum risk weighting specified in Rz 127, a 0% risk weighting can be assigned if the transaction and the collateral are denominated in the same currency and 130

- the collateral is either a cash deposit or gold; or 131
- the collateral is in the form of sovereign securities or securities issued by public-sector entities eligible for a 0% risk weighting under the standardised approach, and its market value has been discounted by 20%. 132

XI. Eligibility of collateral under the comprehensive approach (Art. 47 (1)(d) CAO)

A. Eligible forms of collateral

[1] Undertakings for the Collective Investment of Transferable Securities

[§146] The following forms of collateral are recognised under the comprehensive approach:

- all instruments listed in Rz 118–123; 133
- equities not included in a main index, but listed on a recognised exchange; 134
- mutual funds and UCITS which include such equities. 135

B. Calculation

[§130] Where collateral is accepted under the comprehensive approach, banks shall calculate their adjusted exposure to a counterparty in order to allow for any changes in value of that collateral. When using haircuts (additions to or subtractions from collateral), banks are required to adjust both the amount of exposure to the counterparty and the value of any collateral received from that counterparty, in order to allow for any possible future fluctuations in the value of either. 136

[§131] Where there is a currency mismatch between the exposure and the collateral, an additional downward adjustment must be made to the volatility-adjusted collateral amount to take account of possible future fluctuations in exchange rates. 137

[§132] Where the volatility-adjusted exposure amount is greater than the volatility-adjusted collateral amount (including any further adjustment for exchange rate risk), banks shall calculate their risk-weighted assets as the difference between these two volatility-adjusted amounts multiplied by the risk weighting of the counterparty. The exact framework for performing these calculations is set out in Rz 144–147. 138

[§133] Both supervisory haircuts (Rz 148) and own-estimate haircuts (Rz 151 et seq.) may be used. The use of own-estimate haircuts is only permitted once the supervisory authority has verified compliance with certain qualitative and quantitative criteria (Rz 154–162), and has determined that they have been met. 139

[§134] A bank may choose to use supervisory or own-estimate haircuts irrespective of whether it is using the standardised approach or the IRB approach to credit risk. If a bank uses own-estimate haircuts, it must do so for the full range of instrument types for which own-estimate haircuts are appropriate, with the exception of immaterial portfolios where the bank may use the standard supervisory haircuts. 140

[§135] The size of the individual haircuts will depend on the type of instrument, type of transaction and frequency of marking to market and remargining. For example, repo and repo-style transactions subject to daily marking to market and remargining will receive a haircut based on a 5-day holding period. By contrast, in the case of collateralised credit transactions where the collateral is subject to daily marking to market but not to daily remargining, the haircuts are based on a 20-day holding period. Cf. note Rz 165. 141

[§136] For certain types of repo or repo-style transactions (mainly repo transactions with sovereign bonds as defined in Rz 182–197), a haircut of zero may be applied in calculating the claim amount after credit risk mitigation. 142

[§138] As a further alternative to supervisory haircuts and own-estimate haircuts, banks may use value-at-risk models. For this, see Rz 166 et seq. 143

[§147] If collateral is used, the position after credit risk mitigation shall be calculated as follows: 144

$$E^* = \max \{0, [E (1 + H_E) - C (1 - H_C - H_{FX})]\}$$

where:

E^* = claim amount after credit risk mitigation

E = current claim amount

H_E = haircut appropriate to the claim

C = current value of the collateral received

H_C = haircut appropriate to the collateral

H_{FX} = haircut appropriate for the currency mismatch between collateral and claime

[§148] The exposure after credit risk mitigation shall be multiplied by the risk weighting of the counterparty in order to obtain the risk weighting of the collateralised transaction. 145

[§149] The treatment of transactions with maturity mismatches between claim and collateral is described in Rz 111–113. 146

[§150] If the collateral is a basket of assets, the haircut applicable to the basket is determined in accordance with the formula $H = \Sigma_i a_i \times H_i$, where a_i is the weighting of a specific asset in the basket and H_i is the haircut applicable to that asset. Weighting a_i is equal to the percentage share of asset i in value terms compared to the whole basket. 147

C. Use of standard supervisory haircuts

[§§151, 153] Standard supervisory haircuts (expressed as %) where collateral is marked to market daily, subject to daily margin calls and a 10-day holding period: 148

Issue rating	Residual term to maturity	Central governments and public-sector entities which may be treated as sovereigns, and multilateral development banks in accordance with Appendix 1	Other issuers
Rating categories 1 or 2, or 1 for short-term debt instruments	≤ 1 year > 1 year, ≤ 5 years > 5 years	0.5 2 4	1 4 8
Rating categories 3 and 4, or 2 and 3 for short-term debt instruments and unrated bank securities in accordance with Rz 121 (incl. fiduciary deposits) and unrestricted life policies with a surrender value ('Pillar 3b')	≤ 1 year > 1 year, ≤ 5 years > 5 years	1 3 6	2 6 12
Rating category 5	All	15	
Equities included in a main index (including convertible bonds) and gold		15	
Other equities (including convertible bonds) traded on a recognised exchange and other forms of collateral		25	
Mutual funds/UCITS		Maximum haircut applicable to any security in which the fund is permitted to invest.	
Cash in the same currency[2]		0	

[§152] Where there is a currency mismatch between the exposure and collateral in the form of debt securities and cash collateral, the standard supervisory haircut for the exchange rate risk shall be 8%. 149

[§153] In the case of transactions in which the bank lends instruments which cannot be recognised, the haircut to be applied to the exposure shall be the same as for equities listed on a recognised stock exchange but not contained in the main index. 150

D. Use of own-estimate haircuts

[§154] On request, the supervisory authority can grant a bank permission to calculate haircuts using the bank's own estimates of market price and exchange rate volatility. Permission to do so shall be conditional upon the satisfaction of the minimum qualitative and quantitative standards set out in Rz 154-162. 151

[2] including medium-term notes or similar instruments issued by the lending bank, and fiduciary deposits with the lending bank or another bank

[§154] When debt securities are rated at least category 4, or 3 for short-term debt instruments, banks may calculate a volatility estimate for each category of security. In determining the categories of securities, the nature of the issuer, its rating, the residual maturity and modified duration must be taken into account. Volatility estimates must be representative of the securities actually included in the category. For other debt instruments or equities recognised as collateral, haircuts shall be calculated for each type of security. 152

[§155] The volatilities of the collateral and the currency mismatch must be calculated separately. Estimated volatilities for each transaction must not take into account the correlations between unsecured claim, collateral and exchange rates. 153

[§§156-160] Where haircuts are calculated on the basis of own-estimates, the following *quantitative* requirements must be met:

- for the calculation of the haircut, a 99th percentile, one-tailed confidence interval is to be used; 154
- the minimum holding period shall depend on the type of transaction and the frequency of remargining or marking to market. The minimum holding periods for different types of transactions are specified in Rz 163. Banks may use haircut numbers calculated according to shorter holding periods, scaled up to the appropriate holding period using the formula set out in Rz 164. 155
- The illiquidity of lower-quality assets must be taken into account. the holding period must be adjusted upwards in cases where a specified holding period is too short given the liquidity of the collateral. Banks should also identify where historical data may understate potential volatility, e.g. a pegged currency. In such cases, the data must be subjected to stress testing; 156
- the choice of historical observation period (sample period) for calculating haircuts shall be a minimum of one year. If a weighting scheme is used for the historical observation period, the weighted average observation period must be at least six months (that is, the weighted average time lag of the individual observations is at least 6 months); and 157
- the data sets should be updated no less frequently than once every three months, and should also be immediately reassessed whenever market conditions demand. 158

[§§162-165] In addition, the following qualitative requirements must be met:

- the estimated volatility data (and holding periods) must be used in the day-to-day risk management process of the bank; 159
- banks must have robust processes in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the risk measurement system; 160
- the risk measurement system should be used in conjunction with internal exposure limits; and 161
- an independent review of the risk measurement system must be carried out regularly within the bank's own internal auditing process. A review of the overall risk management process must take place at regular intervals and should specifically address, at a minimum: 162
    - the integration of risk measurement into daily risk management;
    - the validation of any significant change in the risk measurement process;
    - the accuracy and completeness of position data;
    - the verification of the consistency, timeliness and reliability of data sources used for the internal models, including the independence of such data sources; and
    - the accuracy and completeness of volatility assumptions.

E. Necessary haircut adjustments

[§§166–167] For some transactions, depending on the nature and frequency of the revaluation and re-margining provisions, different holding periods are appropriate: 163

Type of transaction	Minimum holding period	Condition
Repos and repo-style transactions	5 business days	daily remargining
Other capital market transactions and Lombard loans	10 business days	daily remargining
Collateralised loans	20 business days	daily revaluation[3]

[§ 168] Where the frequency of the remargining or revaluation is greater than one day, the minimum haircut numbers will be scaled up depending on the actual number of business days between remargining or revaluation using the following formula: 164

$$H = H_M \sqrt{[(N_R + (T_M - 1)) / T_M]}$$

where:

H = haircut

H_M = haircut for minimum holding period

T_M = minimum holding period for the type of transaction

N_R = exact number of business days between remargining for capital market transactions or revaluation for collateralised loans

[§168] Where the volatility is calculated based on a minimum holding period of T_N days, and this is different from the specified minimum holding period T_M, H_M shall be calculated according to the following formula: 165

$$H_M = H_N \sqrt{[T_M / T_N]}$$

where:

T_N = minimum holding period used by the bank to derive H_N

H_N = haircut based on the holding period T_N

F. Use of VaR models to determine haircuts

[§178] As an alternative to the use of standard supervisory haircuts or own-estimate haircuts, banks shall be entitled to use a VaR model approach to calculate the exposure amount after credit risk mitigation. This must take into account the correlation effects between security positions. This approach only applies to repos and repo-style transactions covered by bilateral netting agreements on a counterparty-by-counterparty basis. 166

[§178] The VaR model approach shall be available to banks which have at their disposal a market risk model recognised in accordance with SFBC Circular 06/2 "Market risks". 167

Banks which do not have a market risk model recognised under supervisory law may separately apply for supervisory recognition to use their internal VaR models for the calculation of potential price volatilities for repos and repo-style transactions. 168

Internal models shall only be accepted when a bank can prove the quality of its model to the supervisory authority through the back-testing of its output using one year of historical data. 169

[3] Exception: unrestricted life policies with a surrender value (Swiss 'Pillar 3b'), revaluation annually

[§179] The quantitative and qualitative criteria for recognition of internal market risk models for repos and repo-style transactions are in principle the same as those set out in SFBC Circular 06/2 "Market risks". With regard to the holding period, the minimum will be 5 business days (and not 10). The minimum holding period should be correspondingly adjusted upwards for instruments where such a holding period would be inappropriate given the liquidity of the instrument concerned. 170

[§181] For banks using their internal market risk model, the calculation of the exposure E* after credit risk mitigation will be the following: 171

$$E^* = \max \{0, [(\Sigma E - \Sigma C) + (\text{VaR output from the internal market risk models})]\}$$

When calculating capital requirements, banks will use the previous business day's VaR figure.

G. Requirements for a zero haircut

Irrespective of which approach (simple approach, comprehensive approach or VaR model approach) is applied for repos and repo-style transactions where the repurchase agreement is denominated in Swiss francs, only the uncovered portion (i.e. the positive net exposure amount without application of haircuts) shall be taken into account to determine the capital requirement for the credit risk, provided that the following requirements are met: 172

- the counterparty is a *key* market participant; 173
- the repo transaction is automatically settled across a proven electronic system which eliminates any operational and counterparty risks; 174
- transactions are settled across the system on a "delivery against payment" basis; 175
- exposures and collateral are marked to market (to reflect both currency and price movements) at least twice daily by the system, the net position is constantly calculated, and remargining is automatically carried out on a daily basis; 176
- the documentation covering the agreement is standard market documentation for this type of repo transaction in the relevant securities; it specifies that if the counterparty fails to satisfy an obligation to deliver cash or securities or fails to satisfy margin requirements or otherwise defaults, then the transaction can be terminated with immediate effect; 177
- Upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the bank must have the unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit; 178
- the system used to process the repo transaction is recognised by the supervisory authority; 179
- the assets underlying the repo transaction are assets permitted for repo transactions by the Swiss National Bank. 180

The system recognised by the supervisory authority is the Swiss franc repo system based on the integrated systems of Eurex Zurich AG, SIS SegaInterSettle AG and Swiss Interbank Clearing. 181

[§170] In addition to the stipulations set out in Rz 172, a haircut (H) of zero may be applied for repos and repo-style transactions where the counterparty is a *key* market participant and the following requirements are met: 182

- both the exposure and the collateral are either cash or a sovereign security, or a security issued by a public-sector entity qualifying for a 0% risk weighting under the standardised approach; 183
- both the exposure and the collateral are denominated in the same currency; 184

- either the transaction has a remaining maturity of at most one day (overnight), or both the exposure and the collateral are marked to market daily and are subject to daily remargining; 185

- following a counterparty's failure to remargin, the time between the last mark to market prior to the failure to remargin and the liquidation of the collateral may be no more than four trading days; 186

- the transaction is settled across a settlement system generally recognised for that type of transaction; 187

- the documentation covering the agreement is standard market documentation for repo and repo-style transactions in the securities concerned; 188

- the transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction may be terminated with immediate effect; and 189

- upon any default event, regardless of whether the counterparty is insolvent, bankrupt or subject to compulsory winding-up, the bank must have the unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit. 190

[§170] This carve-out under Rz 182 shall not be permitted for banks using a model approach as described in Rz 166 et seq. 191

[§171] *Key* market participants within the meaning of Rz 182 shall be:

- sovereigns, central banks and public-sector entities 192

- banks and securities traders 193

- other finance companies (including insurance companies) which are eligible for a 25% risk weighting under SA-CH and a 20% risk weighting under SA-BIS 194

- regulated mutual funds that are subject to capital requirements or leverage limits 195

- regulated pension funds 196

- recognised clearing organisations 197

[§172] Where a supervisory authority in a third country applies a specific carve-out to repos and repo-style transactions in securities issued by its domestic government, the same carve-outs may also be applied in Switzerland. 198

H. Repos and repo-style transactions

[§176] For banks using the standard supervisory haircuts or own-estimate haircuts, the following framework shall apply to take into account the impact of master netting agreements. 199

$$E^* = \max \{0, [(\Sigma E - \Sigma C) + \Sigma (E_S \times H_S) + \Sigma (E_{FX}) \times (H_{FX})]\}$$

where:

E^* = claim amount after credit risk mitigation

E = current claim amount

C = current value of the collateral received

E_S = absolute value of the net position in a given security

H_S = haircut appropriate to that security

E_{FX} = absolute value of the net position in any currency other than the agreed currency

H_{FX} = haircut appropriate for this currency mismatch

XII. Collateralised OTC derivatives

[§186] The capital requirement for credit risks in respect of an individual contract shall be calculated using the mark-to-market method under SA-CH and the mark-to-market method under SA-BIS/IRB as follows: 200

capital requirement = [EAD - C_A] x r x 8%,

where:

EAD = credit equivalent in accordance with Rz 27–48 or Rz 49–63

C_A = adjusted collateral value under the comprehensive approach

r = risk-weighting for the counterparty

[§187] Where effective bilateral netting contracts are in place, replacement values shall be equal to net replacement values. The haircut for currency risk should be applied when there is a mismatch between the collateral currency and the settlement currency. Even where there are more than two currencies involved in the position, collateral and settlement currency, a single haircut assuming a 10-business day holding period scaled up as necessary depending on the frequency of marking to market, shall be applied. 201

XIII. Guarantees and credit derivatives (Art. 47 (1)(b)&(c) CAO)

A. Eligible forms of collateral

Banks must recognise and understand the risks associated with guarantees and credit derivatives. Any systems for measuring, managing and controlling risks must capture guarantees and credit derivatives appropriately. The "Guidelines for risk management in the use and trading of derivatives", published by the Swiss Banking Association, set out the minimum requirements for the use of credit derivatives (SFBC Circular 04/2, “Self-regulation as minimum standard”, Appendix I). 202

The provisions set out in Rz 204–252 relate to banks which use either the Swiss standardised approach (SA-CH) or the international standardised approach (SA-BIS) to determine their capital adequacy requirements for credit risks. For banks using the IRB approach, the Basel minimum standards (Rz 2) shall apply directly, subject to the restrictions specified in Rz 266. 203

B. Recognition of hedge effectiveness

By using guarantees and credit derivatives, banks which buy protection can reduce their credit risk in respect of one or more counterparties. However, for effective hedge protection under a guarantee or credit derivative to be recognised under the substitution approach (Rz 232), the credit risks must be genuinely transferred to the protection provider, and the following minimum criteria must be met. The effectiveness of hedge protection shall never be recognised as being higher than the maximum payment amount. 204

[§189] A guarantee or credit derivative contract: 205

- must represent a direct claim on the protection provider; 206
- must be explicitly referenced to specific claims or a pool of claims, so that the extent of the cover is clearly defined and indisputable; 207

- must be irrevocable: The contract must not allow the protection provider to unilaterally cancel the credit cover or to increase the cost of cover or to reduce the agreed maturity of the cover unless the protection buyer fails to meet its contractually agreed payment obligations, or fails to meet any other fundamental contractual obligations; 208

- must be unconditional: the contract must not contain a provision allowing the protection provider to avoid meeting its obligations with immediate effect; 209

- must be binding in all relevant jurisdictions upon all parties involved, and must be legally enforceable; 210

- must be in writing. 211

[§195] The hedge effect can only be recognised if the protection provider[4] belongs to one of the following issuer categories: 212

- central governments and central banks in accordance with Appendix 2 section 1 CAO (SA-CH) or Appendix 3 section 1 CAO (SA-BIS); 213

- BIS, IMF and multilateral development banks in accordance with Appendix 1; 214

- public-sector entities and banks and securities traders to which, pursuant to Appendix 2 section 1 CAO (SA-CH) or Appendix 3 section 1 CAO (SA-BIS), a lower risk weighting is assigned than that assigned to the reference borrower; and 215

- all other entities rated in rating category 3 or better. 216

C. Additional minimum requirements for guarantees

[§190] The guarantor shall be liable for all types of payments that the reference borrower is to make in respect of the underlying reference instrument. Where the guarantor is liable only for repayment of the principal of the reference instrument, interest and all other payments not covered by the guarantee should be treated as unsecured amounts in accordance with Rz 241. 217

[§190] On any insolvency of or any default in payment by the reference borrower, the protection buyer shall be entitled, directly and in a timely manner, to request payment from the protection seller for any monies outstanding under the credit agreement. 218

D. Sureties

Where sureties fulfil the requirements set out in Rz 206–218, they shall be recognised as hedge instruments in the same way as guarantees for the purposes of calculating capital requirements. In principle, it should be assumed that only sureties given on a joint and several basis will be able to fulfil these requirements. 219

E. Additional minimum requirements for credit derivatives

[§191] The exposure to be hedged must be included as one of the claims contractually specified for the purposes of determining whether a credit event has occurred and for the purposes of settlement. If the claim to be hedged does not fulfil this condition, either Rz 228–231 or Rz 246 shall apply. For a total 220

[4] As the protection provider has already met its maximum obligations in the case of credit linked notes (CLN), the restrictions on recognised protection sellers mentioned in this paragraph do not apply for CLNs.

rate of return swap, the reference instrument and the exposure to be hedged must be the same.

The contractually specified credit events which render the credit derivative due must include at least the following: 221

- delay in payment of the amounts due under the terms of the obligation used for the purposes of determining whether a credit event has occurred (with a grace period that is closely in line with the grace period in the underlying obligation); 222
- insolvency (e.g. bankruptcy, overindebtedness, inability to pay debts) of the reference borrower, or admission in writing of its general inability to pay its debts as they become due, and similar events; 223
- restructuring (through forgiveness or postponement of principal, interest or fees) of the contractually specified obligations used for the purposes of determining whether a credit event has occurred, if the restructuring leads to a reduction or loss of the claim. If restructuring is not specified as a credit event, Rz 240 or Rz 246 shall be applied. 224

[§191] The ability to determine whether a credit event has occurred must be clearly allocated to one or several parties. This ability must not be the sole responsibility of the protection seller. The protection buyer must have the right to notify the protection provider of the occurrence of a credit event. 225

[§191] Credit derivatives allowing for a cash settlement may be recognised for capital purposes provided a robust valuation process is in place for the reference instrument. The valuation process must allow for a reliable calculation of the loss. There must be a clearly defined period for obtaining post-credit event valuations. 226

[§191] If cash settlement is not provided for, the protection buyer must have the right to transfer all claims specified for settlement to the protection seller in the event of a credit event. The terms of the claims must provide that any required consent to such a transfer may not be unreasonably withheld. 227

[§191] If the underlying claim is not contractually specified for determining settlement or for determining credit events (asset mismatch), the following minimum requirements must be met: 228

- The underlying obligation and reference claim must both be issued by the same legal entity. 229
- The claims specified for determining settlement or for determining credit events must rank *pari passu* with or be subordinate to the exposure to be hedged. 230
- Legally enforceable cross-default or cross-acceleration clauses must ensure the effective transfer of credit risks to the protection seller. 231

F. Calculation

[§196] If a guarantee meets the requirements set out in Rz 206 et seq., the protected portion of the underlying obligation may be assigned the risk weighting of the protection provider. 232

[§§193-194] If a bank obtains hedge protection in the form of a credit derivative which meets all of the requirements set out in Rz 205–231 for full recognition of the effectiveness of hedge protection, the claim to be hedged may be assigned the same risk weighting as the protection provider in the case of the following credit derivatives, providing the following conditions are satisfied: 233

- credit default swaps (CDS); no further conditions; 234
- total return swaps (TRS); on condition that the bank must not book payments by the protection provider in respect of the contract in question as income without adjusting the valuation of the exposure to be hedged accordingly (either by reducing the fair value or by increasing provisions). 235

- [§207] First-to-default swap (FDS): FDS: for the smallest claim in the basket on a risk weighted basis, but at worst to the level of the notional hedged amount. If several claims are the smallest in the basket on a risk weighted basis, the bank may freely choose to which of these claims it will apply the substitution approach. 236

- [§209] Second-to-Default-Swap: using the protection provider's risk weighting as the basis for the second-smallest exposure (after risk weighting) in the basket shall be permissible only where the basket in question either has already been hedged via a first-to-default swap (with at least an equal hedge amount) or one of exposures in the basket has already defaulted and the second-to-default swap has therefore become a first-to-default swap. 237

- n^{th}-to-default swaps shall be treated in the same way as second-to-default swaps. 238

- Credit linked note (CLN): as the protection provider has already fulfilled its maximum obligations, a risk weighting of 0% is applied. 239

[§192] When a restructuring as stipulated in Rz 224 does not represent a contractually specified credit event, allowance for limited hedge protection shall be permissible, provided that all other relevant requirements of Rz 205–231 are met: 60% of the amount of the hedge of a credit derivative without restructuring may be recognised if that credit derivative is identical in all other respects to a credit derivative which includes restructuring. i.e. the substitution approach may be applied to a maximum of 60% of the entire amount of the exposure to be hedged, while the remainder of the exposure to be hedged must be treated as if unsecured. 240

[§198] Where the amount guaranteed or hedged via credit derivative is less than the amount of the exposure to be hedged and the hedged and unsecured portions have equal ranking, i.e. the bank and the protection provider share losses on a pro-rata basis, capital relief will be afforded on a proportional basis: the protected portion of the exposure will receive the treatment under the substitution approach, with the remainder being treated as unsecured. 241

[§200] Where the guarantee or credit derivative is denominated in a currency different from that of the exposure to be hedged (currency mismatch), the amount of exposure deemed to be recognised by the supervisory body is to be reduced by applying a safety margin which is calculated using a haircut, i.e. 242

$$G_a = G \cdot (1 - H_{FX})$$

where

G_a = protected amount recognised under regulatory law

G = protected amount recognised under regulatory law, where currencies are the same

H_{FX} = haircut appropriate to this currency pair.

The haircut to be applied shall be based on a 10-business day holding period, assuming daily marking to market of the hedge. For banks using supervisory haircuts, the haircut H_{FX} shall be 8%. For banks which do not mark hedges to market on a daily basis, the haircut must be scaled up according to Rz 164 by increasing N_R accordingly. 243

[§205] Where the guarantee or a credit derivative and the claim to be hedged display a residual maturity mismatch, the provisions set out in Rz 112 and 113 shall apply. 244

If a position not allocated to the trading book is hedged using a credit derivative through the bank's own trading department, the hedge may only be recognised on condition that the trading department passes on this internal risk transfer, by means of an exactly opposing transaction, to a third party (cf. Rz 25 of SFBC Circular 06/2 "Market risks"). In this way, the hedged claim shall receive the risk weighting of the external third party. 245

Guarantees and credit derivatives whose effectiveness as hedges cannot be recognised shall not be 246

taken into account in relation to the reference instrument.

G. Capital requirement for the bank as protection provider

The credit equivalent of a guarantee shall be equal to the guaranteed claim amount in accordance with Art. 41 (1) CAO. Under Art. 40 CAO the reference borrower's risk weighting shall be applied to the credit equivalent. 247

Where the bank enters into a commitment as protection provider via a CDS or TRS, the resultant hedge commitments shall be treated as direct exposures to the reference borrower for the purposes of determining capital adequacy. 248

[§208] Where the bank enters into a commitment as protection provider via an FDS with a basket rating issued by a rating agency recognised by the supervisory authority, the risk weighting assigned shall be determined as a function of the standardised approach used and the applicable rating category: 249

	SA-CH	SA-BIS
• Rating categories 1 and 2:	25%	20%
• Rating category 3:	50%	50%
• Rating category 4 (long-term) or 5 (short-term):	100%	100%
• Rating category 5 (long-term):	375%	350%

- Rating categories 6 and 7: deduction from adjusted Tier 1 capital and Tier 2 capital pursuant to Art. 31 CAO.

If the bank is the protection seller in an FDS without a basket rating issued by a rating agency recognised by the supervisory authority, the risk weightings assigned to the individual claims in the basket shall be multiplied by the corresponding maximum payment amounts arising from a credit event. Capital requirements for the FDS shall be 8% of the total of the risk-weighted maximum payment amounts, subject to an upper limit equal to the maximum possible payment amount under the FDS. 250

[§210] If the bank is the protection seller in an SDS, generally Rz 249 and 250 shall apply. Unlike with first-to-default swaps, however, in the absence of a basket rating the smallest payment amount (after risk weighting) may be disregarded from the total until the default of the first position contained in the basket. For n^{th}-to-default swaps, the procedure is the same. Thus, for example, when deriving the total for a fifth-to-default swap, the four smallest payment amounts (after risk weighting) are disregarded. Whenever one of the positions in the basket defaults, n decreases by one. 251

Repayment of a CLN depends on the credit standing of both the reference borrower and the CLN issuer. For the calculation of capital requirements, the higher of the risk weightings assigned to the two borrowers shall be used. 252

XIV. Securitisation transactions (Art. 37 (2)(b) CAO)

A. Basel minimum standards

The Basel minimum standards (Rz 2) shall apply for the calculation of capital requirements for transactions relating to the securitisation of credit risk ("securitisations"). Where the Basel minimum standards allow for options, clarification is provided with reference to the relevant passages. 253

Where the Basel minimum standards stipulate that the supervisory authority is to be consulted (see [§§538, 607, 620]), banks must obtain the consent of their auditor. 254

B. Fallback option for the calculation of K_{IRB}

[§639] Where a bank is not in a position to use either the bottom-up approach or the top-down approach for calculating K_{IRB}, the bank may, subject to approval from the supervisory authority, apply the fall-back option provided for such cases. 255

C. Credit conversion factor for cash advances

[§§582, 641] For eligible servicer cash advance facilities, the undrawn amount may be allocated a credit conversion factor of 0% if the following requirements are met: 256

- the facility is without prior notice and unconditionally cancellable; 257
- the servicer is entitled to full repayment; 258
- this right ranks above all other claims on cash flows from the underlying pool of claims; and 259
- the servicer obtains an audit of the above conditions from an independent party to verify their enforceability. Internal audit and credit control departments are considered to be independent in this context. 260

D. Look-through treatment in the standardised approach

[§573] Where a bank uses the look-through treatment to calculate the risk weighting of a claim without an external assessment, and where this claim is the most senior in the entire transaction, it will receive the average risk weighting of the underlying claims in the underlying pool. 261

The bank must inform the supervisory authority that it is employing this approach. 262

Where the bank is unable to determine the average risk weighting, the entire unrated position must be deducted from capital. 263

E. Supervisory formula

[§635] For the securitisation of claims involving exclusively retail loans, the supervisory formula may be used and the parameters h and v shall be set to zero. The supervisory authority shall be informed whenever this approach is adopted. 264

F. Call provisions

[§798] Prior to exercising a call, banks are not expected to disclose to the supervisory authority the rationale for the bank's decision to place the call nor the impact of the exercise of the call on the bank's regulatory capital ratio. 265

XV. The internal ratings based (IRB) approach (Art. 38 & 65 CAO)

A. Basel minimum standards and subsidiary rules (Art. 65 CAO)

The provisions contained in the Basel minimum standards (Rz 2) regarding the IRB approach shall be applicable, subject to the following: where these minimum standards refer to the standardised approach, the provisions relating to the standardised approach set out in the Basel minimum standards shall generally apply. Where the Basel minimum standards allow for options, clarification is provided with ref- 266

erence to the relevant passages.

EUR amounts mentioned in the Basel minimum standards shall be converted into CHF amounts using a factor of 1.5, i.e. EUR 1 equals CHF 1.50. 267

The subsidiary rules relate in particular to the following areas: treatment of qualifying equity interests, including in relation to interests in collective investment instruments (cf. Appendix 5 CAO); weighting of deposit liabilities to deposit guarantee (cf. Appendix 2 section 5.2 CAO (SA-CH) resp. Appendix 3 section 5.2 CAO (SA-BIS)). 268

B. Approval

The supervisory authority shall give permission for use of the IRB approach only if the following requirements are complied with on a permanent basis: 269

- The minimum requirements for the IRB approach, as set out in [§§387 - 537] and clarified in this Circular, are observed. 270
- The bank has a sufficient number of employees capable of working with rating systems [§394]. 271
- The IT infrastructure is capable of running the rating system satisfactorily. 272
- The rating systems in respect to the specific activities of the bank rest on a robust design and are and correctly implemented. 273

[§404] The supervisory authority may require that the bank use more than the minimum number of internal ratings specified in [§404]. 274

[§259] Insignificant business units, positions and position categories (cf. Rz 292–296) may be exempted from application of the IRB approach subject to the supervisory authority's approval. 275

[§443] In deciding on whether to permit a specific bank to use the IRB approach, the supervisory authority shall consider the results of its own audits and those conducted by the auditors. In addition, the supervisory authority may take into account the audit findings of foreign supervisory bodies, of auditors other than the bank's own, or of other specialised and independent experts. 276

Expenses incurred by the supervisory authority in connection with the approval process and any necessary audit work subsequent to the approval, shall be borne by the bank. 277

The supervisory authority shall take cost implications for the bank into account when deciding whether audits are necessary, and if so, which ones should be carried out. 278

C. IRB stress tests

[§437] There are no terms of reference for the design of IRB stress tests beyond the requirements contained in pillars 1 and 2 [§§434–437 and 765]. 279

The bank shall provide the supervisory authority and the Swiss National Bank with a stress test design. 280

In consultation with the Swiss National Bank, the supervisory authority shall decide whether the stress test design is in line with pillars 1 and 2. The supervisory authority may ask for changes to the design. 281

The stress test results shall be sent to the supervisory authority on a regular basis, with a copy to the Swiss National Bank. 282

The stress test results shall be periodically discussed by the bank, the supervisory authority and the Swiss National Bank. 283

The stress test results shall be incorporated in the calculation of any additional capital charges applicable under pillar 2 [§765]. 284

D. Notification of the supervisory authority

Following approval for the use of the IRB approach, the supervisory authority shall be notified if 285

- any material changes are made to rating systems [§394], or 286
- any changes are made to risk management practices. 287

E. Bank-specific implementation (roll-out)

[§257] *Manner and scope of roll-out:* A bank may introduce the IRB approach in any of the ways specified in [§257]. The initial implementation of the IRB approach must result in IRB calculations covering for at least approximately 90% of the capital requirements for credit risks for all of the bank's counterparty related positions where IRB is appropriate. In principle, this coverage level should continue to be maintained subsequent to the implementation of the IRB. In the case of significant changes in structure, e.g. takeovers or mergers, the coverage level may be temporarily reduced with approval from the supervisory authority. 288

F. Transition period

[§264] *IRB minimum requirements:* The IRB minimum requirements according to Rz 270 shall already apply during the transitional period (1 January 2007 to 31 December 2009). 289

[§267, §269] *Grandfathering for specific equity positions:* In principle, the IRB shall be applicable to all relevant equity investments without there being a transitional period. Following approval by the supervisory authority, the capital requirements for equity investments held on 31 December 2007, may be calculated according to the Swiss Banking Act Implementing Regulations of 17 May 1972[5], as amended on 24 March 2004, up to 31 December 2010 at the latest (this supersedes the provisions of [§269]). 290

G. Position categories

For risk weighting purposes, every position shall generally be allocated to one of the following position categories. The provisions set out in the Basel minimum standards relating to allocation of positions to position categories shall be binding. The subsidiary allocation rules concerning individual positions set out in Rz 292–294 shall not be mandatory, providing the capital requirements do not depend on allocation of such positions and the positions in point are insignificant. 291

- Corporate positions (incl. PF, OF, CF, IPRE and HVCRE positions) as defined in [§§218–228] and clarified in Rz 298–299. This position category also includes positions to: stock exchanges, the Pfandbriefzentrale of Swiss cantonal banks, the Pfandbriefbank of Swiss mortgage institutions and public bodies that have no right to raise taxes and whose liabilities are not guaranteed by a public entity. 292
- Positions to central governments as defined in [§229]. This position category also includes positions to: central governments' central banks, the European Union (EU) and the European Central Bank (ECB), the Bank for International Settlements (BIS), the International Monetary Fund (IMF) and the multilateral development banks listed in Appendix 1. Positions to public-sector corporations are not included. 293
- Positions to banks as defined in [§230]. This position category also includes positions to: stock 294

[5] AS 1972 821

exchanges, joint institutions set up by banks and recognised by the supervisory authority, multilateral development banks not named in Appendix 1, and public bodies that have the right to raise taxes or whose liabilities are guaranteed in full by a public entity. Payment liabilities to deposit guarantee holders are also included.

- Retail positions as defined in [§§231–234] and clarified in Rz 300–317; 295
- Positions to equity securities as defined in [§§235-238] and clarified in Rz 319–323 and 354; 296
- Purchased retail and corporate positions as defined in [§§239-243]. 297

H. Definition of HVCRE positions (highly volatile commercial real estate financing)

[§227, first point] No positions in the Swiss market are defined as HVCRE positions ex ante. However, in bank-specific cases the supervisory authority shall be entitled to classify certain CRE positions as HVCRE positions. 298

[§228] For foreign markets, banks must follow the HVCRE definitions prescribed by the relevant supervisory authorities. Further, in bank-specific cases the supervisory authority shall be entitled to classify certain CRE positions as HVCRE positions. 299

I. Definition of retail positions

[§231, first point] *Maximum position value for natural persons:* The total position to a natural person can be treated as a retail position, regardless of the amount involved. 300

[§231, second point] *Definition of eligible residential real estate:* Residential real estate which is occupied or let by the borrower (this supersedes the regulation on "owner-occupied" in [§231]). The maximum number of residential units per building or building complex is not defined. 301

[§231, third point] *Definition of small business:* Small businesses are defined as businesses with (consolidated – cf. [§273]) annual sales of up to CHF 15 million. If a bank does not regard sales as a suitable indicator, another one may be chosen (e.g. balance sheet total) with the approval of the supervisory authority. 302

[§231, third point] *Maximum position to small businesses:* A position to a self-employed person can be treated as a retail position, regardless of the amount involved. The key defining element for self-employed persons is that they have unlimited personal liability. 303

[§§231–232] *Lombard (collateral) loans and retail positions:* Lombard loans may be included in retail positions if the necessary conditions [§§231–§232] have been met. Within the meaning of the flexibility referred to in [§231, fourth point], the bank may also opt to allocate its entire collateral loan portfolio to the retail position category. In each case, however, the supervisory authority shall first be consulted. Generally, the following conditions shall be met: 304

- At least 95% of the bank's collateral loans (by number) qualify as retail positions on account of the amount and counterparty involved. 305
- The bank has been managing its collateral loan business for many years with proven, historically low credit losses. 306
- All Lombard (collateral) loans are managed by the bank's retail units using a unified credit process and corresponding standards. 307
- The bank must manage the collateral loans using a refined and proven, reliable risk management 308

system.

In particular, a risk management system pursuant to Rz 308 must meet the following requirements:

- any Lombard loans are generally over-collateralised; 309
- any Lombard loans and the value and quality of the underlying collateral are closely monitored; 310
- corrective measures are taken in a timely manner if the collateral drops in value; 311
- from a legal perspective, the ability to realise the collateral rapidly is unequivocally provided for; 312
- any individual collateral is subject to specific, statistically based haircuts which are usually higher than the supervisory standard haircuts (Rz 148); 313
- collateral is immediately realised if the counterparty misses a scheduled margin payment; 314
- risk concentrations in the collateral are monitored appropriately. 315

[§232] There is no ex ante minimum number of positions per pool. 316

[§232, first point] Positions to small businesses (Rz 302) may be allocated to the retail position category subject to the conditions set out in [§232, first point]. 317

[§233] The position sub-category "(a) exposures secured by residential properties" contains mortgage positions typically fully secured by residential or commercial real estate. Other positions can be allocated to the position sub-category "(b) qualifying revolving retail exposures", provided the necessary conditions are met (cf. [§235]). Otherwise, positions shall be allocated to the position category "c) all other retail exposures". 318

J. Definition of equity securities

Equity securities shall be deemed to include all shares and equity instruments within the meaning of [§235], including investment (mutual) fund units. Depending on the type of equity security involved, the following categories of equity positions can be distinguished:

- private equity positions forming part of a sufficiently diversified portfolio; 319
- positions to equity securities traded on a recognised exchange; 320
- all other equity positions. 321

[§344] *Private equity positions* include any forms of investment in companies whose equities are not freely traded on an exchange, i.e. illiquid equity interests in unlisted companies. Private equity investors receive their return either through an initial public offering, a sale or merger, or a recapitalisation. Private equity position types include, among others, leveraged buyouts, venture capital, growth capital, angel investing, mezzanine capital. 322

Sufficiently diversified portfolio of private equity positions: portfolios where no private equity position to a single counterparty (or group of related counterparties) exceeds 5% of the total portfolio position. 323

K. Risk weighting of companies, sovereigns and banks

[§272] The risk weighting for defaulted positions, after deduction of specific write-downs and partial write-offs, shall be 100% both under A-IRB and F-IRB. 324

[§273] In the formula at the end of [§273] defining annual sales S (or balance sheet total) of SMEs in CHF (Rz 267), the term (S5)/45 divided by (S/1.5)/45, or equivalent, is to be substituted by (S7.5)/67.5. 325

[§274] Where the annual sales of a company is not a suitable indicator for measuring its size, the balance sheet total should be used instead, if more appropriate. If approved by the supervisory authority, a simplified approach may be adopted whereby sales may be allocated to segments of counterparties of similar size using a random sample basis. If neither annual sales nor balance sheet size are meaningful size indicators, the reduction of risk weighting based on the size of the company shall not be used. 326

L. Risk weighting for specialised lending and highly volatile income producing real estate financing (SL and HVCRE)

[§250] *F-IRB for HVCRE positions*: Banks which satisfy the IRB minimum requirements with respect to PD estimates in connection with HVCRE loans may calculate the corresponding risk weightings according to F-IRB taking into account [§283]. 327

[§251] *A-IRB for HVCRE positions*: Banks which satisfy the IRB minimum requirements with respect to PD, LGD and EAD estimates in connection with HVCRE loans may calculate the corresponding risk weightings according to A-IRB taking into account [§283]. 328

[§277] *Reduced UL risk weightings for SL positions* (excl. HVCRE positions): The risk weights defined in [§277] shall apply. 329

[§282] *Reduced UL risk weightings for HVCRE positions:* The risk weights defined in [§282] shall not apply. Exception: cases in which a foreign supervisory authority has prescribed a definition of HVCRE (cf. Rz 299) and that supervisory authority has approved the use of reduced UL risk weightings for such positions. In such cases the corresponding reduced UL risk weightings can be applied. 330

M. Subordinate positions and collateral

[§288] *Definition of subordinate positions*: All positions fulfilling the definition of subordination contained in the SFBC-RRV are classified as subordinate. 331

[§289] *Other collateral eligible under F-IRB such as CRE or RRE*: Rz 335–336. 332

N. Non-application of haircuts for repo-style transactions

[§294] The rules under SA-BIS shall apply *mutatis mutandis* to non-application of haircuts for repo-style transactions. 333

O. Collateral under F-IRB

[§506] *Referral to the minimum requirements under the standardised approach (Section II.D of the Basel minimum standards):* In order that banks using the F-IRB approach may take eligible financial collateral into account in calculating capital requirements, these banks must meet the minimum requirements under SA-BIS. 334

[§§507–508] *CRE or RRE collateral eligible under F-IRB:* In application of footnote 85 of the Basel minimum standards, multi-family housing units may be used as collateral even if they are subject to income producing real estate financing (SL or IPRE). Conversely, IPRE in the form of commercial property may not be used as collateral (thus the option given in footnote 86 of the Basel minimum standards is not excercised). 335

[§521] *Other eligible physical collateral:* Except for the collateral types named in [§507], no other physical collateral shall be eligible under the F-IRB approach. 336

P. Guarantees and credit derivatives under the F-IRB approach

[§§302, 305] *Referral to the standardised approach*: The SA-BIS rules for guarantees and credit derivatives are also applicable to the F-IRB approach. 337

[§302] *Protection providers eligible under the F-IRB approach:* All eligible protection providers under SA-BIS shall also be eligible under the F-IRB approach. In addition, any protection providers shall be eligible if they have an internal rating equivalent to external ratings in rating categories 1, 2 or 3 from a recognised rating agency, in accordance with the applicable PD estimate. 338

Q. Position value at default (EAD)

[§309] *Referral to the standardised approach*: The SA-BIS rules on legal and contractual netting shall also apply *mutatis mutandis* to the IRB approach. Currency and maturity mismatches shall be treated in the same way as under SA-BIS. 339

[§311] *Referral to the standardised approach* [§§82–87] as regards F-IRB: In principle, the SA-BIS approach shall be applicable to the calculation of credit equivalents (Art. 40–41 CAO). Exceptions to this are irrevocable commitments (irrespective of maturity), note issuance facilities (NIFs) and revolving underlying facilities (RUFs), for which a credit conversion factor of 75% [§312] shall be applied. 340

R. Maturity adjustment of risk weightings under F-IRB and A-IRB

[§318] *Maturity adjustment of risk weightings under F-IRB:* Banks using the F-IRB approach must adjust risk weightings for maturity in the same way as under the A-IRB approach. 341

[§319] *Exceptions from maturity adjustment:* The risk weightings of all corporate positions shall be explicitly adjusted for maturity, without exception. 342

[§320] *Maturity for positions with no agreed maturity:* For positions with no agreed maturity, which are nevertheless unconditionally cancellable by the bank at any time, and which must be repaid within a maximum of 12 months from cancellation, M = 1 year shall be applied. For other positions with no explicit maturity, M = 2.5 years. 343

[§320, second point] *Effective maturity for positions with agreed maturity:* If the bank is not able, or only able with excessive effort, to calculate the effective maturity (M) in accordance with [§320], the contractually agreed remaining maturity of the position may be used as an alternative. 344

[§322] *Maturity adjustments of less than a year for short-term positions:* In addition to the transactions referred to in [§321], the lower limit of one year for the maturity parameter M shall not apply for the following positions: 345

- Positions arising from capital market transactions in the form of repo and repo-style transactions, margin lending, OTC transactions or exchange-traded derivatives. The following requirements must be met: The transactions are to be collateralised and marked to market daily, and there will be daily remargining payments or changes to the collateral in the case of any excess or shortfall in coverage compared to the originally agreed collateralisation. In the case of any failure to meet any remargining obligation, the transactions shall be terminated through realisation of the collateral within the timeframe applicable to options and futures exchanges. 346

- Positions to banks arising from foreign currency transactions on condition that connected settlement risks are eliminated using a suitable system. 347

- Positions from short-term, self-liquidating trade transactions, including letters of credit. 348

- Positions from electronic transfers (e.g. via SIC, SEGA, EUROCLEAR). 349

[§325] *Maturity mismatches:* The relevant SA-BIS rules shall be applied for the treatment of maturity mismatches. 350

S. Risk weighting of retail positions

[§328] The position sub-category "exposures secured by residential properties" is defined in [§231] and Rz 318. This supplements and clarifies the rules set out in [§328]. 351

[§§328–330] The risk weighting for defaulted retail positions, after deduction of specific write-downs and partial write-offs, shall be 100% both under A-IRB and F-IRB. 352

T. Risk weighting of equity securities

The treatment of qualifying equity interests shall be analogous to that under SA-BIS (Appendix 5 CAO), with the IRB risk weightings being determined according to a market-based approach or the PD/LGD approach. 353

[§237, footnote 59] *Exclusion of directly hedged liabilities in the calculation of capital requirements for positions to equity securities:* Liabilities, the return on which is linked to that of equity securities, may be excluded from the calculation of capital requirements provided that they are directly hedged by a position in equity securities such that the net position no longer represents a significant risk. 354

[§260] *Obligation to use the IRB approach for equity securities:* Banks holding large volumes of equity securities but using the SA-BIS approach to calculate capital requirements for credit risks shall not be obliged to calculate capital requirements for equity securities according to the IRB approach. 355

[§343] *Mandatory application of a particular market-based approach commensurate with the bank's characteristics:* In the calculation of capital requirements for equity securities, the bank may choose freely any applicable market-based approach provided that it meets the relevant minimum requirements. 356

[§344] *Simple risk weighting method – risk weights and expected loss:* In lieu of the risk weights defined in [§344], the following risk weights are to be applied. The calculation of the expected loss (EL) in an equity securities position is derived by multiplying the position at default (EAD) by the applicable expected loss value. Rz 375 and 380 govern the further treatment of expected losses from equity positions. 357

358

Position type	Risk weighting	EL value
Private equity positions forming part of a sufficiently diversified portfolio	190%	0.8%
Positions to equity securities traded on a recognised exchange	290%	0.8%
All other equity positions	370%	2.4%

[§346] *Mandatory use of internal modelling method for the calculation of capital requirements for positions to equity securities:* In the calculation of capital requirements for equity positions, a bank may choose the PD/LGD approach or the market-based approaches (simple risk weighting method, internal model method) provided that it meets the relevant minimum requirements. 359

[§347] *Floor for risk weights under the internal model method:* The floors defined in [§347] (200% or 300% risk weighting if the simple risk weighting method is used) shall not be applied. The floor limit 360

specific to each equity securities position type shall be the sum of the attendant minimum risk weightings under the PD/LGD approach (Rz 363) and 12.5 times the relevant EL value (Rz 357–358).

[§348] *Use of different market-based approaches for the calculation of capital requirements for positions to equity securities:* Under the conditions described in [§348], a bank may use different market-based approaches for the calculation of capital requirements. 361

[§350, second point, and §355] *LGD for equity securities:* For positions to private equity securities forming part of a sufficiently diversified portfolio (cf. Rz 323), an LGD value of 65% may be substituted for the LGD value of 90%. 362

[§§351–353] *Floor for risk weightings under the PD/LGD approach:* The explicit floors for risk weightings defined in [§§352–353] and the conditional usage of minimum risk weights defined in [§351] shall not apply. Instead, the minimum risk weightings in the PD/LGD approach shall have the following minimum probability of default limits, and shall be used in conjunction with the LGD values defined in Rz 362: 363

- 0.09% for types of equity securities defined in [§352]; 364
- 0.40% for positions to equity securities traded on a recognised exchange; 365
- 1.25% for all other equity holdings. 366

[§356] *Capital requirements for positions to equity securities in respect of counterparties assigned a 0% risk weighting in the standardised approach:* For the types of position to equity securities set out in [§356], capital requirements shall be determined in accordance with the IRB approach. 367

[§357] *Capital requirements for equity securities of government-subsidised counterparties:* For the equity securities specified in [§357], capital requirements shall be determined in accordance with the IRB approach. 368

[§358] *Capital requirements for insignificant positions to equity securities:* For positions to equity securities which comply with all the criteria for insignificance set out in [§358], capital requirements shall be determined according to the IRB approach. 369

The risk weighting for defaulted equity securities after deduction of specific write-downs and partial write-offs shall be 100%. 370

U. Risk weighting of purchased positions

[§242, fourth point] The bottom-up approach shall be mandatory for pools with single positions of more than CHF 150,000 (see also Rz 372). 371

[§365] *Availability of the top-down approach for purchased corporate positions:* On request, the supervisory authority may give a bank permission to calculate capital requirements for default risk on purchased corporate positions using the top-down approach. The bottom-up approach shall be mandatory for pools with single positions of more than CHF 150,000 (see also Rz 371). 372

[§369] *Maturity adjustment of risk weights for the calculation of capital requirements for dilution risk:* Under the conditions set out in [§369], the maturity parameter M may be set to 1 year. 373

[§373] *Protection providers recognised under F-IRB as used in the calculation of capital requirements for dilution risk:* The recognised protection providers are the same as those defined in Rz 338. 374

V. Expected loss and provisioning

[§375] to be supplemented as follows: In summing up expected losses, any expected loss from equity 375

holdings, even according to the simple risk weighting method, should be calculated separately.

[§376] *Expected loss from equity holdings using the simple risk weighting method:* Rz 357–358. 376

[§378] *Reduced EL risk weightings for SL positions (excl. HVCRE positions):* Rz 329. 377

[§379] *Reduced EL risk weightings for HVCRE positions:* Rz 330. 378

[§383] *Allocation of general provisions covering latent risks (Art. 25 CAO) to eligible capital:* The supervisory authority may allow a bank which is using or intending to use SA-BIS as well as the IRB approach to allocate general provisions as specified in Art. 25 CAO using an internal procedure. This procedure must lead to an appropriate allocation and must not be primarily designed to maximise the eligible capital. 379

[§386] to be supplemented as follows: Expected losses calculated according to the simple risk weighting method (Rz 357–358) shall be deducted 50% from adjusted Tier 1 capital and 50% from Tier 2 capital. 380

w. Capital requirements by scaling

In calculating capital requirements based on the IRB approach, the capital requirements for unexpected losses as calculated in accordance with this Circular or the underlying risk-weighted positions should first be multiplied by the scaling factor of 1.06 as stipulated by the Basel Committee ([§14]). Following this, the scaled-up risk-weighted positions shall be multiplied by the bank-specific multiplication factor specified by the Banking Commission (Art. 65 (3) CAO) in order to arrive at the risk-weighted positions under IRB within the meaning of Art. 33 (2)(a) CAO. Together with the positions risk-weighted as per SA-BIS, these form the total of positions risk-weighted by credit risk in accordance with Art. 33 (2)(a) CAO. 381

x. Minimum risk quantification standards

[§452, second point, footnote 82] *Length of default in payment:* 90 days should always be used regardless of the type of borrower. 382

[§452] *Alternative definition of default for Lombard (collateral) loans*: In lieu of the definition in [§452], banks may apply the following definition of default for collateral loans: A Lombard (collateral) loan is in default, if: 383

- the realisable market value of the available collateral falls below the level of the Lombard loan, and 384
- as a result, the position shows a cover shortfall, and 385
- it is not known, or not likely, that the counterparty is able to meet its credit obligations, or agreed measures have failed to rectify the cover shortfall. 386

[§454] *Implementing and monitoring the indications of potential position defaults set out in [§453]*: The choice of how to apply and monitor the indications of potential position defaults is left to the bank. The bank's implementation and monitoring shall be audited in the context of the approval process. 387

[§458] *Re-ageing*: There are no further requirements regarding re-aging other than those contained in [§458]. 388

[§467] *Seasoning effects:* Whilst there is no ex ante requirement, it is recommended that banks increase PD estimates in order to avoid a jump in capital requirements arising from foreseeable seasoning effects. 389

[§471] *Best EL estimate for defaulted positions:* With the agreement of the supervisory authority, specific provisions for defaulted positions and partial provisioning shall be used as the best estimate of the 390

expected loss on the position.

XVI. Entry into force

SFBC Circular 03/2 “Credit derivatives” shall be revoked with effect from 31 December 2007. 391

Date of entry into force: 1 January 2007 392

Appendices

Appendix 1: Multilateral development banks
Appendix 2: Terms and abbreviations used in the IRB

Legal basis

- Swiss Federal Law on Banks and Savings Banks: Art. 3 (2)(b), Art. 3g, Art. 4 (2)&(4), Art. 4bis (2) and Art. 56
- Swiss Stock Exchange Ordinance: Art. 29
- CAO: Art. 18–65
- EBK – GebV: Art. 13–14

Appendix 1

Multilateral development banks

Multilateral development banks according to Art. 53 CAO shall be defined as:

- World Bank Group including International Bank for Reconstruction and Development (IBRD) and International Finance Corporation (IFC)
- Asian Development Bank (ADB)
- African Development Bank (AfDB)
- European Bank for Reconstruction and Development (EBRD)
- Inter-American Development Bank (IADB)
- European Investment Bank (EIB)
- European Investment Fund (EIF)
- Nordic Investment Bank (NIB)
- Caribbean Development Bank (CDB)
- Islamic Development Bank (IDB)
- Council of Europe Development Bank (CEDB).

Appendix 2

Terms and abbreviations used in the IRB

A-IRB	advanced IRB	fortgeschrittener IRB
CCF	credit conversion factor	Kreditumrechnungsfaktor
CF	commodities finance	Rohstofffinanzierungen
CRE	commercial real estate	gewerbliche Liegenschaften
EAD	exposure at default	Positionswert bei Ausfall
EL	expected loss	erwarteter Verlust
F-IRB	foundation IRB	einfacher IRB
HVCRE	high-volatility commercial real-estate	hochvolatile Renditeobjektfinanzierungen
IPRE	income-producing real estate	Renditeobjektfinanzierungen
IRB	internal ratings-based approach	auf internen Ratings basierender Ansatz
LGD	loss given default	Verlustquote bei Ausfall
KMU		kleine und mittlere Unternehmen
M	effective maturity	effektive Laufzeit
OF	object finance	Objektfinanzierungen
PD	probability of default	Ausfallwahrscheinlichkeit
PF	project finance	Projektfinanzierungen
RRE	residential real estate	Wohnliegenschaften
UL	unexpected loss	unerwarteter Verlust
RPV	replacement value	Wiederbeschaffungswert
SL	specialised lending	Spezialfinanzierungen