KPMG

Circular 2017/7 Credit risk - banks

Capital requirements for credit risk at banks

dated 4 November 2020

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FINANCIAL SERVICES

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Credit risk - banks

Capital requirements for credit risk at banks

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Legal bases:	FINMASA Article 7(1)(b) BA Articles 3(2)(b), 3g, 4(2) and (4), 4bis(2) CAO Articles 2, 18-77, 139 FinIA Article 7 FinIO Article 63 FinSA Article 71
Annex 1:	Multilateral Development Banks
Annex 2:	Simplified SA-CCR
Annex 3:	Repealed
Annex 4:	Current exposure method for derivatives (Article 57 CAO in its version of 1 July 2016)

Addressees

BA			ISA				SESTA	FMIA						CISA									AMLA			OTHERS	
Banks	Financial groups and congl.	Other intermediaries	Insurance companies	Ins. groups and congl.	Distributors		Securities dealers	Trading Venues	Central Counterparties	Central depositories	Trade repositories	Payment systems	Participants	Fund management companies	SICAV	Limited partnerships for CIS	SICAF	Custodian banks	Managers domestic CIS	Distributors	Representatives of foreign CISs	Other intermediaries	SROs	DSFIs	SRO Supervised	Audit firms	Rating Agencies
X	X						X																			

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I. Objective

This circular shall provide more details on Articles 18-77 of the Capital Adequacy Ordinance (CAO; SR. 952.03). 1

II. Basel Minimum Standards

These regulations shall be based on the revised capital accord published by the Basel Committee on Banking Supervision (the Basel Minimum Standards). The Basel Minimum Standards are defined in the following documents: 2

- "International Convergence of Capital Measurement and Capital Standards – A Revised Framework / Comprehensive Version" dated June 2006 (Basel Basic Text; B2) 3
- "Enhancements to the Basel II Framework" dated July 2009 (Basel Enhancements; B2ENH) 4
- "Basel III: a global regulatory framework for more resilient banks and banking systems" dated December 2010 and revised in June 2011 (Basel III text; B3) 5
- "Capital requirements for banks' equity investments in funds" dated December 2013 (FUNDS) 6
- "The standardized approach for measuring counterparty credit risk exposures" dated March 2014 (SACCR) 7
- "Capital requirements for bank exposures to central counterparties" dated July 2012 and revised in April 2014 (Basel III text for bank exposures to central counterparties; CCP1 and CCP2) 8
- "Revisions to the securitization framework" of 11 December 2014, revised in July 2016, further adjustments with "Capital treatment for short-term "simple, transparent and comparable securitizations" of May 2018 (Basel III text on the new securitization rules; "SEC") 9*

In the following, references in square brackets shall refer to the respective text passages in the Basel minimum standards; the above-mentioned abbreviations will be used. The ancillary document to FINMA circ. 17/7 on the amended Basel Minimum Standards[1] indicates where paragraphs have been added or amended. Paragraphs not mentioned in the table were accepted from the Basel basic text without any modifications. 10*

III. Multilateral Development Banks (Article 66 CAO) as well as the EFSF/ESM

[B2; §59] A preferential risk weight shall be accorded to the multilateral development banks listed in the annex. 11

[1] www.finma.ch > Documentation > Circulars > Annexes

The risk-weight for exposures to the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM) shall be 0%. 12

IV. External Ratings (Articles 64 - 65 CAO)

A. Recognized rating agencies (Article 6 CAO) and export credit agencies

[B2; §90] The recognized rating agencies whose ratings may be used for the determination of risk weights are listed on FINMA's website[2], together with a concordance table. 13*

[B2; §55] Provided they respect the relevant OECD[3] rules, export credit agencies shall be recognized for the market segment of Public Finance. 14

When used to determine the capital requirement for credit and market risk in the exposure class, "Central Governments and Central Banks" (Article 63(2)(1) CAO), export credit agency ratings may be used as if they were ratings provided by recognized rating agencies. 15

B. Risk Weighting Using Ratings (Article 64 CAO)

[B2; §68] The FINMA may refuse a bank the right to alternate between using and not using external ratings in accordance with Article 64(4) CAO if it takes the view that the bank's principal aim in doing so is to seek to reduce its minimum capital required. 16

[B2; §96-98] If there are two or more ratings which provide differing risk weights, the ratings that correspond to the two lowest risk weights must be taken into account and the higher of these two must be applied. 17

[B2; §107] External ratings given for a single or several entities within a corporate group may not be used to determine the risk weight for other entities within the same group. This shall also apply to an external view (third-party banks) as well as to an internal view (bank-internal view) for companies that are part of a financial group or a financial conglomerate in respect to other group companies. 18

C. Issuer-specific and Issue-specific Ratings

[B2; §99, 102] [B3; §118] Securities with an issue-specific rating assigned by a recognized 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: 19

- If a specific issue of a borrower has a high-grade rating (which results in a lower risk weight than for an unrated exposure), but the bank's exposure does not exactly match that issue, this rating may only be applied to the bank's unrated exposure if the latter is not subordinate to the rated issue in any way. Otherwise, the unrated exposure must be assigned at least the risk weight of an unrated exposure. 20

[2] https://www.finma.ch/en/~/media/finma/dokumente/finmapublic/bewilligungstraeger/ratingagenturen.pdf?la=en

[3] Sect. 25-27 of the "OECD Arrangement on Guidelines for Officially Supported Export Credits" of 5 December 2005

- Where unrated exposures (as described in margin no. 20) are risk-weighted based on comparably rated exposures, the general rule is that foreign currency ratings must be used for exposures in that same foreign currency. If a separate domestic currency ratings is available, this must only be used to risk-weight exposures denominated in the domestic currency. 21

- If a borrower has an issuer rating, this must be applied to senior unsecured claims on exposures to that issuer. Other exposures to an issuer with a high-grade rating must be treated as if they were unrated exposures. 22

- If either an issuer or its issue receives an "inferior" rating, which is at least equal to that of an unrated claim, a non-rated exposure to that same borrower, which is of equal priority as or is subordinated to a non-collaterized senior debt held towards the issuer (as regarded for issuer ratings) or a claim related to that particular issuance, the risk weight allocated to this claim shall be that of the inferior rating. 23

[B2; §100] Irrespective of whether a bank bases itself on the issuer-specific or issue-specific rating, the rating must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it by a client. 24

D. Short-term Ratings

[B2; §103] For risk-weighting purposes, short-term ratings shall be considered to be issue-specific. They may only be used to determine the risk weights of exposures in scope of that rating. Short-term ratings may be used only for amounts due from banks and corporates. 25

[B2; §105] Short-term inter-banking lines shall be treated as follows: 26

- The basic treatment of short-term receivables (cf. Annex 2, Section 4.1 CAO) shall be used for all claims towards banks with an original maturity of up to three months, provided there is no issue-specific short-term rating. 27

- If an issue-specific short-term rating exists that leads to a more favorable (i.e. lower) or the same risk weight compared to the basic treatment as per Annex 2 Section 4.1 CAO, this short-term rating may only be applied to this specific exposure. Other short-term exposures shall be treated according to the basic treatment stated in Annex 2 section 4.1 CAO. 28

- If there is a specific short-term rating for a short-term exposure towards a bank that leads to less advantageous (i.e. higher) risk weights, the basic treatment as per Annex 2 Section 4.1 CAO for short-term inter-banking lines may not be applied. All unrated short-term exposures will then receive the same risk weight that corresponds to this specific short-term rating. 29

E. Unrated Short-term Exposures

[B2; §104] If a rated short-term exposure is allocated a risk weight of 50%, unrated short-term claims may not be allocated a risk weight lower than 100%. If an issuer receives a short-term rating warranting a 150% risk weight, all unrated claims, whether long-term or short-term, shall also receive a 150% risk weight, unless the bank holds recognized forms of collateral for such exposures. 30

F. Use of External Ratings

[B2; §94][B3; §121] Where a bank uses ratings provided by external rating agencies to determine risk weights, it must apply these consistently in its internal risk management procedures. It is prohibited to select ratings from several recognized rating agency to thus obtain a more favorable rating for capital adequacy purposes. A rating of a single or several rating agencies, which was selected for a particular market segment, may not be changed arbitrarily. 31

V. The standardized approach for measuring counterparty credit risk exposures for derivatives SA-CCR (Article 57 CAO)

A. SA-CCR and the simplified SA-CCR approaches

As an alternative to the SA-CCR, banks in supervisory categories 4 and 5 may use the simplified SA-CCR described (cf. Annex 2) or the current exposure method (cf. Annex 4) to calculate the credit equivalent. 32*

Banks in supervisory category 3 may use the simplified SA-CCR approach or the current exposure method if they fulfill both of the following conditions: (i) the risk-weighted assets (RWA) for derivatives, including the CVA capital requirements times twelve and a half, amount to less than 3% of the bank's total RWA, and (ii) the bank holds derivative positions solely to hedge its own interest and forex risks and/or for the settlement of client business over a QCCP (cf. margin nos. 521– 526). If a bank in supervisory category 3 using the simplified SA-CCR approach or the current exposure method and its RWA for derivatives exceed 3% but not 5 %, it may continue to use the simplified SA-CCR approach or current exposure method if it can prove in an analysis or a calculation that this will not cause a significant difference in the capital requirements if it had used the normal SA-CCR approach instead. Banks that no longer fulfill the conditions to be eligible for the simplified SA-CCR approach or the current exposure method mentioned in this margin number, shall be given one year to switch to the normal SA-CCR approach. 33*

B. Credit equivalents

[SACCR; Annex 4, §128] Banks not authorized to use the EPE modeling method shall calculate their credit equivalent for OTC derivatives, exchange-traded derivatives and long settlement transactions using the standardized approach prescribed in Article 57 CAO (henceforth called the SA-CCR approach). A separate credit equivalent shall be calculated for each netting set (margin no. 107) of transactions (Exposure at Default, EAD), as follows: 34

$$\text{EAD} = alpha * (RC + PFE)$$

where:
alpha = 1.4,

RC = supervisory replacement costs, calculated according to margin no. 38–43, and

PFE = potential future exposure, calculated according to margin no. 44–105.

[SACCR; Annex 4; §129] The supervisory replacement costs and the potential future exposure shall be calculated differently, depending on whether they are margined regularly in accordance with margin no. 109. In the case of margined derivative transactions, the credit equivalent may be limited to a ceiling by the relevant credit equivalent, which would have been calculated had it been unmargined. Moreover, to simplify things, margined derivative transactions may be treated as if they were unmargined. 35

For contracts where the replacement values cannot become positive and that are not part of a netting set or a margin agreement, the credit equivalent may be set at zero. For credit derivatives where the bank acts as protection seller and which are not part of a netting set or a margin agreement, the bank may limit the credit equivalent to the sum of the outstanding premiums. In both cases it shall be up to the bank to treat such contracts separately from their legal netting sets (margin number 107) and to consider them as single exposures without netting or margin agreement. 36*

C. Supervisory replacement costs

The supervisory replacement costs shall be calculated as described in margin no. 38–43: the current positive or negative net market value (V) of all derivative contracts in the netting set and the net value of the collateral (C) according to margin no. 108. The same market values of the derivative contracts shall be used as are used in the accounts. 37

a) Supervisory replacement costs for unmargined derivative transactions

[SACCR; Annex 4; §136] For unmargined transactions, the supervisory replacement costs (RC) shall be calculated in accordance with $RC = \max\{V - C; 0\}$. In doing so, V shall be the current (positive or negative) net market value of all derivative contracts in the netting set, and C the net value of the collateral in accordance with margin no. 108. 38

b) Supervisory replacement costs for margined derivative transactions

[SACCR; Annex 4; §144-145] For margined transactions, the following shall apply: $RC = \max\{V - C; TH + MTA - NICA; 0\}$. V shall be the current (positive or negative) net market value of all derivative contracts in the netting set, C the net value of the collateral in accordance with margin no. 108, TH and MTA the thresholds and minimum transfer amounts of the margin agreements in accordance with margin no. 109 and NICA the net independent collateral amount in accordance with margin no. 110. Like this, not only the current market values and collateral (*V*-*C*) are taken into account but also the maximum value of the exposure that could happen without a margin call to the counterparty being triggered (TH + MTA - NICA). 39

c) Special cases where the netting set mismatches the margin call

[SACCR; Annex 4, §185] Should the margin agreement not include all derivative transactions in the netting set or if the transactions in the netting set have been collateralized with different margin agreements, the netting set has to be divided into multiple sub-netting sets that align with the respective margin agreements. This treatment shall apply to both supervisory RC and PFE components. 40

[SACCR Annex 4, §186] If a single margin agreement applies to several netting sets, so that net margin 41

payments must be calculated and exchanged without having fulfilled the supervisory conditions for a netting stated in margin no. 107, the credit equivalent shall exceptionally be calculated at the level of the margin agreement. The same shall be the case if collateral delivered or received outside a margin agreement applies to more than one netting set. In such cases, the replacement cost shall be calculated regardless of the whether parameter C has a plus or a minus sign (margin no. 108), i.e. regardless of whether the bank is a net collateral provider or collateral receiver.

If the bank is a net collateral receiver (C > 0), the following shall apply: $RC = \max[\sum_{NS} \max(V_{NS}; 0) - C; 0]$. Here, all netting sets NS in the margin agreement shall be included; V_{NS} is the related net market value of the derivative contracts included therein and C is the net value of the collateral received. Therefore, the net value of the collateral received is netted with the positive market value of the netting sets. 42

If the bank is a net collateral provider (C < 0), the following shall apply: $RC = \sum_{NS} \max(V_{NS}; 0) + \max[|C| + \sum_{NS} \min(V_{NS}; 0); 0]$. In this case, the negative market values in the netting sets shall be netted with the collateral received. 43

D. Potential Future Exposure (PFE)

[SACCR; Annex 4, §146] PFE shall be the product of the multiplier described in margin no. 45 with the aggregate add-on component of the netting sets as per margin nos. 49–104. 44

The multiplier shall be calculated as follows: 45

$$\text{multiplier} = \min\left(1; 5\% + 95\% * \exp\left(\frac{V - C}{2 * 95\% * \text{Add-on}}\right)\right)$$

For this, exp(...) shall be the exponential function, V the current (positive and negative) net market value of all derivative contracts in the netting set, C is the net value of the collateral as per margin no. 108 and the aggregate add-on component for the netting set. The multiplier shall serve to recognize excess collateral and negative market values. It shall result in a reduced PFE if the net amount of market value and collateral (V - C) is negative. Otherwise, the formula shall result in a multiplier of 1 and the PFE in the full amount of the add-on. 46

[SACCR; Annex 4, §187] Should a margin agreement encompass several netting sets or several collateral components serve to back a netting set as described in margin no. 41, the bank shall calculate a separate PFE for each netting set. PFEs at the level of each netting set shall then be aggregated. For the parameter C in the calculation of the multipliers for each netting set, collateral shall be allocated to the netting sets as follows: If the bank is a net collateral receiver (C>0), the netting sets with positive replacement values shall be allocated collateral up to the amount of the replacement values. If the bank is a net collateral provider (C<0), the netting sets with negative replacement values shall be allocated collateral up to the amount of the replacement values. If C>0 (or C<0), all of the amounts allocated to all netting sets must also be positive (or negative) or zero. Apart from these limitations, the allocation may occur at will.[4] If the 47

[4] Example: Four netting sets (NS) have the replacement values of V1=+100, V2=+10, V3=-10 and V4=-100. If the bank is a net collateral receiver with C = 150 and the collateral is eligible for all four NS, then NS1 shall be allocated at least 100 and NS2 at least 10. The remaining 40 may be allocated freely. If the bank is a net collateral provider with C=50, then amount which may be freely

collateral provided is larger than the sum of the negative replacement values (i.e. if $C < \sum_{NS} \min(0; V_{NS})$), then all multipliers shall equal 1 and no allocation is necessary.

As an operational simplification or as an alternative to margin no. 47, banks may calculate the PFE at the level of the margin agreement by calculating a separate add-on for each netting set (NS), aggregating the results and then applying the following aggregated multiplier to the sum: 48

$$\text{multiplier}^{\text{aggregated}} = \min\left(1; 5\% + 95\% * \exp\left(\frac{\sum_{NS} \max(V_{NS}; 0) - C}{2 * 95\% * \sum_{NS} \text{Add-on}_{\text{NS}}}\right)\right)$$

E. Calculating the add-on for each derivative contract

Calculating the add-ons based on a scale effective notional (SEN). The latter shall be defined as a product of four components for each derivative contract: (i) the adjusted notional, (ii) the supervisory delta (δ), (iii) the maturity factor (MF) and (iv) the supervisory factor (SF). Because of the delta, the SEN has a plus or a minus sign in front it and therefore may be negative or positive, which is of relevance for the aggregation in accordance with margin nos. 73–104. 49

For an individual derivative contract without netting, the add-on shall equal the absolute amount of the SEN. 50

In binary options (or digital options), where the buyer receives a predefined amount if the underlying is beyond a certain previously defined threshold, the SEN shall be defined with the following calculations. First, the binary option is represented as a collar combination of a purchased and a sold European option each of the same type (call or put), which approximates the pay-out profile of the binary option. Hereby, both of the European options shall have the same underlying and the same strike date as the binary option. The strike prices (parameter K) of the two European options shall be selected in such a way that one represents 95% of the threshold value of the binary option and the other 105%. The notional values of the European options shall be selected in such a way that the pay-out profile of the collar combination where the underlying is smaller than 95% or larger than 105% exactly corresponds to the one of the binary option. Two separate SENs shall be calculated according to margin no. 49 for the two binary options and then aggregated according to margin no. 75 (complete offsetting). The absolute amount of this aggregated SEN is then capped at the pay-out amount of the binary option.[5] 51*

If a derivative contract has the same pay-out profile as a combination of several European options (e.g. collar, butterfly spread, calendar spread, straddle or strangle) then each of the European options shall be treated as a separate contract. A corresponding repartition of interest rate caps into individual caplets or of interest rate floors into individual floorlets is allowed but not prescribed. If these are repartitioned then the parameters S and T shall equal the time until the beginning date of the coupon period for each caplet and floorlet and parameter E shall equal the time until the end date of the coupon period. 51.1*

allocated can be between zero and -10 for NS3 and the rest (between -50 and -40) shall be allocated to NS4. However, it would not be permitted to allocate all of the collateral provided (-50) to NS3 because an allocation to NS4 (with a value of up to -100) has priority over the allocation of collateral to NS3, which exceed -10.

[5] Example: A binary option has a predefined pay-out amount of 100. If the addition of the SEN of both European options according to margin number 75 results in -130, the negative sign of the aggregated SEN remains intact but its absolute amount is capped at 100. The SEN of the binary option in this example thus is -100.

a) Adjusted notional [SACCR; Annex 4; §157-158]

An adjusted notional is calculated for each derivative transaction. This adjusted notional is not necessarily identical with the contractual notional. The adjusted notional within the SA-CCR shall be the final result of the provisions detailed in the margin nos. 53–61 below. 52

For interest rate and credit derivatives, the notional shall be multiplied with the supervisory duration (SD). The latter is calculated as follows:[6] 53

$$SD = max\left\{\frac{10\ trading\ days}{(1\ year)}; 20\ x\ [exp(-0.05 * S) - exp(-0.05 * E)]\right\}$$

S shall be the start date, E the end date, in accordance with margin no. 120.

For foreign exchange derivatives, the adjusted notional shall be defined as the notional of the foreign currency leg of the contract, converted to the bank's functional currency If both legs of a foreign exchange derivative are denominated in currencies other than the domestic currency, the notional amount of each leg shall be converted to the domestic currency and the leg with the larger domestic currency value is the adjusted notional amount 54

In the case of equity and commodity derivatives, the notional shall be the product of the current price of one unit of the stock or commodity and the underlying number of units 55

If the notional is a function of an underlying, the current market price of this underlying shall be used to determine the adjusted notional. 56

For variable notional swaps, the average notional shall apply for the remaining life. 57

If a transaction's structure creates a leverage effect, the notional of an equivalent unleveraged transaction must be used. Therefore, if, for instance, the underlying interest rate in a swap is multiplied by a factor, this factor must also be applied to the swap's notional amount. The notional of a total return swap shall be the outstanding notional amount of the underlying credit and not its market value. 58

For a derivative contract with multiple exchanges of notional, the notional shall be multiplied by the number of payments that are still required according to the contract. 59

For volatility transactions in accordance with margin no. 113, the adjusted notional shall be the contractual notional multiplied by the referenced volatility or variance. 60

A notional in a foreign currency shall be converted into the bank's functional currency at its spot rate. 61

[6] The number of trading days for each year shall be determined by market convention. Example: if there are 250 trading days in a year, the following shall apply: 10 trading days / (1 year) = 10 / 250 = 0.04.

b) Maturity Factor (MF)

[SACCR; Annex 4, §164] The maturity factor shall account for the period used for potential increases in value. This period shall depend on whether it is a margined transaction as per margin no. 109 or not. 62

For unmargined derivatives, this shall be $MF = \sqrt{\min(M; 1\text{ year})/(1\text{ year})}$. M shall be the larger value of either 10 trading days or the remaining life of the derivative in accordance with margin no. 115.[7] 63

For margined derivatives, this shall be $MF = 1.5 * \sqrt{MPOR/(1\text{ year})}$, where MPOR is the margin period of risk appropriate for the margin agreement in accordance with margin nos. 116–119.[8] 64

[SACCR; Annex 4, §187] Where a single margin agreement applies to several netting sets as described in margin no. 41, the trades in these netting sets shall be treated like unmargined derivatives (i.e. in accordance with margin no. 63). 65

c) Delta (δ)

A supervisory delta shall be assigned to each derivative transaction (). This takes into consideration the sensitivity to the primary risk factor and may be positive or negative, depending on how the transaction's market value behaves in relation to it. The SA-CCR does not allow sensitivities to be calculated according to internal methods. Instead, the supervisory formulas below shall apply. 66

[SACCR; Annex 4, §159] With margin nos. 68 and 69 remaining applicable for options or CDO tranches, the formula shall be $\delta = +1$ if the market value rises due to the primary risk driver and $\delta = -1$ if it falls. 67

The following formulas shall apply for options: 68*

Delta (δ)	Purchased option	Sold option
Call Option	$+\Phi\left(\frac{\ln(P/K) + 0.5 * \sigma^2 * T}{\sigma * \sqrt{T}}\right)$	$-\Phi\left(\frac{\ln(P/K) + 0.5 * \sigma^2 * T}{\sigma * \sqrt{T}}\right)$
Put Option	$-\Phi\left(\frac{-\ln(P/K) - 0.5 * \sigma^2 * T}{\sigma * \sqrt{T}}\right)$	$+\Phi\left(\frac{-\ln(P/K) - 0.5 * \sigma^2 * T}{\sigma * \sqrt{T}}\right)$

where:

ϕ = cumulative distribution function of the standard normal distribution,

[7] Derivative transactions with a daily settlement shall be considered to be derivatives without margin agreement. For these, margin no. 63 shall apply, whereby parameter M as described in margin no. 115 shall be set to a minimum value of 10 trading days. As an alternative, it would also be acceptable to treat derivative transactions with daily settlement the same as those with daily margin settlement, i.e. according to margin no. 64 as this leads to higher credit equivalents.

[8] If the MPOR is expressed in trading days like for the minimum values in accordance with margin nos. 116–119, then the number of trading days for each year shall be determined by market convention in order to be able to perform the division within the formula. Example: an MPOR of ten trading days with 250 trading days per year results in the following to be entered in the formula: 10/250 = 0.04.

ln(…) = natural logarithm function,

P = market price of the underlying, or in the case of Asian options, the current amount of the mean amount on which the pay-out price is based [9, 10]

K = the option's strike price[11]

σ = the supervisory volatility in accordance with margin no. 104

T = the latest moment in the contract for an option strike

For CDO tranches (margin no. 122) it shall be $\delta = \frac{+15}{(1+14*A)\times(1+14*D)}$ if the bank acts as protection buyer and $\delta = \frac{-15}{(1+14*A)\times(1+14*D)}$ if it acts as protection seller. A shall be the attachment point and D the detachment point of the CDO tranche. 69

d) Supervisory factors (SF)

The SFs depend on the relevant primary risk drivers (see margin no. 111) and are defined in the table of margin no. 105; margin nos. 71 and 72 remain applicable. 70

[SACCR; Annex 4, §184] For a basis transaction according to margin no. 112, the supervisory factor must be multiplied by 50%, as shown in the table. For example, for a floating/floating interest rate swap in a single currency, an SF of 0.25% shall apply. 71

For volatility transactions in accordance with margin no. 113, the SF shall be multiplied with the factor 5, as shown in the table. 72

F. Aggregation of add-ons within a netting set

a) General information

The aggregation rules for the SEN for each derivative contract in an aggregated add-on for each netting set are described in margin nos. 74–104. 73

The SEN of the derivative contracts in accordance with margin nos. 49–72 shall serve as a basis for the aggregation within the netting set. There shall be three levels of aggregation: (i) full netting if permitted, 74

[9] For interest rate derivatives, the market value shall mean the referenced interest rate and for credit derivatives the credit spread. For interest rate derivatives in currencies where negative interest rates prevail in the market or for contracts with negative strike interest rates, the market and strike interest rates shall be shifted with an adequate, positive constant: λ. Therefore, P shall be replaced with $P+\lambda$ and K with $K+\lambda$. The constant λ is to be selected in such a way that all of the market and strike interest rates are strictly positive (i.e. >0) (e.g. for CHF, the floor of the relevant SNB target range). This same value in must also be consistent for all interest rate options in the same currency.

[10] If reliable data is available, forward prices relevant to the exercise date shall be used; otherwise the current spot rates.

[11] See footnote 9 for negative strike prices

(ii) partial netting if permitted or (iii) no netting.[12]

Level (i): The full netting takes place by adding the SENs of the individual derivative contracts. Here, SENs with opposite signs cancel each other out. The fully netted SEN from the first level forms the base for the partial netting. 75

Level (ii) The partial netting shall take place using the prescribed formulas with supervisory correlation parameters and may differ, depending on the category of risk factor. Apart from the partial netting of transactions in the opposite direction, this level shall also take into account the diversification effect arising from transactions in the same direction. The results of the partial netting shall always be positive or zero and form the add-on of this aggregation level. 76

Level (iii): In the last level, the aggregated add-on of the netting set is identified by adding all of the add-ons resulting from the partial nettings. 77

The criteria for a full and partial netting within the different categories of risk factors are explained in further detail in margin nos. 84–104. No netting of risk factor categories as defined in margin no. 111 is permitted; therefore, the add-ons of the various risk factor categories shall be aggregated. 78

b) Special cases: aggregating the add-on of basis and volatility transactions

[SACCR; Annex 4, §162-163] Basis and volatility transactions in accordance with margin nos. 112–113 shall be exempted from the criteria defined in margin nos. 84–104. The following special provisions of margin nos. 80–83 shall apply to these. 79

Basis transactions may only be netted amongst themselves if they reference the same pair of related risk factors (i.e. the same basis). A different add-on shall be calculated for each basis defined in margin nos. 81 and 82; these are then added to the other add-ons. 80

Basis interest rate transactions (e.g. floating/floating interest rate swaps) with the same underlying shall be fully netted within the maturity band as defined in margin no. 84 and partially across three maturity bands with the formula in margin nos. 86 and 87. 81

Basis transactions in the other risk factors categories (except interest rates) shall be fully netted if they have the same underlying. In such a case, there is no partial netting. The add-on for each basis shall be equal to the absolute amount of the SEN within this basis. 82

Volatility transactions can only be netted in full or in part with other volatility transactions, if at all. The full and partial netting of volatility transactions shall follow the same rules as the netting of non-volatility transactions within the different risk factors categories (margin nos. 84–104). For instance, transactions that reference the volatility or variance of the same share or share index shall be fully netted first. Then, all of the share volatility transactions shall undergo a partial netting using the formula described in margin no. 97. Share volatility transactions and other equity derivatives may not be netted. 83

[12] The Basel Minimum Standards [SACCR] uses the term "hedging set". This means a number of derivative contracts where a complete or partial netting is permitted for the calculation of the aggregated add-ons.

c) Aggregation of add-ons for interest rate derivatives [SACCR; Annex 4, §166-169]

Interest rate derivatives shall be categorized according to currency and within each currency, into three maturity bands depending on their end date (E) in accordance with margin no. 120: (i) E is shorter than 1 year, (ii) E is between 1 and 5 years and (iii) E is longer than 5 years. 84

A full netting (margin no. 75) shall be permitted for interest rate derivatives which show the same currency and maturity band. 85

A partial netting shall be permitted for interest rate derivatives (margin no. 76) with the same currency. The partial netting for each currency between the netted SEN for the three maturity bands (SEN_1, SEN_2 and SEN_3) shall take place using the formula: 86

$$\text{Add-on} = \left[\begin{matrix}\text{SEN}_1^2 + \text{SEN}_2^2 + \text{SEN}_3^2 \\ +1.4 * \text{SEN}_1 * \text{SEN}_2 + 1.4 * \text{SEN}_2 * \text{SEN}_3 + 0.6 * \text{SEN}_1 * \text{SEN}_3\end{matrix}\right]^{1/2} \quad 87$$

As an optional simplification, the bank may refrain from partial netting as required by margin nos. 86 and 87. In such a case, the add-on may be computed by adding the absolute amounts of the SEN for each currency and maturity band. 88

A separate add-on shall be calculated for each currency using the formula above; these are then aggregated. 89

d) Aggregation of add-ons of currency derivatives [SACCR; Annex 4, §171]

A full netting of currency derivatives (margin no. 75) shall be permitted within the same pairs of currencies. 90

No partial netting exists for currency derivatives. The add-on for each currency pair shall be equal to the absolute amount of the SEN within this currency pair. 91

The add-ons of all currency pairs shall be aggregated. 92

e) Aggregation of add-ons of credit derivatives [SACCR; Annex 4, §172-173]

A full netting (margin no. 75) shall be permitted within credit derivatives referencing the same entity (either a single entity or an index). 93

A partial netting (margin 76) shall include all credit derivatives. Mathematically: 94

$$\text{Add-on} = \left[\left(\sum_i \rho_i * \text{SEN}_i\right)^2 + \sum_i (1 - \rho_i^2) * \text{SEN}_i^2\right]^{1/2}$$

Here, the sum shall include all reference obligors and indices "i", ρ_i shall be the related correlation parameter as stated in the table in margin no. 105 and SEN_i shall be the fully netted SEN belonging to this reference obligor or index. 95

f) Aggregation of add-ons of equity derivatives [SACCR; Annex 4, §177]

The full netting of equity derivatives in accordance with margin no. 75 shall be permitted within the same single entity or index. 96

A partial netting shall include all equity derivatives. Mathematically: 97

$$\text{Add-on} = \left[\left(\sum_j \rho_j * \text{SEN}_j\right)^2 + \sum_j \left(1 - \rho_j^2\right) * \text{SEN}_j^2\right]^{1/2}$$

Here, the sum shall include all individual securities and indices "j", ρ_j which is the correlation parameter as stated in the table in margin no. 105 and SEN_i the fully netted SEN belonging to individual securities or indices. 98

g) Aggregation of add-ons of commodity derivatives [SACCR; Annex 4, §178-182]

Commodities are divided into four categories: (i) energy, (ii) metals, (iii) agricultural products and (iv) remaining commodities. 99

Banks dealing with commodity derivatives must refine their classification within each of these commodity categories in order to reflect their business activities adequately. It is impossible for this circular to provide an exhaustive list of all possible commodity types. However, within the commodity category "energy", this has to be at least subdivided into the commodity types crude oil, electricity, natural gas and coal. Each metal (gold, silver, copper, etc.) and every agricultural product (corn, wheat, soy, etc.) shall form their own commodity type in the relevant commodity category. However, if substantial basis risks of these types could be underestimated in the process, the bank shall refine the categorization (e.g. quality, provenance, etc.) further. 100

A full netting is permitted for commodities that belong to the same category and type of commodities (margin nos. 99 and 100, respectively). 101

A partial netting of commodity derivatives shall be permitted within each of the commodity categories that are the same (margin no. 99). Within each commodity category, the partial netting shall take place according to this formula: 102

$$\text{Add-on} = \left[\left(\sum_k \rho_k * \text{SEN}_k\right)^2 + \sum_k \left(1 - \rho_k^2\right) * \text{SEN}_k^2\right]^{1/2}$$ 103

Here, the sum shall include commodity types "k" within the relevant commodity category, ρ_k which is the related correlation parameter as stated in the table in margin no. 105 and SEN_k shall be the fully netted SEN belonging to this commodity type.

A separate add-on shall be calculated for each of the four commodity categories in accordance with margin no. 99; these shall be aggregated. 104

G. Supervisory parameters for the SA-CCR [SACCR; Annex 4, §183]

105

Underlying asset class			SF[13]	Correlation (ρ_i, ρ_j, ρ_k)	Volatility for margin no. 68 (σ)
Interest			0.50%		50%
Currencies			4.00%		15%
Credit derivatives	Reference obligors	AAA-AA	0.38%	50%	100%
		A	0.42%	50%	100%
		BBB	0.54%	50%	100%
		BB	1.06%	50%	100%
		B	1.60%	50%	100%
		CCC	6.00%	50%	100%
		Without Rating	1.06%	50%	100%
	Index	AAA-BBB (investment grade)	0.38%	80%	80%
		Others	1.06%	80%	80%
Shares	Single name securities		32%	50%	120%
	Index		20%	80%	75%
Commodities	Electricity		40%	40%	150%
	All others		18%	40%	70%

H. Definitions, terms, categories

The following list shall define important terms and classifications, which shall be used when calculating the credit equivalent using the SA-CCR. 106

- **Netting set** – the calculation of the credit equivalent shall depend on whether netting with a counterparty takes place in accordance with Article 61 CAO or not. Derivative contracts with the same counterparty may be netted with other be as described in margin nos. 34–47 and 73–104, provided they fulfill the conditions stated in margin nos. 145–155. A quantity of contracts offsettable as described shall be called a netting set. A separate credit equivalent must be calculated for each netting set. If there is no netting, each separate contract forms its own netting set. 107

- **Collateral (C)** [SACCR; Annex 4, §132+136] – The SA-CCR shall take into consideration the counterparty credit risk of collateral that the bank has posted to its counterparty and the risk-mitigating effect of collateral the bank has received. Parameter C may be positive or negative and shall be the net value of the collateral received by the bank, that is eligible, according to margin nos. 124–135 and 108*

[13] Taking into consideration margin nos. 71 and 72 for basis and volatility transactions

156–278, minus the collateral requested by the bank and in consideration of relevant discounts and haircuts. The value of the collateral received by the bank shall be lowered by such haircuts , minus the collateral requested by the bank and in consideration of relevant discounts and haircuts.[14] The value of the collateral received by the bank shall be lowered by such haircuts.[15] In the same manner, the value of collateral posted to its counterparty by a bank shall be increased. With the exception of margin nos. 197 and 210, the same haircuts shall be used as in the comprehensive approach for collateralized transactions as described in margin nos. 191–277. The SA-CCR does not use a haircut for currency mismatches. A holding period of one year shall apply to transactions with no obligation to make further contributions (unmargined). Transactions with an obligation to make further contributions (margined) shall be subject to a minimum holding period defined in margin nos. 116–119.

- **Derivatives** with margin calls (**margined**) shall be those where a margin is calculated and exchanged at regular intervals on the basis of the net market price of the **derivative contract**. The amount of the margins paid shall include the full net market price of the derivative contract included in the margin agreement, except if **thresholds** (TH) and **minimum transfer amounts** (MTA) have been agreed upon. Transactions with one-way margin agreements where the bank only posts collateral but does not receive any shall be treated like unmargined transactions [SACCR Annex 4, §138]. 109

- The **net independent collateral amount (NICA)** [SACCR, Annex 4, §142–143] shall represent the contractually agreed upon collateral, is independent of the market value of the derivatives. The term shall summarize different terms used in different market segments, such as initial margin and independent amount. The net independent collateral amount shall be the (i) collateral exceeding the variation margin and/or (ii) the independent amount agreed upon in the variation margin. NICA shall be the net amount of collateral to be posted by the counterparty minus the net independent collateral amount to be posted by the bank upon agreement, so that NICA may be positive or negative. The collateral posted by the bank does not have to be included in the NICA if it is deemed bankruptcy-remote. 110

- [SACCR; Annex 4, §151–153] Each derivative transaction must be allocated to at least one of the following five **asset classes**: (i) interest rates, (ii) currencies, (iii) credit derivatives, (iv) equity) and (v) commodities (including gold). The allocation depends on the primary **risk driver** of the derivative transaction. Secondary risk factors do not have to be accounted for in the SA-CCR. Derivative transactions with a single underlying, shall have this as the primary risk driver. In the case of derivative transactions with multiple underlyings, the bank shall consider the sensitivities of these underlyings and their volatility in order to determine the primary risk driver. In the case of complex trades with several, equivalent risk drivers, the FINMA or the audit firm may also require them be allocated to more than one asset class. In this case, banks must determine a separate SEN in accordance with margin nos. 49–72 for each asset class to which the exposure is allocated when determining the PFE. 111

- **Basis transactions** are derivatives that reference the difference of two related risk factors (asset classes). Risk factors are deemed to be related if they may be fully or partially netted in accordance with margin nos. 73–104 during the aggregation. Typical examples of basis transactions are float- 112

[14] Parameter C is not limited to collateral exchanged during a netting or margin agreement. If the bank has received collateral that is eligible for both derivative risk exposures as well as other credit risk exposures, in the SA-CCR only the part which the bank has allocated to the derivative exposures may be considered. The bank shall be free to decide how it wishes to allocate collateral (to derivative exposures or others).

[15] Haircuts shall be limited to a maximum of 100% for collateral posted to the bank.

ing/floating interest rate swaps in a single currency or transactions where the market price of two related commodities are exchanged (commodity basis trades). Interest rate swaps where variable interest rate are swapped in different currencies may not be treated as basis transactions but rather as currency derivatives.

- **Volatility transactions** shall be derivatives that reference the (historical or implicit) volatility or variance of an asset class. Typical examples are transactions based on a volatility index, as well as volatility and variance swaps. 113

- **Maturity parameters** [SACCR Annex 4, §155] – The following time bands shall be of relevance for each derivative transaction.[16] 114

  - Although parameter **M** normally means the **residual maturity** of a derivative, convention shall set it to at least ten trading days. The residual maturity is the longest period within which the contractually agreed-upon payments may become due. If a derivative transaction is designed in such a way that all of the outstanding claims and obligations are settled/unwound on specific dates and the contract's parameters are adjusted so they set the market value of the transaction to zero, the residual maturity shall be set to the next one of these dates [SACCR Annex 4, §158]. 115

  - [SACCR Annex 4, §164] The supervisory ***margin period of risk (MPOR)*** shall be: 116

    - For transactions settled bilaterally with a daily margin settlement, the MPOR shall be at least ten trading days (cf. margin no. 232). 117

    - An MPOR of at least five business days shall apply to centrally cleared transactions subject to daily margining that clearing members (banks) have with their clients (cf. margin no. 551). 118

    - Transactions or netting sets that fulfill the criteria defined in margin nos. 233–239 shall be subject to the MPOR defined in those provisions. Exposures held to qualified central counterparties as defined in margin nos. 521–524 shall be exempted from the rules stipulated in margin no. 233. 119

- For interest rate and credit derivatives, the start date (S) and the end date (E) shall define the period until the beginning and the end of the period of the interest rate or credit derivative. Common interest rate swaps and credit default swaps (CDS) shall have a start date of 0 and the end date shall be the residual maturity.[17] S and E shall be expressed in years.[18] 120*

- For options, parameter T shall define the latest possible **moment to exercise the option**, expressed in years. 121

[16] Illustrative examples of maturity parameters M, S and E may be found in SACCR §156 of the Basel Minimum Standards (http://www.bis.org/publ/bcbs279.pdf)

[17] In the case of Bermudan swaptions, S shall be the earliest exercise date and E the ending time of the option that is the underlying to the swaption. For other derivatives, where the underlying is the value of an interest rate or credit derivatives (e.g. swaptions or bond options), S and E are the starting and ending points of the underlying interest rate or credit derivatives

[18] Example: for an interest rate swap with a residual maturity of 9 months, S = 0 and E = 0.75.

- The term CDO tranche shall summarize all credit derivatives where the credit protection extends to a loss on a tranche in a pool of reference obligors (e.g. n^{th} to default swaps or securitization tranches). **Attachment point A** and **detachment point D** shall express the relevant parts in the loss distribution, at which the credit protection begins and ends. They shall be expressed in numbers between zero and one. In the case of n^{th} to default swaps or a pool of m reference obligors, the following $A = (n-1)/m$ and $D = n/m$ shall apply. 122

VI. EPE Modeling Method (Article 59 CAO)

With respect to the EPE modeling method, the provisions in the Basel Minimum Standards (margin no. 3) and some aspects modified due to the revised Basel III text (margin nos. 5 and 7) shall apply. This shall concern the rules used to calculate the capital requirements. It shall also include the Pillar 2 requirements of the Basel Minimum Standards, i.e. [B2; §777(i)-777(xiii)]. 123*

VII. Risk-mitigating Measures (Article 61 CAO)

A. General aspects

[B2; §114] Where an issue-specific rating already takes into account the effects of risk-mitigating measures, these may not be double counted when calculating the minimum capital requirements. 124

[B2; §113] For exposures that already take into account risk-mitigating measures and which are assigned capital requirements higher than an otherwise identical exposure that does not use these measures, their effects do not need to be taken into account. 125

[B2; §206] Where a bank uses multiple credit risk mitigation (CRM) measures for a single exposure, the bank shall sub-divide the exposure into portions covered by each type of CRM technique, and separately calculate the risk weight of each of these portions. Where credit protection provided by a single protection seller consists of portions with different maturities, they must be subdivided into separate protection as well. 126

[B2; §122, 124, 125] Capital requirements may be reduced by using collateral, provided that: 127

- the reduction of the counterparty's credit quality does not have a significantly negative effect on the value of the collateral; and 128

- the bank has procedures in place for a timely liquidation of collateral. 129

[B2; §127] Both banks involved in a collateralized transaction shall be subject to capital requirements. For example, both repos and reverse repos are subject to capital requirements. Explicit capital requirements shall also be applied to both sides of securities lending transactions, as is also the case with the depositing of securities in connection with a derivative exposure or other transactions where the bank is exposed to credit risk. 130

[B2; §84, §166, Annex 4 §2] For the purpose of this circular, loans, repos and repo-like transactions with securities shall be deemed securities financing transactions (SFT). Lending transactions collateralized with securities shall be deemed to be margin lending. Repos and repo-like transactions with securities shall be deemed repos and reverse repos and securities lending and borrowing. 131

[B2; §128] Where a bank, acting as agent, arranges a repo or repo-like transaction between a client and a third party, and provides a guarantee to the client that the third party will meet its obligations, the capital requirements must be met as if the bank were the principal itself. 132

B. Maturity Mismatches

[B2; §203] The effective maturity of a claim shall be viewed as the longest possible remaining time before the counterparty is scheduled to fulfill its obligation. The effective maturity of the collateral shall be viewed as the shortest possible residual maturity, taking into account any implicit options and termination rights. 133*

[B2; §204] Hedges with maturity mismatches shall be recognized only if the original maturity of the underlying exposure is greater than or equal to one year. In any case, hedges with maturity mismatches shall not be recognized if the residual maturity is less than or equal to three months. 134

[§B2; 205] Credits mitigated with collateral, legally enforceable netting, guarantees and credit derivatives, shall be adjusted as follows: 135

$$Pa = P \cdot (t-0.25) / (T-0.25)$$

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 exposure), expressed in years

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

VIII. Legal and Contractual Netting (Article 61(1)(a) CAO)

A. Netting of loans and deposits on the balance sheet

[§B2; §188] Where a bank is able at any time to determine receivables from and payables (in the form of loans and deposits) to counterparties that may legally be netted, is in a position to legally enforce the netting agreement in each jurisdiction involved (in case of insolvency or bankruptcy of the counterparty) and monitors and controls the roll-off risks and the relevant exposures on a net basis, it may use the net exposure of loans and deposits as the basis to calculate its capital adequacy in accordance with the formula shown in margin no. 204. Assets (loans) shall be treated as receivables, and liabilities (deposits) as 136

collateral. Haircut H shall be set to zero unless there is a currency mismatch. If the bank marks to market on daily basis, a holding period of ten business days and all requirements set out in margin nos. 133–135, 208–210 and 240 and 241shall apply.

B. Recognition of netting agreements for repo and repo-like transactions

[B2; §174] Netting of exposures in the banking and trading book shall be recognized only if the netted transactions fulfill both of the following requirements: 137

- all transactions are marked to market on a daily basis; and 138
- the collateral instruments used in the transactions are recognized as financial collateral in the banking book. 139

[B2; §173] The effects of bilateral netting agreements for repo and repo-like transactions shall be recognized on a counterparty level, if the agreements in the event of default, even if this means insolvency or bankruptcy, are legally enforceable in each jurisdiction involved. In addition, the netting agreements shall: 140

- award the right to the non-defaulting party, in the event of the counterparty's default, including their insolvency or bankruptcy, to either terminate or close out on-going transactions covered in the agreement in a timely manner; 141
- allow the offsetting of profits and losses from the transactions (including the value of any collateral) that have been terminated or closed out under this agreement, so that in the end, one party owes the other one single amount; 142
- allow for the prompt liquidation or offsetting of collateral upon the event of default; and 143
- in the event of a default, be enforceable in every jurisdiction involved together with the rights resulting from margin nos. 141–143, even if the default is due to insolvency or bankruptcy. 144

C. Recognition of netting agreements for derivatives [SACCR, Annex 4; §134]

Banks may net contracts subject to novation under which any obligation between a bank and its counterparty to deliver a given currency on a given value date is automatically amalgamated with all other obligations for the same currency and value date, legally substituting one single amount for the previously gross obligations. 145

Banks may also net any other transactions subject to forms of bilateral, legally valid nettings not listed in margin no. 145, including close-out netting or other forms of novation. 146

In both cases above, a bank shall prove that it has: 147

- A netting contract or agreement with the counterparty which creates a single legal obligation, covering all included transactions, such that the bank would have either a claim to receive or obligation to pay only the net sum of the positive and negative mark-to-market values of included individual transactions in the event a counterparty fails to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances; 148

- written and reasoned legal opinions that, in the event of a legal dispute, the relevant courts and administrative authorities would find the bank's exposure to be a net amount under: 149
  - the jurisdiction of the country where the counterparty is domiciled; if a foreign branch of the counterparty is involved, then also according to the laws of that domicile, 150
  - the legal provisions applicable to the individual transactions, 151
  - the legal provisions applicable to the contracts or agreements required for implementing the netting; 152
- procedures in place to ensure that the legal characteristics of netting arrangements are reviewed regularly to detect possible changes in the applicable law. 153

Agreements with walk-away clauses for the netting shall be prohibited for capital requirement purposes. A walkaway clause is a provision that allows the non-defaulting counterparty to make limited or no payments to the defaulting counterparty, even if the insolvent counterparty is a net creditor. 154

The pure offsetting of payments ("payment netting"), with which operating costs are to be reduced in the daily settlement process, shall not be included when calculating the capital adequacy requirements, since the counterparty's gross obligations are not affected by these. 155

IX. Eligibility of Collateral

A. Qualitative requirements

(B3; §110) Banks must ensure that sufficient resources are allocated to the orderly operation of margin agreements with derivatives and securities financing counterparties, i.e. the timely and correct treatment of outgoing margin calls or the reaction time to handle incoming margin calls. Banks must have collateral management policies in place to control, monitor and report: 156

- the risk they are exposed to due to margin agreements (e.g. the volatility and liquidity of securities used as collateral), 157
- the risk concentrations arising due to particular types of collateral, 158
- the re-use of cash and other collateral, including any potential liquidity deficits due to the re-use of collateral received from counterparties, 159
- ceded rights to collateral, which had been posted to counterparties. 160

B. Possible approaches

[B2; §121] Banks may opt to apply either the simplified or the comprehensive approach. In the banking book, banks are allowed to use the approaches alternatively, but not simultaneously. This restriction does not apply to lombard (collateral) loans, to securities lending or repos and repo-like transactions. Only the 161

comprehensive approach shall be permitted for the trading book.

[B2; §121] Partial collateralization shall be recognized in both approaches. Maturity mismatches between the underlying exposure and the collateral shall only be permitted under the comprehensive approach. 162

X. Eligibility of Collateral under the Simplified Approach (Article 61(1)(d) CAO)

A. Eligible forms of collateral

[B2; §145] The following forms of collateral shall be recognized under the simplified approach: 163

- Cash deposits by the lending bank, including medium-term notes or similar instruments issued by the lending bank, as well as fiduciary deposits at the lending or at a different bank. 164
- Gold 165
- Debt instruments rated by a recognized external rating agency with a minimum rating of: 166
    - at least 5, if issued by central governments or other public-law entities which the national supervisory authority treats as if they were the central governments; 167
    - at least 4, if issued by other entities (including banks and securities firms); or 168
    - at least ST3, for short-term debt instruments. 169
- Debt instruments not rated by a recognized rating agency, provided: 170
    - they were issued by a bank; 171
    - they are traded on a recognized exchange; 172
    - they are classified as senior debt; and 173
    - all other rated senior debt instruments, issued by that same bank rated by a recognized rating agency, which could be allocated to rating category 4 (or ST 3 for short-term debt). 174
- Equity instruments (including convertible bonds) that are included in a main index. 175
- Mutual funds and UCITS[19], on condition that: 176
    - the unit price is published on a daily basis, and 177

[19] Undertakings for the collective investment of transferable securities if

- 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 to hedge investments mentioned in this margin number and margin no. 193 must not prevent units in that mutual fund and UCITS from being eligible as financial collateral. 178

- Repealed 179*

[B3; §111] Re-securitizations as described in margin no. 94.1 of FINMA circ. 2008/20 "Market Risks – Banks" may not be used as financial collateral, regardless of their rating. This prohibition shall apply regardless of the approach selected to define the haircuts. 180

B. Calculations

[B2; §§194, 145] Credit-linked notes backed by cash that have been issued by the bank against claims in the banking book and which meet the requirements for credit derivatives (Section XIII), shall be treated as claims backed by cash collateral. 181

If cash deposits, medium-term notes or similar instruments issued by a lending bank are held as collateral with a third-party bank and are openly pledged/ceded to the lending bank, and if this occurs unconditionally and irrevocably, the exposure amount protected by the collateral (after any haircuts applicable for currency risks) shall receive the risk weight of the third bank involved. 182

Any portion of a debt collateralized by fiduciary deposits at another bank shall receive the risk weight of the bank with which the fiduciary deposit was placed. 183

[B2; §182] For collateral to be recognized under the simplified approach, the collateral must be pledged or otherwise secured for at least the exposure's life, and its market value must be recalculated with a minimum frequency of six months. Cash deposits, fiduciary deposits and medium-term notes may be exempted from the requirement for market valuations. The parts of the claims collateralized by the market value of recognized collateral shall receive the risk weight applicable to the collateral provider. The risk weight of the collateralized portion shall be subject to a floor of 20%, except for the cases described in margin nos. 185–189. The remainder of the claim shall receive the risk weight of the corresponding counterparty. 184

[B2; §183] Repo and repo-like transactions fulfilling the criteria described in margin nos. 260–268 and 271–276 shall receive a risk weight of 0%. If the counterparty is not a core market participant, the transaction must be risk-weighted at 10%. 185

[B2; §184] Derivatives marked to market on a daily basis collateralized by cash in the same currency shall be risk-weighted at 0%. Where they are collateralized against sovereign bonds or bonds issued by other government entities qualifying for a 0% risk-weighting under the standardized approach, they shall be given a risk weight of 10%. 186

[B2; §185] Instead of the minimum risk weights specified in margin no. 184, a 0% risk weight may be assigned if the transaction and the collateral are denominated in the same currency and 187

- the collateral is a cash deposit; or 188

- the collateral is in the form of securities issued by central governments or public-law entities eligible for a 0% risk weighting under the standardized approach, and its market value has been discounted by 20%. 189

Repealed 190*

XI. Eligibility of Collateral under the Comprehensive Approach (Article 61(1)(d) CAO)

A. Eligible forms of collateral

[B2; §146, B3;§111] The following collateral instruments shall be eligible for recognition in the comprehensive approach: 191

- all instruments listed in margin nos. 163–178, except for the instruments listed in margin no. 180. 192*
- equities not included in a main index, but listed on a recognized exchange. 193
- mutual funds and UCITS which include such equities. 194
- [B2; §703] All instruments in the trading book may be used as collateral for repos and repo-like instruments contained in the trading book, except for those mentioned in margin no. 180. The instruments not recognized as collateral in the banking book (i.e. they do not fulfill the requirements stipulated in margin no. 163 et seqq.) shall be subject to the same haircut as the one used for equities not included in a main index, but listed on a recognized exchange (margin no. 209). However, banks using their own estimates or the EPE model approach to determine the haircuts shall also use these for the trading book. 195

B. Calculations

[B2; §130] Where collateral is accepted under the comprehensive approach, banks must adjust their exposures to a counterparty in order to account for any changes in value of that collateral. If using haircuts (additions to or subtractions from collateral), banks must adjust both their exposure to the counterparty and the value of any collateral received from that counterparty, in order to account for any possible future fluctuations in the value of either. 196

[B2; §131] Where there is a currency mismatch between the exposure and the collateral, an additional downward adjustment shall be made to the volatility-adjusted collateral amount to account for possible future fluctuations in exchange rates. 197

[B2; §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 weight of the counterparty. The exact framework for performing these calculations is set out in margin nos. 204–207. 198*

[B2; §133] Banks may use either supervisory haircuts (margin nos. 208–210) or own-estimate haircuts (margin no. 212 et seqq.). The use of own-estimate haircuts shall only be permitted once the FINMA has verified its compliance with certain qualitative and quantitative criteria (margin nos. 216–230), and has determined that these have been met. 199

[B2; §134] A bank may choose to use supervisory or own-estimate haircuts irrespective of whether it is using the standardized approach or the foundation IRB approach for its credit risk. If a bank uses own-estimate haircuts, it shall do so for the full range of instrument types for which own-estimate haircuts are appropriate, with the exception of immaterial portfolios. 200

[B2; §135] The size of the individual haircuts shall depend on the type of instrument, type of transaction and frequency of marking to market and remargining. For example, repo and repo-like 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 secured credit transactions where the collateral is subject to daily marking to market and no remargining clause applies, the haircuts shall be based on a 20-day holding period. Also see margin no. 241. 201

[B2; §136] For certain types of repo or repo-like transactions (mainly repo transactions with sovereign bonds as defined in margin nos. 260-276), a haircut of zero may be applied when calculating the exposure amount after credit risk mitigation. 202

[B2; §138] As a further alternative to supervisory haircuts and own-estimate haircuts, banks may use value-at-risk models. For this, see margin no. 242 et seqq. 203

[B2; §147] For a collateralized transaction, the exposure amount after risk mitigation shall be calculated as follows: 204

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

where:

E^* = the exposure value after risk mitigation

E = current value of the exposure

H_E = haircut applied to the exposure

C = current value of the collateral received

H_C = haircut applied to the collateral

H_{FX} = haircut applied to the currency mismatch between collateral and exposure

[B2; §148] The exposure after credit risk mitigation must be multiplied by the risk weight of the counterparty in order to obtain the risk-weighted value of the collateralized transaction. 205

[B2; §149] The treatment of transactions with maturity mismatches between exposure and collateral is described in margin nos. 133–135. 206

[B2; §150] Where the collateral is a basket of assets, the haircut on the basket shall be $H = \sum_i a_i \cdot H_i$ where a_i is the weight of an asset in the basket and H_i is the haircut applicable to that asset. The risk weight of a_i shall be equal to the percentage of asset i in terms of value compared to the entire basket. 207

C. Use of standard supervisory haircuts

[B2; §151, 153][B3; §111] Standard supervisory haircuts (expressed as a percentage) where collateral is marked to market daily, subject to daily remargining and a 10-day holding period: 208

209*

Issue Rating	**Residual maturity**	**Central governments and public-law entities treated like central governments, as well as multilateral development banks as per Annex**	**Other issuers**	**Securitization exposures**
Rating categories 1 or 2, or ST1 for short-term debt instruments	≤ 1 year > 1 year ≤ 5 years > 5 years	0.5 2 4	1 4 8	2 8 16
Ratings 3 or 4 or ST2 or ST3, respectively for short-term debt instruments and unrated bank debt instruments according to margin no. 170 (incl. fiduciary investments)	≤ 1 year > 1 year ≤ 5 years > 5 years	1 3 6	2 6 12	4 12 24
Rating category 5	All	15	not recognized	not recognized
Shares included in a main index (including convertible bonds) and gold		15		
Other equities traded on a recognized stock exchange (including convertible bonds) and other securities		25		
Mutual funds/UCITS		Highest haircut applicable to any security in which the fund can invest		
Cash collateral in the same currency[20]		0		

[20] Including medium-term notes or similar instruments issued by the lending bank, as well as fiduciary deposits at the lending or at a different bank.

[B2; §152] The standard supervisory haircut for currency risk where exposure and collateral in the form of debt instruments or cash collateral are denominated in different currencies shall be 8% (based on daily mark-to-market of collateral, daily margining and a 10-business day holding period). 210

[B2; §153] In the case of transactions where the bank lends non-eligible instruments, the haircut for the exposure shall be the same as for equities listed on a recognized stock exchange but which are not part of a main index. 211

D. Use of own-estimate haircuts

[B2; §154] On request, the FINMA may grant a bank permission to calculate haircuts using its own estimates of the volatility of market prices and exchange rates. Permission to do so shall be conditional on meeting the minimum qualitative and quantitative standards set out in margin nos. 216–230. 212

[B2; §154] For debt instruments with a rating of at least 4, or 3 for short-term debt instruments, banks may calculate a volatility estimate for each category of securities. When determining relevant categories, the type of issuer, its rating, the residual term and the 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 eligible as collateral, haircuts shall be calculated for each individual security. 213

[B2; §155] Banks shall estimate the volatilities of collateral and currency mismatches individually. The estimated volatilities may not take into account the correlations between unsecured exposure, collateral and exchange rates. 214

[B2; §156-160] Where haircuts are calculated on the basis of own estimates, the following quantitative requirements apply: 215

- for the calculation of the haircut, a 99th percentile, one-tailed confidence interval shall be used; 216
- 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 shall be found in margin no. 232. Banks may use haircuts calculated with shorter holding periods, scaled up to the appropriate holding period using the formula set out in margin no. 240; 217
- Banks must take into account the illiquidity of lower-quality assets. The holding period shall be increased in cases where a specified holding period is too short given the liquidity of the collateral. Banks must also be in a position to identify where historical data may understate the potential volatility, such as would be the case with a pegged currency. In such cases, the data shall be subjected to stress testing; 218
- The choice of historical observation period (sample period) for calculating haircuts shall be a minimum of one year. If the daily observations are based on differing weights, the weighted average observation period shall take place for at least six months (that is, in the weighted average, the individual observations are from at least six months ago); and 219
- the data sets shall be updated at least every three months and, should market conditions demand it, be reassessed immediately. 220

[B2; §162-165] In addition, the following qualitative requirements must be met: 221

- the estimated volatility data (and holding periods) must be embedded in the bank's day-to-day risk management process; 222
- banks shall have robust processes in place ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the risk measurement system; 223
- the risk measurement system must be used in conjunction with internal exposure limits; and 224
- an independent review of the risk measurement system shall be carried out regularly in the bank's own internal auditing process. The overall risk management process must be reviewed at regular intervals and as a minimum; such a review must specifically address the following: 225
    - the embedding of risk measurement in daily risk management; 226
    - the validating of significant changes in the risk measurement process; 227
    - verifying the accuracy and completeness of exposure data; 228
    - verifying whether the consistency, timeliness and reliability of data sources used for the internal models, including the independence of such data sources; and 229
    - verifying whether the volatility assumptions are accurate and adequate. 230

E. Necessary adjustments to the minimum holding period and haircuts

a) Adjustments of minimum holding period [B2; §166-167] [B3; §103]

Different holding periods are appropriate for different transactions, depending on the nature and frequency of their revaluation and remargining provisions: 231

232

Transaction type	Minimum holding period [21]	Condition
Repo and repo-like transactions	5 business days	Daily remargining
Other capital market transactions, derivatives [22] and lombard loans	10 business days	Daily remargining
Collateralized loans	20 business days	Daily revaluation

A longer holding period must be defined for transactions or netting sets (see margin no. 107) that fulfill one of the criteria specified in margin nos. 233–239.

[21] Supervisory Floor for Margin Period of Risk
[22] With the exception of margin no. 551

For netting sets consisting of more than 5,000 transactions at any given time within a quarter, the minimum holding time in the following quarter shall be 20 business days. 233

For netting sets, which include one or more transactions consisting of illiquid securities or derivatives that cannot easily be replaced, the minimum holding time shall be 20 business days. 234

In this regard, the terms "illiquid securities" and "not easily replaceable derivatives" shall imply a difficult market environment. This type of situation shall be characterized by the absence of a continuous and active market, i.e. where market participants cannot receive several price quotes within a maximum of two days, where no market movement is discernible and where there is no discount (in the case of collateral) or mark-up (in the case of derivatives) on the market price. 235

Situations where transactions are considered to be illiquid as per this definition shall include instruments for which there is no daily pricing as well as instruments which are valued using specific accounting rules (e.g. derivatives, repos or similar, where the net present value is determined using models which do not contain input parameters observed on the market). 236

Moreover, the bank shall determine whether it is building up a counterparty risk concentration by engaging in certain transactions or accepting certain securities and whether the bank could replace these transactions if the counterparty were to suddenly leave the market. 237

If a bank has been subject to contentious margin calls for a specific netting set in the last two quarters where the contentious action has lasted longer than the holding period (before these provisions became valid), the bank shall account for these cases by defining a holding period for the next two quarters that is at least double the minimum holding period as per margin nos. 233–237 for the netting set in question. 238

For re-margining obligations, which do not take place daily but every N days, the holding period shall be at least the minimum holding period F as defined in margin nos. 231, 232 and 233–238 plus N days minus 1, where: 239

$$\text{Holding period} = F + N - 1$$

b) Adjustment to haircuts

[B2; §168] Where the frequency of the remargining or revaluation is greater than one day, the minimum haircut shall have to be scaled up, depending on the actual number of business days between remargining or revaluation using the following formula: 240

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

where:

H = haircut

H_M = haircut for minimum holding period

T_M = minimum holding period for the specific type of transaction

NR = exact number of business days between margin calls for capital market transactions or the revaluations for collateralized loans

[B2; §168] Where the volatility is calculated based on a minimum holding period of T_N days, which is different from the specified minimum holding period TM , HM shall be calculated with the following formula: 241

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

where:

T_N = holding period used by the bank to determine H_N

H_N = haircut based on the holding period T_N

F. Use of VaR models to estimate haircuts

[B2; §178] As an alternative to using the standard supervisory haircuts or own-estimate haircuts, banks may use a VaR model to calculate the exposure after credit risk mitigation. This must take into account the correlation effects between securities positions. This approach shall only apply to repos and repo-like transactions covered by bilateral netting agreements on a counterparty-by-counterparty basis. 242

[B2; §178] The VaR model approach shall be available to banks with a market risk model in place that is recognized as per FINMA Circular 08/20 "Market Risks – Banks". 243

Banks using a market risk model not recognized under supervisory law may apply for separate supervisory recognition of their internal VaR models used for the calculation of potential price volatilities for repos and repo-like transactions. 244

Internal models shall only be recognized if a bank can prove the quality of its model to the FINMA through back-testing its results using one year of historical data. 245

[B2; §179] The quantitative and qualitative criteria for recognizing internal market risk models for repos and repo-like transactions shall be the same as those set out in the FINMA circular 08/20 "Market Risks - Banks". However, the minimum holding period applicable shall be at least 5 business days (and not 10). Should a holding period turn out to be inappropriate for a particular instrument due to its liquidity, the holding period must be increased accordingly. If a transaction or a netting set (see margin no. 107) fulfills the criteria stipulated in margin nos. 233–239, the holding period must be adjusted to reflect those stipulations. 246

[B2; §181] For banks using their own internal market risk model, the calculation of the exposure after credit risk mitigation E* shall be the following: 247

$$E^* = \max \{0, [(\sum E - \sum C) + (\text{VaR output from the internal market risk models})]\}$$ 248

When calculating capital requirements, banks shall use the previous business day's VaR. 249

G. Requirements for a zero haircut

Regardless of which approach (simplified approach, comprehensive approach or VaR model approach) is applied for repos and repo-like transactions where the repurchase agreement is denominated in Swiss francs, only the unprotected portion (i.e. the positive net exposure amount without application of haircuts) must be taken into account to determine the minimum capital requirements for the credit risk, provided the following requirements are met: 250

- the counterparty is a **key** market participant; 251
- the repo transaction is automatically settled on a recognized electronic system which eliminates any operational and settlement risks; 252
- transactions are settled with a "delivery against payment" system; 253
- the system marks to market the exposures and collateral (to reflect both currency and price movements) at least twice daily, the net exposure is immediately recalculated, and daily remargining takes place automatically; 254
- the documentation covering the agreement is standard market documentation for this type of repo transaction in the relevant securities. It shall specify 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; 255
- In case of default, the bank shall have the unrestricted, legally enforceable right to immediately seize and liquidate the collateral to its benefit, regardless of whether the counterparty is insolvent or bankrupt; 256
- the system used to process repo transactions is recognized by the FINMA; 257
- the securities underlying the repo transaction are securities permitted for repo transactions by the Swiss National Bank. 258

Systems recognized by the FINMA shall be the Swiss franc repo systems based on the integrated systems of SIX Repo AG or Eurex Zurich AG and which are settled via SIX SIS AG and the payment system, SIC. 259

[B2; §170] In addition to the stipulations set out in margin no. 250, a haircut (H) of zero may be applied for repos and repo-like transactions where the counterparty is a key market participant and the following requirements are met: 260

- both the exposure and the collateral are either cash or a security issued by a central government or a public-law entity qualifying for a risk weight of 0% under the standardized approach; 261
- both the exposure and the collateral are denominated in the same currency; 262
- either the transaction has a maximum residual maturity of one day (overnight), or both the exposure and the collateral are marked to market daily and are subject to daily remargining; 263

- following a counterparty's failure to remargin, the time between the last time it was marked to market prior to the failure to remargin and the liquidation of the collateral may not exceed four trading days; 264

- the transaction is settled in a payment and settlement system generally recognized for this type of transaction; 265

- the documentation covering the agreement is standard market documentation for repo and repo-like transactions in the securities concerned; 266

- the transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to remargin or otherwise defaults, then the transaction may be terminated with immediate effect; and 267

- in case of default, regardless of whether the counterparty is insolvent or bankrupt, the bank has the unrestricted, legally enforceable right to immediately seize and liquidate the collateral to its benefit. 268

[B2; §170] The exceptions specified in margin no. 260 are not permitted for banks using a model approach as described in margin nos. 242 et seqq.. 269

[B2; §171] Key market participants as per margin no. 260 shall be: 270

- central governments, central banks and public-law entities 271

- banks and securities dealers 272

- other finance companies (including insurance companies) eligible for a 20% risk weight 273

- regulated mutual funds subject to capital requirements or leverage limits 274

- regulated pension funds 275

- recognized operators of payment and securities settlement systems 276

[B2; §172] Where a supervisory authority in a third country applies a specific carve-out to repos and repo-like transactions in securities issued by its domestic government, this exception may also be invoked in Switzerland. 277

H. Repo and repo-like transactions

[B2; §176] For banks using the standard supervisory haircuts or own-estimate haircuts, the following framework shall apply to take into account the impact of netting agreements: 278

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

where:

E^* = the exposure value after risk mitigation

E = current value of the exposure

C = current value of the collateral received

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

H_S = haircut applied to that security

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

H_{FX} = haircut applied to this currency mismatch

XII. Guarantees and Credit Derivatives (Article 61(1)(b) and (c) CAO)

A. Minimum requirements

Banks shall recognize and understand the risks associated with guarantees and credit derivatives. Any system used to measure, manage and control risks shall capture guarantees and credit derivatives appropriately. 279

The provisions set out in margin nos. 281–332 shall apply to banks which use the international standardized approach (SA-BIS) to determine their minimum capital requirements for credit risks. For banks using the IRB approach, the Basel Minimum Standards shall apply immediately, subject to the restrictions specified in margin no. 371. 280

B. Recognition of protection effectiveness

Banks buying protection in the form of guarantees and credit derivatives can mitigate their credit risk for one or more counterparties. However, in order for the protection in the form of a guarantee or credit derivative to be recognized under the substitution approach (margin no. 311), the credit risk must actually be transferred to the protection provider, and the minimum criteria outlined below must be met. In any case, the protection effectiveness shall be limited to the maximum pay-out amount. 281

[B2; §189] A guarantee or credit derivative contract shall: 282

- constitute a direct claim towards the protection provider; 283
- be explicitly tied to specific claims or a pool of claims, so that the extent of the protection is clearly defined and indisputed; 284
- be irrevocable: the contract does not allow the protection seller to unilaterally revoke the credit protection, increase the protection cost or reduce the agreed maturity of the protection unless the protection buyer fails to meet its contractually agreed payment obligations, or fails to meet any other fundamental contractual obligations; 285
- be unconditional: the contract must not contain any provision which would allow the protection provider to avoid immediately fulfilling its obligations; 286
- be binding for all parties involved and in all relevant jurisdictions and be legally enforceable; 287
- be in writing. 288

[B2; §195][B3;text between §120 and §121] The protection effectiveness can be recognized only if the protection provider[23] belongs to one of the following issuer categories: 289

- central governments and central banks in accordance with Annex 2 Section 1 CAO (SA-BIS), with a risk weight that is equal to or smaller than that of the reference obligor; 290
- the BIS, the IMF and multilateral development banks in accordance with Annex 1, with a risk weight that is equal to or lower than that of the reference obligor; 291
- public-law entities as well as banks and securities dealers in accordance with Annex 2 CAO (SA-BIS) with a risk weight that is equal to or lower than that of the reference obligor; 292
- other legal entities with external ratings, except if the protection is used for a securitzation. Legal entities shall include parent companies, subsidiaries and group companies with a risk weight equal to or smaller than that of the reference obligor. 293
- If a protection is used for a securitization: other legal entities with a rating of the rating class "4 or better" and which, up to the point of providing the credit protection had a rating of the rating class "3 or better". The protection giver fulfilling these conditions may also be a parent company, a subsidiary or sister company of the reference obligor, provided their risk weight is equal to or smaller than that of the reference obligor. Banks allowed to apply the IRB approach to a direct receivable from a protection seller may also use internal PD estimates instead of external ratings in order to value the recognizability of the protection seller in accordance with the first sentence of this margin number. 294

[23] As the protection provider has already fulfilled its maximum obligations in the case of credit-linked notes (CLNs), the restrictions mentioned in this margin number do not apply to CLNs.

C. Additional minimum requirements for guarantees

[§B2; §190] A guarantor shall be liable for all types of payments that the reference obligor is to make for the underlying reference obligation. If a guarantor is liable only for the repayment of the principal of the reference obligation, interest and all other payments not protected by the guarantee shall be treated as unsecured amounts in accordance with margin no. 322. 295

[B2; §190] In the case of insolvency or late payment by the reference obligor, the protection buyer shall be entitled, directly and in a timely manner, to request payment from the protection provider for any monies outstanding under the credit agreement. 296

D. Sureties and export risk guarantees provided by the Swiss federal government

For the purpose of calculating minimum capital requirements, sureties that fulfill the requirements set out in margin nos. 283–296 shall be recognized as protection in the same way as guarantees. As a rule, only sureties given on a joint and several basis shall fulfill these requirements. The risk-mitigating effect of sureties issued by the Swiss federal government in the context of the Promotion of Building of Residential Properties and Ownership (PBRO) shall be recognized even though the conditions set for guarantees are not fully fulfilled. 297

The risk-mitigating effect of the export risk guarantees issued by the Swiss federal government shall also be recognized even though the conditions set for guarantees are not fully fulfilled. 298

E. Additional minimum requirements for credit derivatives

[B2; §191] The receivable to be hedged must belong to the contractually specified receivables for the purpose of defining credit events as well for settlement. If the receivable to be hedged does not fulfill this condition, either margin nos. 307–310 or margin no. 327 shall apply. For a total return swap, the reference obligation and the receivable to be hedged must be identical. 299

The contractually specified credit events which trigger the credit derivative's maturity shall include at least the following: 300

- failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation); 301

- insolvency (e.g. bankruptcy, overindebtedness, inability to pay debts) of the reference obligor, or admission in writing of its general inability to pay its debts as they become due, and similar events; 302

- restructuring (by way of debt relief for the repayment of principal, interest or fees) of the contractually specified obligations used to determine whether a credit event has occurred, if the restructuring leads to a reduction or loss of the claim. If restructuring is not contractually specified as a credit event, margin no. 321 or margin no. 327 shall apply. 303

[B2; §191] The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This obligation shall not be the sole responsibility of the protection provider. The protection buyer shall have the right to notify the protection provider of the occurrence of a credit event. 304

[B2; §191] Credit derivatives allowing for a cash settlement may be recognized for capital purposes only if a robust valuation process is in place for the reference debt. The valuation process shall enable a reliable calculation of the loss. There shall be a clearly defined period for obtaining post-credit event valuations. 305

[B2; §191] If no cash settlement is foreseen, the protection buyer shall be entitled to transfer all claims specified for settlement to the protection provider in case of a credit event. However, the terms of the claims must provide that consent to such a transfer cannot be withheld without good reason. 306

[B2; §191] If the receivable to be protected is not contractually specified for determining settlement or for determining credit events (asset mismatch), the following minimum requirements shall be met: 307

- the debt obligation to be protected and the reference entity to the credit derivative shall be identical legal entities; 308
- the receivable specified in the contract to determine credit events or a settlement shall be of equal rank or subordinated to the receivable to be protected; 309
- legally enforceable cross-default or cross-acceleration clauses must ensure the effective transfer of credit risks to the protection seller. 310

F. Calculation

[B2; §196] If a guarantee meets the requirements set out in margin nos. 283 et seqq., the protected portion of the receivable to be protected may be assigned the risk weight of the protection provider. 311

[B2§ 197] Materiality thresholds on payments below which no payment is made in the event of a loss represent retained first-loss exposures and must be weighted at 1250% by the bank buying the credit protection. 312

[B2; §199] If the bank transfers part of the risk of an exposure in one or more tranches to one or more protection providers and retains some level of the loan's risk and the risk transferred, and the risk retained are of different seniority, then the bank may obtain credit protection for either the senior tranches (e.g. second-loss tranche) or the junior tranche (e.g. first-loss tranche). In this case, the provisions of Section XIV (Securitization Transactions) shall apply. 313

[B2; §193-194] If a bank obtains a protection in the form of a credit derivative that meets all of the requirements set out in margin nos. 282–310 for full recognition of the effectiveness of the protection, the receivable to be protected may be assigned the same risk weight as that of the protection provider for the following types of credit derivatives, if the following conditions are met: 314

- credit default swaps (CDS): no further conditions. 315
- Total return swaps (TRS): the condition is that the bank does not record payments made by the 316

protection provider for the contract in question as income without adjusting the valuation of the exposure to be protected accordingly (either by reducing its fair value or by increasing provisions).

- [B2; §207] first-to-default swap (FDS): for the asset with the lowest risk-weighted amount in the basket, but limited to the maximum of the notional hedged amount. If several claims have the lowest risk weights in the basket, the bank may freely choose to which of these receivables it will apply the substitution approach. 317

- [B2; §209] Second-to-default swap: applying the protection provider's risk weight to the second smallest exposure in the basket is permitted only if the basket in question has already been protected with a first-to-default swap (with at least an equal hedge amount) or one of the exposures in the basket has already defaulted and the second-to-default swap has therefore become a first-to-default swap. 318

- n^{th}-to-default swaps are treated in the same way as second-to-default swaps. 319

- Credit-linked notes (CLN): as the protection provider has already fulfilled its maximum obligations, a risk weight of 0% is applied. 320

[B2; §192] If a restructuring as stipulated in margin no. 303 does not represent a contractually specified credit event, a limited hedge protection may be included in the calculation of the capital adequacy, provided that all other relevant requirements of margin nos. 282–310 are met: 60% of the amount of a credit derivative's hedge without restructuring may be recognized if that credit derivative is in all other respects identical to a credit derivative that includes restructuring This means that the substitution approach may be applied to a maximum of 60% of the entire exposure to be hedged, while the remainder of the exposure to be hedged shall be treated as if unsecured. 321

[B2; §198] Where the amount guaranteed or protected with a credit derivative is less than the total exposure amount to be hedged and the secured and unsecured portions are ranked equally, i.e. if the bank and the protection provider share losses on a pro-rata basis, the minimum capital requirements may be lowered proportionally: the protected portion of the exposure shall be treated with the substitution approach, while the remainder is treated as unsecured. 322

[B2; §200] If the guarantee or credit derivative is denominated in a currency different from that of the exposure to be protected (i.e. there is a currency mismatch), the amount of the exposure deemed to be protected will be reduced by the application of a haircut, i.e. 323

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

where

G_a = protected amount recognized under supervisory law

G = protected amount recognized under supervisory law, where currencies are the same

H_{FX} = haircut appropriate for the currency pair at hand.

The haircut to be applied must be based on a 10-business day holding period, assuming the collateral is marked to market every day. For banks using supervisory haircuts, H_{FX} shall be 8%. For banks that do not mark collateral to market on a daily basis, the haircut shall be scaled up according to margin no. 240 by increasing NR accordingly. 324

[B2; §205] If the residual maturities of a guarantee or a credit derivative and the exposure to be protected are mismatched, the provisions set out in margin nos. 134 and 135 shall apply. 325

If an exposure not allocated to the trading book is protected using a credit derivative issued by the bank's own trading department, the protective transaction may only be recognized on condition that the trading department passes on this internal risk transfer, by means of a transaction that exactly opposing the original one, to a third party (cf. margin no. 25 of FINMA Circular 08/20 "Market Risks – Banks"). The protected receivable shall receive the risk weight of the external third party. 326

Unrestricted life insurance on the life of the borrower or his/her close relatives (parents, siblings, spouse and children) with a guaranteed redemption value may be treated according to the provisions applicable to guarantees in the amount of its redemption value (cf. Chapter XII, Section F) if: 326.1*

- They come from an insurance company that has been rated 1, 2 or 3 by a recognized external rating agency; and 326.2*
- The guarantee requirements pursuant to margin nos. 279, 283–288 as well as margin nos. 295–296 have been fulfilled. 326.3*

Guarantees and credit derivatives where the protective effect cannot be recognized may not be taken into account in relation to the reference obligation. 327

G. Minimum capital required for banks acting as protection provider

Pursuant to Article 54(1) CAO, a guarantee's credit equivalent must be equal to the guaranteed exposure. Article 53 CAO stipulates that the reference obligor's risk weight must be applied to the credit equivalent. 328

If a bank enters into a commitment as protection provider with a CDS or TRS, the resulting protection commitments shall be treated as direct exposures to the reference obligor for capital adequacy purposes. 329

If the bank is the protection provider in an FDS without basket rating by a FINMA-recognized rating agency, the risk weights assigned to the individual receivables in the basket must be multiplied by the maximum pay-out amounts arising from their corresponding credit event. The minimum capital required for the FDS must be 8% of the total of the risk-weighted maximum pay-out amounts, whereas the minimum capital required is limited to the maximum limit of the FDS's pay-out amount. 330

[B2; §210] If a bank enters into a commitment as protection seller with a second-to-default swap (SDS), margin no. 330 shall apply. Unlike with first-to-default swaps, however, in the absence of a basket rating the lowest pay-out amount (after risk weighting) may be disregarded from the total until the default of the first exposure contained in the basket. For n^{th}-to-default swaps, the procedure shall be the same. Thus, for example, the four smallest pay-out amounts (after risk weighting) shall be disregarded when totaling for a fifth-to-default swap, Whenever one of the exposures in the basket defaults, n shall decrease by one. 331

The repayment of a CLN shall depend on the credit rating of both the reference obligor and the CLN issuer. The higher of these two allocated risk weights shall be used to calculate the required capital. 332

XIII. Units in managed funds (Article 66(3bis) CAO)

The provisions in Section XIII shall apply to units in managed funds held in the banking book. These shall include all units in managed funds, regardless of their domicile or legal form, specifically investment companies not limited by Article 2(3) CISA as well as special funds in accordance with Article 71 FinSA. Only situations listed in Article 2(2)(a) to (e) and (g) CISA shall be exempted. Foundations incorporated according to foreign law and the management of collective funds shall not be exempted from the provisions in this section. 333*

[FUNDS§80 (i)]. Units in managed funds held in the banking book shall be treated with one or several[24] of the following approach(es): the look-through approach (LTA), the mandate-based approach (MBA) or the fallback approach (FBA). The approaches differ in their risk sensitivity and conservatism. 334

Banks in supervisory categories 4 and 5 may choose to apply the simplified approach (SA) for their FBA. This approach shall also be available for banks in supervisory category 3 if these hold fund units in negligible amounts. This shall be the case if the carrying value of units in managed funds make up less than 1% of all risk-weighted assets excluding the units in managed funds. 335

Margin nos. 338–358 describe the approaches when using the standardized approach for credit risk (SA-BIS). Banks using the IRB approach shall apply the Basel Minimum Standards[25], with further details provided in Section XV. 336

(Waterfall) The FBA may be used at all times. If the FBA is not used, the LTA shall be used if the conditions listed in margin nos 338–341 are met. Otherwise, the MBA may be used if the fund agreement or national legislation provide sufficient information to allow a conservative estimate of the RWA of all exposures in the managed fund. 337

A. Look-Through Approach (LTA)

[FUNDS; §80 (ii)] When using the LTA, the exposures to the equity investments in funds shall be risk-weighted as if they were being held directly by the bank. This is the most granular and risk-sensitive approach. With the exception of margin no. 337, it must[26] be used if: 338

- there is sufficient and frequent information provided to the bank regarding the underlying exposures of the fund; and 339
- such information is verified by an independent third party. 340

[FUNDS§80 (iii)] In order to fulfill margin no. 339, the frequency of financial reporting of the fund must be the same as or more frequent than that of the bank's, and the granularity of the financial information must 341

[24] See margin no. 355.
[25] Cf. margin nos. 3 and 371.
[26] If the conditions of Article 17 CAO are fulfilled, the MBA may be used instead of the LTA, which is a simplification.

be sufficient to calculate the corresponding risk weights.[27] In order to fulfill margin no. 340, an independent third party, such as the depository or the custodian bank or, where applicable, the fund management company must verify the exposures at least every two years.

[FUNDS§80 (iv)] Under the LTA, banks must risk weight all underlying exposures of the fund as if these were being held directly by the bank. This specifically includes any underlying exposure arising from the managed fund's derivatives and the associated counterparty credit risk (CCR). 342

Instead of determining a credit valuation adjustment (CVA) charge associated with the fund's derivatives exposures in accordance with margin nos. 487–518, banks must multiply the CCR by a factor of 1.5 before applying the risk weight associated with the counterparty.[28] 343

[FUNDS§80 (v)] Banks may rely on third-party calculations to determine the risk weights associated with their equity investments in funds (i.e. the underlying risk weights of the exposures of the managed fund) if they do not have adequate data or information to perform the calculations themselves. In such cases, the applicable risk weight shall be 1.2 times higher than if the exposure were held directly by the bank.[29] 344

B. Mandate-based Approach (MBA)

[FUNDS§80 (vi)] The MBA shall provide a method to calculate the risk-weighting to be used if the conditions for applying the LTA are not given. 345

[FUNDS§80 (vii)] Under the MBA shall banks may use the information contained in a fund's mandate or in the national regulations governing such investment funds.[30] To ensure that all underlying risks are taken into account (including counterparty credit risk, CCR) and that the risk-weighting under the MBA is not less than under the LTA, the risk-weighted assets for the fund's exposures shall be calculated as the sum of the following three items: 346

(a) Balance sheet items shall be risk-weighted assuming the underlying portfolios are invested to the maximum extent allowed under the fund's mandate (or regulations) in those assets attracting the highest capital requirements, and then progressively in those other assets implying lower risk weighting. If more than one risk weight can be applied to a given exposure, the maximum risk weight applicable must be used.[31] 347

(b) The credit equivalent for off-balance sheet transactions in managed funds shall be calculated as foreseen by Article 49 CAO. Counterparty risks arising from derivative positions shall be treated according to margin no 349. 348

[27] No external financial or regulatory audit is required for the reports on the managed funds. The last available report on the managed funds shall be used to calculate capital requirements. If a bank holds (and calculates the risk-weighted assets thereof) the managed funds itself because it acts as custodian bank or because they have been issued by a group-affiliated fund management company, the required information shall be available and the LTA shall be applied regardless of the frequency of the reports on the managed funds.

[28] A bank is not required to apply the 1.5 factor for exposures where the CVA capital charge would not otherwise be applicable. This includes: (i) transactions with a central counterparty and (ii) securities financing transactions (SFTs), unless the FINMA, in accordance with margin no. 491, explicitly requires these to be included in the bank's CVA capital requirements.

[29] For instance, any exposure that is subject to a 20% risk weight under the Standardized Approach would be weighted at 24% (1.2 * 20%) when the look-through is performed by a third party.

[30] Information used for the MBA is not strictly limited to a fund's mandate or national regulations governing the equity interest in funds. It may also be drawn from other disclosure reports prepared by the fund.

[31] For instance, a risk weight of 150% must be applied to investments in corporate bonds with no rating restrictions.

(c) The credit equivalent for counterparty credit risks arising from the fund's derivative exposures shall be calculated using the SA-CCR (margin nos. 32–122) multiplied by the counterparty's risk weight. Whenever the supervisory replacement costs (RC) to be used for the SA-CCR (according to margin nos. 37–43) are unknown, the replacement costs shall be equal to the gross notional. Whenever it is impossible to calculate the potential future exposure (PFE), the bank may apply conservative simplifications (e.g. basing itself on the simplified SA-CCR, see Annex 2), thus enabling the calculation of the PFE. The credit equivalent of derivative positions in the mandated fund, which would be subject to the CVA capital requirements (according to margin nos. 487–518,Section XVII) if held by the bank itself, shall be multiplied by an additional factor of 1.5 before applying the counterparty's risk weight.[32] 349

For managed funds that only hold derivatives for hedging purposes and these derivatives are not material, the derivatives may be excluded from the calculation of the risk-weighted assets. Therefore, the hedging effect of the derivatives does not need to be accounted for. 350

C. Fallback Approach (FBA)

[FUNDS§80 (viii)] Where neither the LTA nor the MBA is feasible, banks shall apply the FBA. The FBA shall apply a 1250% risk weight to the bank's equity investment in the fund. 351

D. Simplified Approach (SA)

Units in managed funds with synthetic risk indicators as defined in Annex 3, Section 3 "Risk profiles and income profiles" of the Ordinance on the Federal Act on Collective Investment Schemes (CISO; SR 951.311) may receive the following risk weighting: 352*

- 250% in case of a synthetic risk indicator with values 1-4 and values 5, 6 or 7 if the managed fund directly or indirectly invests in companies (equity funds) or in debt instruments issued by public entities and corporations (bond funds) and only holds negligible other exposures; 352.1*
- 400% in case of synthetic risk indicators with values of 5, 6 or 7. 352.2*

E. Treatment of managed funds that invest in other managed funds

[FUNDS§80 (ix)] If a bank has an investment in a fund (e.g. Fund A) that itself invests in another fund (e.g. Fund B), for which the bank uses either the LTA or the MBA, the risk weight applied to the investment of the first fund (i.e. Fund A's investment in Fund B) may be determined by using one of the three approaches (LTA, MBA, FBA) set out above. For all further layers (e.g. Fund B's investments in Fund C and so forth), the risk weights applied to an investment in another fund (Fund C) may be determined by using the LTA under the condition that the LTA was also used to determine the risk weight for the investment in the fund at the previous layer (Fund B). Otherwise, the FBA must be applied.[33] 353

One exception shall apply to private equity funds for institutions that meet the requirements for a sim- 354

[32] This additional factor of 1.5 replaces the CVA capital requirements for derivative positions of the fund. Therefore, it does not need to be applied to exposures where the CVA capital requirements do not apply. This includes: (i) transactions with a central counterparty and (ii) securities financing transactions (SFTs), unless the FINMA, in accordance with margin no. 491, explicitly requires that the bank's CVA capital requirements to include these.

[33] I.e. the MBA may not be used for any further layers and the LTA only if all layers above were treated with the LTA as well.

plified approach set out in margin no. 335: Private equity funds that already invest in many other private equity funds in the first layer, the MBA may be used even if the LTA has not been used previously if there is enough information available for the use of the MBA.[34] The information required for the MBA shall be gathered from scratch every two years; in the interim, changes may be tracked on a quarterly basis (sold or purchased investments).

F. Partial Use of Approaches

[FUNDS§80 (x)] A bank may use a combination of the three approaches (LTA, MBA and FBA) to determine the capital requirements for an equity investment in an individual fund, provided that the conditions set out in margin nos. 334–353 are met. 355

G. Pro-rata Allocation of Fund RWAs to the Fund Units

[FUNDS§80(xvi)] After a bank has determined the risk-weights of the various exposures of the managed funds held using the LTA or MBA approach, it shall allocate the total of risk-weighted assets held in the fund to the pro-rata amount of the fund units. Mathematically: 356

$$RWA_{investment} = RWA_{fund} * \text{percentage of shares}$$

The risk-weight resulting from the above formula for the funds held (RWAinvestment / funds units held) shall be capped at 1250%. The risk-weight of the managed fund units determined according to the FBA shall form the upper limit for those determined with the LTA or the MBA. 357

As all exposures need to be considered to determine the RWA of the managed funds, including off-balance sheet items and counterparty credit risks arising from derivatives and SFT, no further adjustments shall be required for the leverage of managed funds. 358

XIV. Securitization Transactions (Article 49(2)(b) CAO)

A. Basel Minimum Standards

The Basel Minimum Standards shall apply to the calculation of minimum capital required for transactions relating to the securitization of credit risk ("securitizations").[35] This approach shall also include the Pillar 2 requirements of the Basel Minimum Standards, i.e. [B2; §784-807], taking into consideration the adjustments stipulated in [SEC;§801–807]. Should the Basel Minimum Standards offer a choice of approaches or if there is need for further explanations, the necessary information shall be mentioned in reference to the passages concerned. 359

[34] For instance, if it is obvious due to information other than the quarterly investor information on the types of investments and the invested amounts that the fund does not have any further exposure (e.g. derivatives), the MBA may be applied. The total RWA of the sum shall equal the sum of the RWA of the individual investments and the RWA of the fund units *(% fund units) * (total RWA of the fund)*

[35] Cf. margin no. 9. This includes the rules for simple, transparent and comparable securitizations (STC securitizations).

B. Design of national options

The Securitization *External Ratings-Based Approach* (SEC-ERBA) may be used to calculate the minimum capital required if the bank has the necessary expertise for securitization transactions, does not automatically use an external rating (i.e. there is an adequate bank-internal process to critically assess and review the ratings and the rating methods used for securitizations) and the operative requirements are fulfilled in accordance to [SEC; §71–73]. 360

[SEC; §20] The national option for credit conversion factors related to cash advances by the governing body is not exercised. 361

C. Consultation with the supervisory authority or the audit firm

Should the Basel Minimum Standards foresee a consultation of the supervisory authority (c.f. [SEC; §1, 45, 49, 52, 52(b), 74, 75(c), 75(e) and 79]) the bank shall consult with its audit firm. These principles do not apply in the following cases: 362

- [SEC; §1] If a securitization transaction is new or if it is not obvious that it is a securitization, both the audit firm and the FINMA shall be consulted. 363
- [SEC; §52(b)] Both the audit firm and the FINMA shall be consulted to regulate the calculation of minimum capital required if separate waterfalls are applied to credit risk and dilution risk. 364
- [SEC; §45, 74, 75(e)] A bank shall obtain FINMA's approval before it can apply an internal assessment approach (IAA). 365

Audit firms are to consult with FINMA if a bank exhibits any of the deficits stated in [SEC; §50(b)] or [SEC; §77] in its internal processes. 366

D. Treatment of re-tranched securitizations

[SEC; §5] Exposures created by the re-tranching of individual securitizations do not have to be treated like resecuritizations if all of the following conditions are fulfilled cumulatively: 367

- A re-tranching does not decrease transparency regarding the asset pools used to secure the individual securitizations; 368
- There are no further correlation risks to the assets already in the pool; 369
- The newly created tranches do not increase leverage (e.g. by redirecting cash flows or similar mechanisms). 370

XV. The Internal Ratings Based Approach (IRB; Articles 50 and 77 CAO)

A. Basel Minimum Standards and subsidiary provisions (Article 77 CAO)

The provisions contained in the Basel Minimum Standards regarding the IRB approach shall be applicable, including the Pillar 2 requirements of the Basel Minimum Standards [B2; §765-766], subject to the following clarifications. Where these minimum standards refer to the standardized approach, the provisions relating to the standardized approach set out in the Basel Minimum Standards shall apply. Where the Basel Minimum Standards allow a choice, clarification shall be provided with reference to the relevant passages. 371

EUR amounts mentioned in the Basel minimum standards must be converted into CHF amounts using a factor of 1.5, i.e. EUR 1 equals CHF 1.50. 372

The subsidiary provisions shall specifically address the following areas: treatment of qualifying holdings, including holdings in managed collective investment schemes (cf. Article 66(3bis) CAO and Section XIV, margin nos. 334–358); weighting of payment obligations for the deposit protection scheme (cf. Annex 2 Section 5.2 CAO). 373

B. Approval

The FINMA shall approve a bank's use of the IRB approach only if the following requirements are complied with at all times: 374

- The minimum requirements for the IRB approach, as set out in [B2; §387–537] and clarified in this circular, are observed. 375
- The bank has a sufficient number of employees capable of working with rating systems [B2; §394]. 376
- The IT infrastructure is configured satisfactorily to run the rating system. 377
- The rating systems in respect to the bank's specific activities rest on a robust design and are correctly implemented. 378

[B2; §404] The FINMA may require that the bank use more than the minimum number of internal ratings specified in [B2; §404]. 379

[B2; §259] Subject to the FINMA approval, insignificant business units, exposures and exposure classes (cf. margin nos. 395–399) may be exempted from the application of the IRB approach. 380

[B2; §443] When deciding on whether to allow a specific bank to use the IRB approach, the FINMA shall consider the results of its own audits and those of the bank's external auditors. In addition, the FINMA may take into account the audit findings of foreign regulatory bodies, of external auditors other than the bank's own external auditor, or of other specialized and independent experts. 381

Expenses incurred by the FINMA in connection with the approval process and any necessary audit work subsequent to the approval, shall be borne by the bank. 382

The FINMA shall take into account the expenses implied for the bank when deciding whether audits are necessary, and if so, which ones should be carried out. 383

C. IRB stress tests

[B2; §437] There are no terms of reference for the design of an IRB stress tests other than the requirements contained in Pillars 1 and 2 [B2; §434-437 and 765]. 384

Banks shall submit their stress test concepts to the FINMA. 385

The FINMA shall assess whether the concept is in line with Pillars 1 and 2. The FINMA may ask that the design be amended. 386

The results from the stress tests shall be forwarded to the FINMA at regular intervals. 387

The results from the stress tests shall be discussed periodically by the bank and FINMA. 388

The stress test results shall be incorporated in the calculation of any additional capital charges applicable under Pillar 2 [B2; §765]. 389

D. Notification of the FINMA

Following approval for the use of the IRB approach, the FINMA shall be notified if 390

- any material changes are made to rating systems [B2; §394], or 391
- any changes are made to risk management practices. 392

E. Bank-specific implementation (roll-out)

[B2; §257, CCP1; §256, 262(i)] Manner and scope of the roll-out: A bank may introduce the IRB approach in any of the ways specified in [B2; §257]. The initial implementation of the IRB approach must result in IRB calculations covering at least approximately 90% of the minimum capital required for credit risks of all of the bank's counterparty-related exposures where using the IRB is appropriate. In this context, exposures to central counterparties as outlined in Section XVIII in the form of derivatives, securities financing transactions (SFT) as well as contributions to the default funds of central counterparties do not have to be taken into account. The threshold of 90% shall be maintained also after the implementation of the IRB. In case of significant changes in its structure, e.g. takeovers or mergers, a bank may temporarily fall below the threshold, subject to approval from the FINMA. 393

F. Categorization of exposure classes

For risk-weighting purposes, every exposure shall be allocated to one of the following exposure classes. The provisions set out in the Basel Minimum Standards relating to the allocation of exposures to exposure 394

classes shall be binding. The subsidiary allocation rules concerning individual exposures set out in margin nos. 395–397 are not mandatory, provided the minimum capital required does not depend on the allocation of such exposures and the exposures in question are insignificant.

- Corporate exposures (incl. PF, OF, CF, IPRE and HVCRE exposures) as defined in [B2; §218-228] and clarified in margin nos. 401 and 402. This exposure class shall also include exposures to: stock exchanges, mortgage bond clearing houses (Pfandbriefzentrale) of Swiss cantonal banks and Swiss mortgage institutions, and public-law entities not entitled to levy taxes and for which liabilities are not guaranteed by the state. 395

- Sovereign exposures as defined in [B2; §229]. This exposure class shall also include exposures 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 Annex 1. Exposures to public-law entities are not included. 396

- Bank exposures as defined in [B2; §230]. This exposure class shall also include exposures to: securities dealers, joint institutions set up by banks and recognized by the FINMA, multilateral development banks not named in Annex 1, and public-law entities that have the right to levy taxes or for which liabilities are guaranteed in full by the state. Payment obligations to the deposit protection scheme shall also be included. 397

- Retail exposures as defined in [B2; §§231-234] and clarified in margin nos. 403–422; 398

- Exposures in equity shares as defined in [B2; §235-238] and clarified in margin nos. 423–427 and 458; 399

- Purchased retail and corporate receivables as defined in [B2; §239-243]. 400

G. Definition of HVCRE exposures (Highly Volatile Commercial Real Estate Financing)

[B2; §227, first item] No exposures in the Swiss market are defined as HVCRE exposures ex ante. However, the FINMA may classify certain CRE exposures as HVCRE at certain banks. 401

[B2; §228] For foreign markets, banks shall follow the HVCRE definitions prescribed by the respective competent supervisory authority. Further, the FINMA may classify certain CRE exposures as HVCRE exposures at certain banks. 402

H. Definition of Retail Exposures

[B2; §231, first item] Maximum exposure value for natural persons: the total exposure of a natural person may be treated as a retail exposure, regardless of the amount involved. 403

[B2; §231, second item] Definition of eligible residential real estate: residential real estate which is occupied or let by the borrower (this replaces the regulation on "owner-occupied" in [B2; §231]). No maximum number of residential units per building or building complex has been defined. 404

[B2; §231, third item] Definition of small business entities: small business customers are entities with 405

consolidated annual sales of less than CHF 15 million (cf. [B2; 273]). If a bank does not regard sales as a suitable indicator, another one may be chosen (e.g. balance sheet total), with the FINMA's approval.

[B2; §231, third item] Maximum exposure to small business entities: an exposure to a self-employed person shall be treated as a retail exposure, regardless of the amount involved. The key defining element for self-employed persons shall be that their personal liability is unlimited. 406

[B2; §231-232] Lombard (collateral) loans and retail exposures: lombard loans may be included in the exposure class "retail exposures" if the necessary conditions [B2; §231-§232] have been met. In view of the flexibility referred to in [B2; §231, fourth item], the bank may also opt to allocate its entire lombard loan portfolio to the exposure class "retail exposures". In each case, however, the FINMA must first be consulted. In principle, particularly the following conditions shall be met: 407

- At least 95% of the bank's collateral loans qualify as retail exposures on account of the amount and counterparty involved. 408
- The bank has been managing its collateral loan business for many years with proven track record and historically low credit losses. 409
- All of a bank's units manage lombard (collateral) loans using a standardized credit process and directives. 410
- The bank manages collateral loans using a refined risk management system that has been proven to be reliable. 411

In particular, its risk management system pursuant to margin no. 411 shall meet the following requirements: 412

- the lombard loans generally show significant excess protection; 413
- the lombard loans and the value and quality of the related collateral are closely monitored; 414
- corrective measures are taken in a timely manner if the collateral drops in value; 415
- from a legal perspective, the ability to realize the collateral rapidly is unequivocally provided for; 416
- individual collateral is subject to specific, statistically based haircuts which are usually higher than the standard supervisory haircuts (margin nos. 208–209); 417
- collateral is immediately realized if the counterparty misses a scheduled margin payment; 418
- large exposures in the collateral are monitored appropriately. 419

[B2; §232] No minimum number of exposures shall be required for each pool, ex ante. 420

[B2; §232, first item] Exposures to small business entities (margin no. 405) may be allocated to the category "retail exposures" if they meet the conditions set out in [B2; §232, first item]. 421

[B2; §233] The exposure sub-class "(a) exposures secured by residential properties" shall denote mortgage exposures (usually fully) secured by residential or commercial real estate. Other exposures may be allocated to the exposure sub-class "(b) qualifying revolving retail exposures", provided the necessary conditions are met (cf. [B2; §235]). Otherwise, exposures shall be allocated to the exposure sub-class "c) all other retail exposures". 422

I. Definition of Equity Exposures

Equity exposures shall include all shares and equity interests as per [B2; §235], including investment (mutual) fund units. Depending on the type of equity shares involved, the categories of equity exposures shall be as follows: 423

- Exposures in equity shares traded on a recognized exchange; 424
- All other equity share exposures including private equity exposures. 425

[B2; §344] Private equity exposures shall include any form of investment in companies the equity shares of which are not freely traded on an exchange, i.e. illiquid interests in unlisted companies. Private equity investors shall either realize their profits because of an initial public offering (IPO), a sale or a merger, or a recapitalization. Private equity exposure types shall include, among others, leveraged buyouts, venture capital, growth capital, angel investing, mezzanine capital. 426

Defining the minimum capital for units in managed collective investment schemes (fund units) shall be based on the Basel Minimum Standards[36]. No fund units are exempt from being treated according to the FBA, LTA or MBA ([FUNDS; §80(xi)], FUNDS; §80(xii)]). Foundations incorporated according to foreign law and the management of collective funds shall also not be exempted. 427

J. Risk Weighting of companies, central governments and banks

[B2;§272] The risk weighting for defaulted exposures, after deduction of individual value adjustments and partial write-offs, shall be 100% both under A-IRB and F-IRB. 428

[B2; §273] In the formula at the end of [§273] defining annual turnover S (or balance sheet total) of SMEs in CHF (margin no. 372), the term (S-5)/45 is to be substituted by (S/1.5-5)/45. 429

[B2; §274] Where the annual sales of a company are not a suitable indicator for measuring its size, the balance sheet total shall be used instead, provided this is a more suitable indicator. If approved by the FINMA, 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 the balance sheet total are meaningful size indicators, the reduction of risk weights depending on the size of the company does not apply. 430

[36] I.e. after bcbs266; see margin no. 6

K. Risk weighting for Specialized Lending and Highly Volatile Commercial Real Estate Financing (SL and HVCRE)

[B2; §250] F-IRB for HVCRE exposures: banks which satisfy the minimum IRB requirements with respect to PD estimates in connection with HVCRE loans may calculate the corresponding risk weights according to F-IRB, taking into account [B2; §283]. 431

[B2; §251] A-IRB for HVCRE exposures: banks which satisfy the minimum IRB requirements with respect to PD, LGD and EAD estimates in connection with HVCRE loans may calculate the corresponding risk weights according to A-IRB, taking into account [B2; §283]. 432

[B2; §277] Reduced UL risk weights for SL exposures (excl. HVCRE exposures): the risk weights defined in [B2; §277] shall apply. 433

[B2; §282] Reduced UL risk weights for HVCRE exposures: the risk weights defined in [B2; §282] do not apply. Exceptions: cases where a foreign supervisory authority has prescribed a definition of HVCRE (cf. margin no. 402) and that supervisory authority has approved the use of reduced UL risk weights for such exposures. In such cases, the corresponding reduced UL risk weights may be applied. 434

L. Collateral

Repealed 435*

[B2; §289] Other collateral eligible under F-IRB, such as CRE or RRE: see margin nos. 439 and 440. 436

M. Non-application of haircuts for repo-like transactions

[B2; §294] The SA-BIS rules also apply to the non-application of haircuts for repo-like transactions. 437

N. Collateral under F-IRB

[B2; §506] Refererence to the minimum requirements under the standardized approach ([Section II.D] of the Basel Minimum Standards): in order for banks using the F-IRB approach to be entitled to take eligible financial collateral into account when calculating the minimum capital requirements, they shall meet the minimum requirements of SA-BIS. 438

[B2; §507-508] CRE or RRE collateral eligible under F-IRB: in application of footnote 92 of the Basel Basic Text, multi-family housing units shall be eligible as collateral even if they are used to finance income-producing real estate (SL or IPRE). Conversely, IPRE in the form of commercial property may not be used as collateral (thus, the option given in footnote 93 of the Basel Basic Text is not exercised). 439

[B2; §521] Other physical collateral that is eligible: under the F-IRB approach, no other physical collateral is eligible other than the collateral types stated in [B2; §507]. 440

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

[B2; §§302, 305](text between §120 and §121) Reference to the standardized approach: the SA-BIS rules for guarantees and credit derivatives are applicable also to the F-IRB approach. 441

[B2; §302](text between §120 and §121) Protection providers eligible under the F-IRB approach: all eligible protection providers under SA-BIS shall be eligible also under the F-IRB approach. Furthermore, protection providers shall be eligible also if they have an internal rating. 442

P. Exposure at Default (EAD)

[§309] Reference to the standardized approach: the SA-BIS rules on legal and contractual netting shall apply also to the IRB approach. Currency and maturity mismatches for netting shall be treated in the same way as under SA-BIS. 443

[B2; §311] Reference to the standardized approach [B2; §82-87] regarding the F-IRB: The SA-BIS approach shall be used to calculate credit equivalents (Articles 53-54 CAO). Exceptions to this are irrevocable commitments (regardless of maturity), note issuance facilities (NIFs) and revolving underlying facilities (RUFs), for which a credit conversion factor of 75% [B2; §312] shall be applied. 444

Q. Maturity adjustments to risk weights under F-IRB and A-IRB

[B2; §318] Maturity adjustment to risk weights under F-IRB: banks using the F-IRB approach must adjust risk weights for maturity in the same way as under the A-IRB approach. 445

[B2; §319] Exceptions from maturity adjustment: the risk weights of all corporate exposures must be explicitly adjusted for maturity, without exception. 446

[B2; §320] Maturity for exposures with no defined maturity: for exposures with no defined maturity, which the bank could nevertheless cancel unconditionally at any time, and which must be repaid within a maximum of twelve months from cancellation, M = 1 year. For other exposures with no explicit maturity, M = 2.5 years. 447

[B2; §320, second item] Effective maturity for exposures with a defined maturity: if the bank is unable, or only able with excessive effort, to calculate the effective maturity (M) in accordance with [B2; §320], the contractually agreed remaining maturity of the exposure may be used as an alternative. 448

[B2; §322] Maturity adjustments of less than a year for short-term exposures: in addition to the transactions referred to in [B2; §321], the lower limit of one year for the maturity parameter M does not apply for the following exposures: 449

- Exposures arising from capital market transactions in the form of repo and repo-like transactions, margin lending or derivatives. The following requirements must be met: the transactions must be collateralized and marked to market daily, and in case of excess or shortfall in coverage compared to the originally agreed collateralization daily remargining payments or changes to the collateral must be made. Should a borrower fail to meet margin calls, the transactions will be terminated by realizing the collateral within the timeframe applicable to options and futures exchanges. 450

- Bank exposures arising from foreign currency transactions if this cancels settlement risks with a suitable system. 451

- Exposures from short-term, self-liquidating trade transactions, including letters of credit. 452

- Exposures from electronic transfers (e.g. via SIC, SEGA, EUROCLEAR). 453

The FINMA may authorize a bank to exempt other short-term investments from the one-year floor. 454

[B2; §325] Maturity mismatches: the relevant SA-BIS rules shall apply correspondingly to the treatment of maturity mismatches. 455

R. Risk weighting of retail exposures

[B2; §328] The asset sub-category "exposures secured by residential properties" shall be defined by [B2; §231] and margin no. 422. This shall supplement and clarify the rules set out in [B2; §328]. 456

[B2; §328-330] The risk weights for defaulted retail exposures, after deduction of specific write-downs and partial write-offs, shall be 100 % both under A-IRB and F-IRB. 457

S. Risk weighting of equity exposures

[B2; §237, footnote 59] Exclusion of directly hedged liabilities in the calculation of minimum capital required for exposures in equity shares: liabilities whose income is linked to equity shares may be excluded from the minimum capital requirement calculation if these liabilites are hedged with equity shares in such a way that their net risk no longer represents a significant risk. 458

[B2; §260] Obligation to use the IRB approach for equity exposures: banks holding large volumes of equity exposures but using the SA-BIS approach to calculate the minimum capital requirements for credit risks are not obliged to the IRB approach use calculate minimum capital requirements for equity shares. 459

[B2; §343] Mandatory application of a particular market-based approach commensurate with the bank's characteristics: banks may freely choose any applicable market-based approach when calculating minimum capital requirements for equity exposures, provided it meets the relevant minimum requirements. 460

[B2; §346] Mandatory use of internal modeling method to calculate minimum capital requirements for exposures in equity shares: when calculating the minimum capital required for equity exposures, a bank may choose the PD/LGD approach or the market-based approaches (simplified risk weighting method, internal modeling method), provided it meets the relevant minimum requirements. 461

[B2; §348] The use of different market-based approaches to calculate the minimum capital required for exposures to equity shares: under the conditions described in [B2; §348], banks may use different market-based approaches to calculate their minimum capital requirements. 462

[B2; §356] Minimum capital for equity exposures in respect of counterparties assigned a 0% risk weighting in the standardized approach: for equity exposures according to [B2; §356], minimum capital shall be determined according to the IRB approach. 463

[B2; §357] Minimum capital for equity exposures of government-subsidized counterparties: for equity exposures according to [B2; §357], minimum capital shall be determined according to the IRB approach. 464

[B2; §358] Minimum capital for insignificant equity exposures: for equity exposures which comply with all the criteria of insignificance set out in [B2; §358], minimum capital shall be determined according to the IRB approach. 465

The risk weighting for defaulted equity exposures after deduction of individual value adjustments and partial write-offs shall be 100%. 466

T. Risk weighting of purchased debt

[B2; §242, fourth item] The bottom-up approach shall be mandatory for pools with individual exposures amounting to more than CHF 150,000 (cf. also margin no. 468). 467

[B2; §365] Possibility of the top-down approach for purchased corporate receivables: upon request, the FINMA may authorize a bank to calculate its minimum capital for default risk on purchased corporate receivables using the top-down approach. The bottom-up approach shall be mandatory for pools with individual exposures amounting to more than CHF 150,000 (cf. margin no. 467). 468

[B2; §369] Maturity adjustment of risk weights when calculating minimum capital for dilution risk: under the conditions set out in [§369], the maturity parameter M shall be 1 year. 469

[B2; §373] Protection providers recognized under F-IRB to calculate the minimum capital for dilution risk: the recognized protection providers shall be the same as those defined in margin no. 442. 470

U. Expected losses and value adjustments

[B2; §378] Reduced EL risk weights for SL exposures (excl. HVCRE exposures): just like margin no. 433. 471

[B2; §379] Reduced EL risk weights for SL exposures for HVCRE exposures: just like margin no. 434. 472

[B2; §383] Allocation of general value adjustment for deferred risks (margin no. 95 of FINMA circ. 13/1 "Eligible Capital – Banks") to capital: The FINMA may authorize a bank using or intending to use both the SA-BIS and the IRB approach, to allocate general value adjustments as specified in margin no. 95 of FINMA circ. 13/1 "Eligible Capital – Banks" using an internal procedure. This procedure shall lead to an appropriate allocation and must not be primarily designed to maximize the eligible capital. 473

Credit Valuation Adjustments (CVAs) of derivatives do not have to be considered as value adjustments as per [B2; §374 - §386]. Instead, they shall be deducted from the credit equivalent of the derivative in question. 474

V. Minimum capital and floors

When calculating minimum capital requirements based on the IRB approach, capital required for unexpected losses calculated as per this circular and the underlying risk-weighted assets shall be multiplied with a scaling factor of 1.06 as defined by the Basel Committee [B2; §14] to obtain the IRB risk-weighted 475

assets as per Article 42(2)(a) CAO. Together with the exposures risk-weighted as per the standardized approach, these shall form the total of exposures risk-weighted by credit risk in accordance with Article 42(2)(a) CAO.

In application of the continued "floor regime" published by the Basel Committee, the following applies:[37] For banks calculating capital requirements for credit risks according to the IRB approach, the minimum capital requirements, taking into account deductions from the eligible capital, cannot be lower than 80% of the requirements and deductions that the bank would have had if applying the Basel I Minimum Standard.[38] In application of Article 47 CAO, the FINMA shall stipulate for an institution how it should calculate an adequate approximation of the theoretical Basel I requirements in a case-by-case approach. For credit risk, this calculation shall be based on the international standardized approach. 476

W. Minimum risk quantification standards

[B2; §452, second item, footnote 89] Duration of default: 90 days should always be used, regardless of the type of borrower. 477

[B2; §452] Alternative definition of default for lombard (collateral) loans: instead of the definition in [B2; §452], banks may apply the following definition of default for lombard loans: a lombard loan shall be in default, if: 478

- the realizable market value of the available collateral falls below the level of the lombard loan, and 479
- as a result, the exposure shows a shortfall, and 480
- 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. 481

[B2; §454] Implementing and monitoring the indications for loans or exposures at risk, as set out in [B2; §453]: it shall be the bank's choice how it wishes to implement and monitor the detecting of exposures at risk; however, its implementation and monitoring will be reviewed during the bank's authorization procedure. 482

[B2; §458] Re-aging: there are no further requirements regarding re-aging other than those contained in [B2; §458]. 483

[B2; §467] Seasoning effects: although not mandatory, it is recommended that banks increase PD estimates in order to avoid a jump in minimum capital required for foreseeable seasoning effects. 484

[B2; §471] Best EL estimate for defaulted exposures: with the FINMA's agreement, individual value adjustments for defaults and partial write-offs can be used as best estimate of the expected loss on an exposure. 485

X. Validations

[B2; §500–505] When assessing the adherence to the requirements on validations, FINMA shall take into 485.1*

[37] Cf. press release of the Basel Committee of 13 July 2009: http://www.bis.org/press/p090713.htm

[38] This shall be equivalent to the calculation of capital requirements as per the Banking Ordinance of 17 May 1972 that was valid until 31 December 2006 (AS **1995** 253, **1998** 16).

account the recommendations of Chapter 3 "Sound practices in the independent validation of IRB models within banks" of the document "Regulatory consistency assessment programme (RCAP) – Analysis of risk-weighted assets for credit risk in the banking book", published by the Basel Committee on Banking Supervision in April 2016.

XVI. Guidelines for a Prudent Valuation of Fair Value Exposures

The guidelines for the prudent valuation of fair value exposures as per margin nos. 32 – 48 of FINMA circ. 08/20 "Market Risks – Banks" also apply to the banking book; however, exposures in the banking book do not need to be valued on a daily basis. 486

XVII. Capital Requirements for CVA (Article 55 CAO)

(§99) CVAs (credit valuation adjustments) are value adjustments for derivatives that arise due to counterparty credit risks. A CVA risk shall be the risk of a potential loss in market value due to such value adjustments. 487

In addition to meeting the minimum capital requirements for credit defaults of derivative counterparties as per margin no. 32–123, banks must also hold sufficient capital for CVA risks of derivatives. This shall also be the case if the applicable accounting guidelines do not actually require the creation of provisions for value adjustments and the bank does not usually undertake such value adjustments. Capital adequacy requirements for CVA risks are called CVA capital requirements. 488

CVA capital requirements are not calculated on the individual exposure but for the bank's entire portfolio (except if using the simplified approach). The calculation method shall be defined by the calculation method selected to determine the credit equivalents and for the specific interest rate risk held in the trading book. The following transactions do not need to be included in the CVA capital adequacy requirements: 489

- transactions, the fulfillment of which are guaranteed by a central counterparty; and 490
- usually SFT. Should SFT bear significant CVA risks, the FINMA may demand that these be included in capital requirements for CVAs. 491

Banks do not need to hold capital for CVA risks arising from group-internal exposures. 492

A. Advanced Approach

(§99) Banks using the EPE modeling method for credit equivalents of derivatives and the mark-to-market approach to determine the required capital for specific interest rate risks in their trading books shall calculate the capital adequacy requirements for CVA in accordance with the provisions set out in the Basel Minimum Standards. 493

B. Standardized Approach

[B2; §99] All other banks, i.e. banks that do not meet the requirements stipulated in margin no. 493, shall calculate the minimum capital requirements for CVA using either the standardized approach or the simplified approach. 494

The standardized approach shall use the following formula to calculate the minimum capital (K) for the bank's entire portfolio:[39] 495*

$$K = 2.33 \cdot \sqrt{\left(0.5 \sum_{counterparties\ i} S_i - \sum_{index\ exposures\ ind} S_{ind}\right)^2 + 0.75 \sum_{counterparties\ i} (S_i)^2}$$

In this context, 496

$$S_i = w_i \cdot \left(\sum_{netting\ sets\ j} EAD_j \cdot M_j \cdot D_j - \sum_{hedges\ h} N_h \cdot M_h \cdot D_h\right)$$

shall be an approximation for the standard deviation of volatility due to CVA risks of counterparty "i" and

$$S_{ind} = w_{ind} \cdot N_{ind} \cdot M_{ind} \cdot D_{ind}$$

the relevant standard deviation for the CDS index hedging position "ind".

Furthermore, the following shall apply: 497

w_i is the weighting of the counterparty "i" on the basis of its external rating according to the table in margin no. 511. For counterparties without an external rating, the bank may assign an external rating to its internal rating, if the FINMA approves. 498

EAD_j refers to the credit equivalent (as per margin nos. 32–123) of one of the netting sets "j" underlying the CVA capital requirements (see margin no. 107) of exposures taking into account collateral, as is used to calculate capital adequacy for default risks. 499

M_j is the effective maturity of the transactions "j". For banks using the EPE modeling approach, M_j must be calculated according to the provisions of the Basel Minimum Standards [B2; Annex 4, §38], but without limiting M_j to five years. For all other banks, M_j shall be the greater value of 1 and the weighted average of the maturities (in number of years) of all transactions in the netting set; each transaction is weighted according to its nominal value. 500

D_j shall be a discount rate of $[1-\exp(-0.05 \cdot M_j)] / (0.05 \cdot M_j)$ for banks that use the current exposure method or standardized approach to determine credit equivalents. For banks using the EPE modeling approach, this discount is not allowed, as the discount factor is already included in the variable M_j, i.e. $D_j=1$. 501

N_h is the nominal value of a CDS exposure "h" used to hedge the CVA risk. If the CVA risk is not hedged using CDS, $N_h=0$. 502

[39] Some examples of this calculation are provided in Annex 4.

M_h is the residual term of the hedging instrument with nominal value N_h. 503

D_h is the discount rate of $[1-\exp(-0{,}05 \cdot M_h)] / (0{,}05 \cdot M_h)$. 504

w_{ind} is the weighting for index hedges. The bank shall assign to each index "ind" one of seven weightings w of the table in margin no. 511, based on their average spreads. 505

N_{ind} is the nominal value of an index CDS position "ind" used to hedge the CVA risk. If the CVA risk is not hedged using an index CDS: $N_{ind} = 0$. 506

M_{ind} is the residual term of the hedging instrument with nominal value N_{ind}. 507

D_{ind} is the discount rate of $[1-\exp(-0{,}05 \cdot M_{ind})] / (0{,}05 \cdot M_{ind})$. 508

For counterparties also included in an index used to hedge an indexed CDS, this nominal value may be deducted on an individual basis from the nominal value of the indexed CDS and treated as a separate hedge (N_h) for this counterparty with a maturity reflecting this index's maturity. 509

The risk weightings listed in this table shall be based on the counterparty's external rating: 510

511

External Ratings [40]	**Weighting w**	
AAA – AA	0.7%	
A	0.8%	
BBB	1%	
BB	2%	
B	3%	
CCC	10%	
Without rating	Banks	1%
	Corporations	1.5%
	Public-law entities as per Annex 2, Section 2.1 CAO	1.5%
	Public-law entities as per Annex 2, Sections 2.2 and 2.3 CAO	1%
	Central governments and central banks	2%
	Swiss Confederation, Swiss National Bank, European Central Bank, European Union	0.7%
	Other	2%

If two or more ratings exist for a counterparty, the weighting must be determined in application of the provisions in margin no. 17. 512

If a bank risk-weights exposures without using external ratings or if there is no rating from an external rating agency for a specific counterparty, the risk weights of the category "without rating" shall be used. 513

[40] See the concordance tables for details on assigning ratings by recognized external rating agencies to these weights.

C. Simplified approach

Banks that do not meet the criteria to use the advanced approach (margin no. 493) may use the simplified approach (margin no. 494 et seqq.) instead of the standardized approach. 514

In the simplified approach, the minimum capital required for CVA risks shall be determined separately for each contract or netting set (margin no. 107) and then these amounts shall be added together. 515

For contracts without netting, the minimum capital required for CVA risks is 2.33 times the weight w (taken from the table in margin no. 511) multiplied by the credit equivalent multiplied by the residual maturity (in number of years). Any residual maturity of less than one year must be rounded up to one year. 516

For contracts with netting, the minimum capital required for CVA risks for each netting set is 2.33 times the weight w (from table in margin no. 511) multiplied by the credit equivalent multiplied by the larger value of 1 or the weighted average of the residual maturities (in number of years) of all transactions in the netting set, whereas each transaction shall be weighted according to its nominal value. 517

Banks that normally do not use any ratings may instead use a generic weight of w = 2% instead of the weights listed in the table in margin no. 511. 518

XVIII. Credit and Replacement Risks of Derivatives and SFTs with Central Counterparties (Articles 69, 70 and 139 CAO)

In regard to exposures of banks to central counterparties, the following rules shall apply: 519

A. General Terms [CCP1 and CCP2; Annex 4, Section I, A. General Terms]

- A **central counterparty (CCP)** is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer, thereby ensuring the future fulfillment of open contracts. A CCP can become a counterparty to a trade transaction with market participants in several ways: by novation, through an open bid system or by other contractually binding agreements. For Basel Minimum Standards, a CCP by definition is a financial institution. 520

- A **qualifying central counterparty (qualifying CCP, QCCP)** is an entity that is licensed to operate as a CCP (including a license granted by way of confirming an exemption), and is licensed to operate as such with respect to the products offered by the relevant supervisory authority. In addition, the CCP shall have its domicile in a jurisdiction where it will be monitored for regulatory purposes and the competent supervisory authority publicly declares that the local rules and regulations are consistent at all times with the CPSS-IOSCO Principles for Financial Market Infrastructures[41]. 521

[41] The "Principles for financial market infrastructures" were published in April 2012 by the then valid Committee on Payments and Settlement Systems (CPSS) and the technical committee of the International Organization of Securities Commissions (IOSCO). The CPSS was renamed into Committee on Payments and Market Infrastructures (CPMI) in September 2014.

Supervisory authorities responsible for banks reserve the right to demand from the banks they supervise additional capital for exposures to central counterparties that go beyond the minimum capital requirements. This might be appropriate where, for example, an external assessment such as an FSAP[42] has found material shortcomings in the CCP or the regulation of CCPs, and the CCP and/or the competent supervisory authority have not since publicly addressed the issues identified. 522

If a CCP is domiciled in a jurisdiction in which the competent supervisory authority for CCPs does not apply the CPSS-IOSCO principles to that central counterparty, the FINMA may decide whether the central counterparty meets this definition. 523

In order for a central counterparty to be considered a qualifying central counterparty (QCCP), it must provide or calculate the amounts mentioned in margin nos. 564 and 565 (K_{CCP}, DF_{CM} and DF_{CCP}) to calculate and make available the capital required for default funds in accordance with margin no. 566. 524

- A ***clearing member*** shall be a member or a direct participant in a CCP that is entitled to enter into a transaction with the CCP, regardless of whether it enters into trades with a CCP for its own hedging, investment or speculative purposes or whether it also enters into trades as a financial intermediary between the CCP and other market participants.[43] 525

- A **client (or clearing client)** shall be a party to a transaction with a CCP through either a clearing member acting as a financial intermediary, or a clearing member guaranteeing the performance of the client to the CCP. 526

- **Initial margin** (IM) shall mean a clearing member's or client's funded collateral posted to the CCP to mitigate the potential future exposure of the CCP to the clearing member arising from the possible future change in the value of their transactions. For the purpose of the following explanations, an initial margin does not include contributions to a CCP for mutualized loss sharing arrangements (i.e. in case a CCP uses initial margin to mutualize losses among the clearing members, it shall be treated as a default fund exposure). An initial margin shall also include any collateral provided by a clearing member or a client which exceeds the amount required by the CCP if the CCP can block the clearing member or the client from withdrawing this collateral. 527

- **Variation margin (VM)** shall mean a clearing member's or client's funded collateral posted on a daily or intra-day basis to a CCP based upon price movements of their transactions. 528

- **Trade exposures** shall include the current[44] and potential future exposure of a clearing member or a client to a CCP arising from OTC derivatives, exchange-traded derivatives, SFTs or margins. 529

- **Default funds (DF)**, also known as clearing deposits or guarantee fund contributions (or any other 530

[42] Financial Sector Assessment Program

[43] For the purpose of these explanations, where a central counterparty settles transactions with another central counterparty, the second central counterparty shall be considered a clearing member of the first. Whether collateral transferred by the second central counterparty to the first is to be considered as initial margin or as contribution to the default fund shall depend on the contractual provisions between the two central counterparties. The FINMA must be consulted in this regard.

[44] For the purposes of this definition, the current exposure of a clearing member shall include the variation margin due to the clearing member but not yet received.

names)[45], shall be clearing members' funded or unfunded contributions towards, or underwriting of, a CCP's mutualized loss sharing arrangements. The name given by a CCP to its mutualized loss sharing arrangements is not determinative of their status as a default fund; rather, the substance of such arrangements shall govern their status.

- **Offsetting transaction** shall mean the transaction leg between the clearing member and the CCP when the clearing member acts on behalf of a client (e.g. when a clearing member clears or novates a client's trade). 531

- A **multi-level client structure** shall denote a situation where a bank acts as indirect client in the transaction with the CCP, i.e. clearing services are offered to the bank through an institution that itself is not a direct clearing member but is a client of a clearing member or of a clearing client. In the business relationship between two actors of a multi-level client relationship, the party which offers clearing services to the other one is the higher level client and the person who accepts the service is the lower level client. 532

B. Scope

[CCP2; §6(i)] Exposures to central counterparties arising from OTC derivatives, exchange traded derivatives transactions, SFTs and long settlement transactions[46] shall be subject to the counterparty credit risk treatment set out in margin nos. 519 and 535–567 of this section.[47] Exposures arising from the settlement of cash transactions (equities, fixed income, spot FX and spot commodities) are not subject to this treatment. The settlement of cash transactions shall remain subject to the treatment described in Article 76 CAO. For contributions to a default fund covering only the settlement risk of cash transactions, a risk weight of 0% shall apply. 533

[CCP2; §6(ii)] When the clearing member-to-client leg of an exchange-traded derivative transaction is conducted under a bilateral netting agreement, both the client bank and the clearing member shall capitalize that transaction as an OTC derivative. The same shall apply for transactions between the higher level and the lower level clients in the case of a multi-level client relationship. 534

C. Central Counterparties

[CCP2; Annex 4, §188] Regardless of whether a CCP is classified as a QCCP (see margin nos. 521–524), a bank shall remain responsible for ensuring that it maintains adequate capital for its exposures to the CCP. In the course of the bank's own assessment of its capital adequacy, a bank shall consider whether it might need to hold capital in excess of the minimum capital requirements if, for example, (i) its dealings with a CCP give rise to more risky exposures or (ii) where, given the context of that bank's dealings, it is unclear whether the CCP meets the definition of a QCCP. 535

[CCP2; Annex 4, §189] Where the bank is acting as a clearing member, the bank shall assess through appropriate scenario analysis and stress testing whether the level of capital held for exposures to a CCP 536

[45] Engl: default fund, also known as clearing deposit or guaranty fund contributions (or any other name) -

[46] Long settlement transactions shall be transactions where the due date or delivery date is later than the earlier of the following dates: the market standard for the instrument in question or five business days after the bank has completed the transaction.

[47] This in particular shall also apply to "brokered derivatives" of the clearing member on account of the client, if the clearing member guarantees the fulfillment obligation by the central counterparty to the client (see margin no. 541).

adequately addresses the inherent risks of those transactions. This assessment shall include potential future or contingent exposures resulting from future drawings on default fund commitments, and/or secondary commitments to take over or replace offsetting transactions from clients of another clearing member in case this clearing member defaults or becomes insolvent.

[CCP2; Annex 4, §190] A bank shall monitor and report to senior management and the appropriate committees of Management and the Board on a regular basis all of its exposures to CCPs, including exposures arising from trading through individual CCPs and exposures arising from CCP membership obligations such as contributions and remargining calls for the default fund. 537

[CCP2 Annex 4, §191] If a bank trades with a Qualifying CCP (QCCP) (see margin nos. 521–524), margin nos. 541–567 shall apply. In the case of non-qualifying CCPs, margin nos. 539 and 540 shall apply. If a central counterparty has ceased to qualify as a QCCP for a maximum of three months, the trades with a former QCCP may continue to be capitalized as though they were with a QCCP, unless the FINMA requires otherwise. After three months, the bank's exposures with such a central counterparty must be capitalized according to margin nos. 539 and 540. 538

D. Exposures to Non-qualifying Central Counterparties

[CCP2 Annex 4, §210] Banks shall apply the standardized approach for credit risk to determine their capital requirements for their trade exposure to a non-qualifying CCP. 539

[CCP2 Annex 4, §211] Banks shall apply a risk weight of 1250% to default fund contributions provided to a non-qualifying CCP. In the case of non-qualifying CCPs, the default fund contributions of such banks shall include both the funded as well as the unfunded contributions for which are liable to be paid should the CCP so require. Where there is a liability for unfunded contributions (e.g. unlimited binding commitments) the FINMA shall determine the amount of unfunded commitments to which a 1250% risk weight is to be applied. 540

E. Exposures toward Qualifying Central Counterparties

a) Trade exposures

[CCP2 Annex 4, §192] Where a bank acts as a clearing member of a QCCP for its own purposes, a risk weight of 2% shall be applied to the bank's trade exposure to the QCCP in respect of OTC derivatives, exchange-traded derivative transactions and SFTs. Where the clearing member offers clearing services to a client, the 2% risk weight also applies to the clearing member's trade exposure to the QCCP that arises when the clearing member is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the QCCP defaults. Collateral posted to the QCCP by the bank is weighted according to margin nos. 559–563. 541

[CCP2 Annex 4, §193] The exposure amount (EAD) for such trade exposure is to be calculated in accordance with Section V using the SA-CCR or the EPE modeling method[48] or according to the provisions on collateralized transactions credit and risk-mitigation techniques set forth in sections VI–XII, in line with the 542

[48] Changes to EPE modeling method introduced in Basel III also apply for these purposes.

approach applied by such bank to such an exposure in the ordinary course of its business.[49]

The 20-day floor for the minimum holding period as established in margin no. 233 does not apply for the calculation of exposures to QCCPs, if none of the criteria in margin nos. 234–236 (illiquid collateral or exotic trades) or in margin no. 238 (margin disputes) are met. This refers to exposure calculations under the SA-CCR and the EPE modeling method, as well as to exposure calculations for repo and repo-like transactions as per section XI, and in particular margin no. 246. 543

The minimum holding period for a derivative exposure to a QCCP may never be less than ten trading days. 544

If the QCCP does not post a variation margin or if it retains a variation margin even if there has been a change in the transaction's value and the collateral is not protected from an insolvency on the part of the QCCP, the minimum period for such an exposure shall be the shorter period of a year or the residual life of the transaction, but a minimum of ten days. Therefore, from the perspective of the clearing member or the client, this exposure shall be treated as a derivative transaction without margin agreement. 545

b) Netting

[CCP2; Annex 4, §194] Where settlement is legally enforceable on a net basis in an event of default and regardless of whether the counterparty is insolvent or bankrupt, the total replacement cost of all contracts relevant to the trade exposure determination can be calculated as a net replacement cost if the applicable close-out netting agreements meet the requirements set out in:[50] 546

- Margin nos. 137–144 in the case of repos and repo-like transactions, 547
- Margin nos. 145–155 in the case of derivatives. 548
- §10-19 of Annex 4 of the Basel text in the case of the EPE modeling approach and cross-product netting. 549

To the extent that the rules referenced above include the term "master netting agreement", this term should be read as including any "netting agreement" that provides legally enforceable rights of set-off of receivables and liabilities of all contracts in the netting set.[51] If the bank cannot demonstrate that netting agreements meet these rules, each single transaction shall be regarded as a netting set of its own for the calculation of trade exposure. 550

c) Clearing member exposures to clients

[CCP2; Annex 4, §195] The clearing member shall always capitalize its exposure (including potential CVA risk exposure) to clients as bilateral trades, irrespective of whether the clearing member guarantees the trade or acts as an intermediary between the client and the QCCP. However, in order to recognize the shorter close-out period for cleared transactions, in the SA-CCR or in the EPE modeling approach, clearing 551

[49] See margin no. 208 for supervisory haircuts, margin no. 212 for own-estimate haircuts and margin no. 242 for using the VaR model.

[50] For the purposes of this Section XVIII, the treatment of netting agreements also applies to exchange-traded derivatives.

[51] This is to take account of the fact that for netting agreements employed by CCPs, no standardization has currently emerged that would be comparable to the level of standardization of bilateral netting agreements in OTC trading.

members can capitalize the exposure to their clients applying a margin period of risk of at least five days . The same minimum holding period shall also apply for the calculation of the CVA capital requirements.

[CCP2; Annex 4, §196] If a clearing member receives collateral from a client and it passes this collateral on to the QCCP, the clearing member may recognize this collateral when calculating the credit equivalent for its client leg. This collateral thus reduces the credit risk of the clearing member to the client. The same shall apply to the exposure between higher-level and lower-level clients in the case of a multi-level client relationship. 552

d) Bank exposures as clients of a clearing member

[CCP2 Annex 4, §197] Where a bank is a client of a clearing member, and it enters into a transaction with the clearing member acting as a financial intermediary (i.e. the clearing member completes an offsetting transaction with a QCCP), the client's exposures to the clearing member may be treated as described in margin nos. 541–550, if the two conditions below are met (margin no. 554–556) Likewise, where a client enters into a transaction with the QCCP, with a clearing member guaranteeing its performance, the client's exposures to the QCCP may receive the treatment described in margin nos. 541–550, if the conditions set out in margin nos. 554–556 are met. The same shall apply to the exposure between lower-level and higher-level clients in the case of a multi-level client relationship. 553

- (a) The offsetting transactions are identified by the QCCP as client transactions, and collateral to support them is held by the QCCP and/or the clearing member, as applicable, under arrangements that prevent any losses to the client due to: (i) the default or insolvency of the clearing member, (ii) the default or insolvency of the clearing member's other clients, and (iii) the joint default or insolvency of the clearing member and any of its other clients.[52] 554

- The client must have conducted a sufficient legal review and have a well-founded basis to conclude that, in the event of legal challenge, the relevant courts and administrative authorities would find that such arrangements mentioned above would be legal, valid, binding and enforceable under the relevant laws of the relevant jurisdiction(s). This legal review must be up-to-date and reviewed periodically. 555

- Relevant laws, regulation, rules, contractual or administrative arrangements shall provide that the offsetting transactions with the defaulted or insolvent clearing member are highly likely to continue to be indirectly transacted through the QCCP, or by the QCCP, should the clearing member default or become insolvent. In such circumstances, the client exposures and collateral with the QCCP shall be transferred at market value unless the client requests to close out the exposures at market value. 556

[CCP2 Annex 4, §198] Where a client is not protected from losses in the case that the clearing member and another client of the clearing member jointly default or become jointly insolvent, but all other conditions in margin nos. 553–556 are met, a risk weight of 4% shall apply to the clients' exposure (EAD) to the clearing member or the higher-level client. 557

[52] That is, upon the insolvency of the clearing member, no legal impediment may exist (other than the need to obtain a court order to which the client is entitled) to the transfer of the collateral belonging to clients of a defaulting clearing member to the CCP, to one or more other surviving clearing members or to the client or the client's representative. National supervisory authorities should be consulted to determine whether this may be achieved in view of the facts on hand.

[CCP2 Annex 4, §199] Where the bank is a client of a clearing member and the requirements in margin nos. 554–557 above are not met, the bank shall capitalize its exposure (including potential CVA risk exposure, if applicable) to the clearing member as a bilateral trade. 558

e) Treatment of posted collateral

[CCP2 Annex 4, §200-201] In all cases, any assets or collateral posted must, from the perspective of the bank posting such collateral, receive the risk weights that otherwise apply to such assets or collateral under the capital adequacy framework, regardless of the fact that such assets have been posted as collateral.[53] 559

Where assets or collateral of a clearing member or client are posted with a CCP or a clearing member and are not held in a bankruptcy remote manner, the bank posting such assets or collateral shall also meet capital requirements regarding the credit risk for the assets or collateral being exposed to risk of loss based on the creditworthiness of the entity holding such assets or collateral. For this purpose, the carrying values of the assets posted as collateral shall be increased by the haircuts stated in margin nos. 208–277. Subsequently, the collateral posted shall be included in the calculation of the trade exposures. When using the SA-CCR method, they are to be added to C and NICA (cf. margin nos. 108 and 110). When using the EPE modeling method, they are either to be integrated into the simulation or multiplied by alpha separately. 560

[CCP2 Annex 4, §201] If the entity holding such collateral or assets is the QCCP, a risk weight of 2% shall apply to collateral covered in the relevant position values of trade exposures. The QCCP's relevant risk weight shall apply to assets or collateral posted for other purposes. 561

[CCP2 Annex 4, §202] Collateral posted by the clearing member (including cash, securities, other pledged assets, and excess initial or variation margin), that is held by a custodian[54], and is bankruptcy remote from the QCCP, is not subject to a capital requirement for counterparty credit risk exposure to such bankruptcy-remote custodian. When calculating the risk-weighted exposures to determine the counterparty risk, collateral shall be risk weighted at 0%. 562

[CCP2 Annex 4, §203] Collateral posted by a client, that is held by a custodian and is bankruptcy remote from the QCCP, the clearing member and other clients, is not subject to a capital requirement for counterparty credit risk. If the collateral is held at the QCCP on a client's behalf and is not held on a bankruptcy remote basis, a 2% risk weight shall be applied to the collateral if the conditions established in margin nos. 553–556 are met; or 4% if the conditions in margin no. 557 are met. 563

f) Default fund contributions (Article 70 CAO)

[CCP2 Annex 4, §206] Banks acting as clearing member of a QCCPshall calculate the minimum capital requirements necessary to cover default fund contributions using the formulae and methodology set 564

[53] Assets posted as collateral may be part of the bank's trading book. They are to be treated accordingly, i.e. as if the assets had not been posted as collateral.

[54] In this paragraph, the word "custodian" may include a trustee, agent, pledgee, secured creditor or any other person that holds property in a way that does not give such person a beneficial interest in such property and will not result in such property being subject to legally enforceable claims by creditors, or to a court-ordered stay of the return of such property, should such person become insolvent or bankrupt.

forth in the Basel III text, "Capital requirements for bank exposures to central counterparties" (margin no. 8). This calculation may be performed by the QCCP, the bank, the competent supervisory authority or another body with access to the required data, as long as they meet the conditions in margin no. 566. The minimum capital requirement is not limited by the maximum amount of the bank's contractual obligations to the default fund.

[CCP2; Annex 4, §207] The minimum capital required for risks toward the default fund of a QCCP is calculated as follows: 565

$$K_{\text{Bank}} = \max\left(\frac{K_{CCP}}{DF_{CCP} + DF_{CM}}; 8\%\times 2\%\right)\times DF_{\text{Bank}}$$

where

K_{CCP} = hypothetical minimum capital requirement of the QCCP due to its counterparty credit risk exposures to all of its clearing members and their clients.

DF_{CCP} = the QCCP's prefunded own resources (e.g. QCCP capital contributed to the default fund, revenue reserves, etc.) to be used by the QCCP to carry losses caused by the default of clearing members which are of the same seniority or junior as the amounts paid to the default fund by the clearing members.

DF_{CM} = the total prefunded default fund contributions from clearing members, and

DF_{Bank} = the prefunded contribution from the bank to the QCCP's default fund

[CCP2; Annex 4, §208] The QCCP, the bank, the competent supervisory authority or any other body with access to the required data must calculate , , and in such a way to permit the QCCP's supervisory authority to verify those calculations. Sufficient information shall be available to permit each clearing member bank to calculate its capital required for its contribution to the default fund and to allow the clearing member bank's supervisory authority (or an audit firm appointed by it) to verify and confirm such calculations. should be calculated at least on a quarterly basis even though national supervisors may require more frequent calculations in case of material changes (such as the QCCP clearing a new product). The QCCP, the bank, the competent supervisory authority or any other body that did the calculations shall make available to the local supervisory authority of any clearing member bank sufficient aggregate information on the composition of the QCCP's exposures to clearing members and information provided to the clearing member to calculate , , and . Such information shall be provided at least as frequently as the bank's local supervisory authority requires it to monitor the risk of the clearing member that it supervises. and i must be recalculated at least quarterly; it shall also be recalculated if there are material changes to the number or the risk profile of cleared transactions or material changes to the financial resources of the QCCP. 566

g) Cap with regard to QCCP's minimum capital required

[CCP2 Annex 4, §209] Where the sum of a bank's minimum capital requirements for exposures to a qualifying CCP due to its trade exposure (margin nos. 541–550 and 559–563) and default fund contribution (margin nos. 564–566) is higher than the total minimum capital requirements (margin nos. 539–540) that would apply to those same exposures if the CCP were for a non-qualifying CCP, the minimum capital requirements as outlined in margin nos. 539–540 shall apply for the QCCP. 567

XVIIIa Mortgage-backed exposures (Article 72 CAO)

Parts of loans with additional security provided in the form of pledged pension fund assets or pledged pension fund benefits in accordance with Article 72(4) CAO may be weighted with a risk weight of 35%, provided they meet the conditions stated in (a)-(c) of this article if applying the SA-BIS. 567.1*

Should the minimum requirements in accordance with the "Guidelines on minimum requirements for mortgage loans" issued by the Swiss Bankers Association in July 2014 not be met, the bank shall apply a risk weight of 100% on the entire loan (all tranches), regardless of the pledging in accordance with margin no. 567.1. Neither the domicile of the borrower, the location of the property or the approach used to determine minimum capital shall play a role when doing so. 567.2*

XIX. Transitional provisions

Repealed 568*

Repealed 569*

Repealed 569.1*

Repealed 569.2*

Repealed 570

Repealed 571*

Annex 1

Multilateral Development Banks

The following are classified as multilateral development banks as defined in Article 66 CAO or Annex 2, Sect. 3.2:

- World Bank Group, including the International Bank for Reconstruction and Development (IBRD), International Development Association (IDA) and the International Finance Corporation (IFC) as well as the Multilateral Investment Guarantee Agency (MIGA)
- 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)
- Asian Infrastructure Investment Bank (AIIB)

Annex 2

Simplified SA-CCR

The simplified SA-CCR (VSA-CCR) may be used by banks in supervisory categories 4 and 5. The VSA-CCR shall basically follow the SA-CCR when calculating the credit equivalent. This simplification shall only take place in regard to the data input into the SA-CCR, as follows: 1

All transactions shall be treated as transactions with no margining, which eliminates factors TH, MTA or NICA (cf. margin no. 39). This shall apply without exception to all transactions of a netting set when using the VSA-CCR. 2

- As a minimum, each transaction shall require only the parameters which are absolutely necessary for the transaction on hand (with the exceptions stated below), as they were already required when using the current exposure method under the previous law. 3

- Gold derivatives shall now be allocated to the risk factor category "commodities". Derivative transactions related to electricity are to be flagged as such; they shall require the proper supervisory factor as stated in SA-CCR. CDO tranches require the proper supervisory delta as stated in SA-CCR, which in turn requires the attachment and detachment points as input. 4

- The remaining data inputs to be used in the SA-CCR do not have to be available for the transaction on hand; instead, fallback inputs (i.e. standardized input values) may be used as provided in the table below. 5

- All transactions of a risk profile category where a fallback input is used shall be deemed to be long positions. Aggregation shall be as follows: 6

    - Interest rates: all trades deemed to take place in CHF. Simple sums within the three maturity bands (no compensation as all delta > 0) and aggregation using formula in margin no. 87. 7

    - Currencies, shares, loans and commodities: Simple sum for all transactions for each group. This is equivalent to the assumption that all credit derivatives refer to the same reference obligor, all equity derivatives to the same issuer and all commodity derivatives to the same metal. 8

In risk categories where the simplification only consists of the treatment without margining, the aggregation may be performed as in the complete SA-CCR and the limitation of delta >0 may be dropped. 9

Many fallback inputs are optional, i.e. they may also be replaced by transaction-specific data inputs. However, in so-called mandatory fallback inputs, the limitations mentioned above shall apply, as reiterated in the table. 10

Annex 2

Simplified SA-CCR

Margin number where this data input is mentioned for the first time	Required data input	Asset class or product class to which this data input is limited	Data input available because already necessary for current exposure method?	Fallback input	Mandatory or optional fallback input
margin no. 34	Netting set		Available	n/a, i.e. use available netting sets	n/a
margin no. 35	With margining?		Not available	Treat all transactions as if without margining	Mandatory
margin no. 36	Could replacement value become positive (yes/no)?		Available	n/a, i.e. use available information	n/a
margin nos. 37, 38	Net market value (V)		Available	n/a, i.e. use available information	n/a
margin nos. 37, 38	Collateral (C)		Available	n/a, i.e. use available information in suitable form[55]	n/a

[55] Two instances of case-specific use of existing information in suitable form are conceivable for IT implementations at banks:
Example 1: If collateral is deducted from the calculated credit equivalent "at the end", just as in the current exposure method, then C = 0 is the fallback input, thus avoiding using the collateral twice.
Example 2: If collateral is already accounted for when calculating the credit equivalent (as foreseen in the SA-CCR), collateral may not be deducted a second time "at the end" from the credit equivalent calculated as per the SA-CCR.

Margin number where this data input is mentioned for the first time	Required data input	Asset class or product class to which this data input is limited	Data input available because already necessary for current exposure method?	Fallback input	Mandatory or optional fallback input
margin no. 39	TH+MTA-NICA		Not available	Not necessary as all transactions must be treated as if without margining	Mandatory
margin nos. 40-43	Mismatch between the netting set and the margining?		Not available	Not necessary as all transactions must be treated as if without margining	Mandatory
margin no. 51	Binary option (yes/no)?		Not available	"No", i.e. no differentiation --> treat like a normal option	Optional
margin nos. 52, 61	Notional value		Available	n/a, i.e. use available information	n/a
margin no. 53	Start time (S) and end time (E)	IR, Credit	Not available	S=0 and E=M (i.e. residual maturity)	Optional

Margin number where this data input is mentioned for the first time	Required data input	Asset class or product class to which this data input is limited	Data input available because already necessary for current exposure method?	Fallback input	Mandatory or optional fallback input
margin no. 63	Residual maturity (M)		Available	n/a, i.e. use available information. If it is known to which individual maturity bands they belong, M shall be set to the same value as what would be the upper limit of that maturity band and set M = 20 for the top-most maturity band.	n/a
margin no. 64	MPOR		Not available	Not necessary as all transactions must be treated as if without margining	Mandatory
margin no. 67	long or short?		Not available	No netting of add-ons in simplified SA-CCR, therefore everything to be regarded as longs (delta>0)	*Mandatory* within an asset class with fallback inputs
margin no. 68	Option (yes/no)?		Not available	Do not treat as option (delta = 1)	Optional

Margin number where this data input is mentioned for the first time	Required data input	Asset class or product class to which this data input is limited	Data input available because already necessary for current exposure method?	Fallback input	Mandatory or optional fallback input
margin no. 68	P/K and T	Options	Not available	Do not treat as option (delta = 1)	Optional
margin no. 69	CDO tranche (yes/no)?		Not available	No fallback, instead input must be available	n/a
margin no. 69	A, D	CDO tranches	Not available	No fallback, instead input has to be available and delta has to be >0 (as everything must be regarded as a long)	n/a
margin no. 71	Basic transaction (yes/no)?	FX, EQ, Credit, Commodities	Not available	Treat like normal transaction (i.e. SF not reduced)	Optional
margin nos. 60, 72	Volatility transaction (yes/no)?		Not available	Treat like normal transaction (i.e. use contractual notional value, SF is not increased)	Optional

Margin number where this data input is mentioned for the first time	Required data input	Asset class or product class to which this data input is limited	Data input available because already necessary for current exposure method?	Fallback input	Mandatory or optional fallback input
margin no. 73	Aggregation and criteria for complete and partial netting met?		Not available	Because delta>0, all SEN are positive. See instructions on aggregation at beginning of annex. I. e. all interest rate derivatives are deemed to be in CHF (residual maturity M is known). Assumption that all credit derivatives refer to the same reference obligor, all equity derivatives to the same issuer and all commodity derivatives to the same metal.	Mandatory within a asset class with fallback inputs
margin no. 105	Asset class		Available	Gold now categorized as commodity, otherwise use available information for allocation	n/a
margin no. 105	Index (yes/no)?	EQ, Credit	Not available	Do not treat as index but as “single name”	Optional

Margin number where this data input is mentioned for the first time	Required data input	Asset class or product class to which this data input is limited	Data input available because already necessary for current exposure method?	Fallback input	Mandatory or optional fallback input
margin no. 105	Investment grade (yes/no)?	Credit indices	Not available	Treat all BB-rated as single names	Optional
margin no. 105	Rating of reference obligor	Credit	Not available	Treat all BB-rated as single names	Optional
margin no. 105	Electricity (yes/no)?	Commodities	Not available	No fallback, instead input must be available	n/a

Annex 4

Current exposure method for derivatives (Article 57 CAO in its version of 1 July 2016)

A. Add-on rates (Article 57 CAO)

If applying the current exposure method, add-ons (as described in more detail in margin nos. 9-29) shall be calculated using the following add-on rates:

Base value of the contract		Add-on rate in percent, in principle according to the residual maturity		
		≤ 1 year	> 1 year ≤ 5 years	> 5 years
1.	Interest	0.0	0.5	1.5
2.	Foreign currencies and gold	1.0	5.0	7.5
3.	Equity shares	6.0	8.0	10.0
4.	Precious metals other than gold	7.0	7.0	8.0
5.	Other commodities	10.0	12.0	15.0
6.	Credit derivatives (with reference obligation of the category "central governments and central banks" or "qualified interest rate instruments" as per Article 4(e) CAO)	5.0	5.0	5.0
7.	Credit derivatives (with reference obligation of the category "other" as per Annex 5 CAO)	10.0	10.0	10.0

2

If it is unclear to which of the seven categories a contract should be assigned to due to the underlying (margin no. 2), the contract must be treated as a contract in "Other commodities" (Category 5). 3

[§708] Add-on rates for first, second and nth-to-default swaps: for first-to-default swaps, the add-on rate shall depend on the reference obligation with the highest risk in the basket. By analogy, for second-to-default swaps the second riskiest reference obligation and for nth-to-default swaps the nth riskiest one in the basket shall determine the add-on rate. 4

An add-on rate of zero may be used for contracts for which the replacement value can never be positive. 5

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. 6

Contracts that are structured in a way that open exposures are closed out on defined payment dates, and the conditions of which are always amended so that the market value of the contract equals zero on these dates, the time to the next fixing date shall be considered to be the residual term to maturity. For interest rate contracts with a residual term to maturity of more than one year that fulfill the above criteria, the add-on rate must be at least 0.5 %. 7

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 of these contracts shall be calculated solely on the basis of the respective replacement value. 8

B. Credit Equivalent (Article 57 CAO)

The calculation of the credit equivalent generally shall depend on whether netting with a counterparty takes place in accordance with Article 61 CAO. 9

a) Credit equivalent without netting as per Article 61 CAO

Generally, the add-on shall be determined by multiplying the applicable add-on rate as per margin nos. 1-8, using the contract's nominal value as calculation basis. If the nominal value is leveraged or increased due to the transaction's structure, the original nominal value shall be used as the calculation basis. 10

It is not permitted to net the add-on with the negative replacement value of the relative contract. This is why negative replacement values must be set to zero. 11

b) Credit equivalent with netting as per Article 61 CAO

As described below, subject to the conditions stipulated in margin no. 13, positive and negative replacement values of derivative contracts with the same counterparty may be netted to produce a net replacement value, and the corresponding add-ons may be netted to produce a net add-on. Credit equivalents as described in Article 57 CAO netted as per Article 61 CAO shall correspond to the sum of these two net values. A quantity of contracts offsettable as described shall be called a netting set. 12

If a bilateral agreement that is legally recognized and enforceable as described in margin nos. 17–19 exists with the counterparty concerned, netting shall be permitted in the following cases: 13

- for all transactions which are included in a netting agreement that states that the bank only has the right to receive or the obligation to pay the difference of the non-realized profits/losses from the transaction on hand in case the counterparty defaults due to insolvency, bankruptcy, liquidation or similar events (close-out netting).

- for all mutual receivables and payables in the same currency which are summarized in a debt conversion agreement between the bank and the counterparty, so that this debt conversion produces a single net amount, thus creating a new agreement which fully replaces all past agreements (netting by novation).

A bilateral agreement shall be recognized and enforceable by means of the following legal frameworks: 16

- the law of the country where the counterparty is domiciled and, if a foreign subsidiary of a company is involved, also the law of the country where the subsidiary is domiciled;

- the law which is applicable to the individual transactions at hand;

- the law which governs the agreements required to allow the netting .

Netting is not permitted in the following cases: 20

- settled transactions if there is a payment netting requiring that the amount to be paid by each party be determined on the due date, taking into account the balance of each currency, and that only this balance be remitted. 21

- if the agreement contains a walk-away clause, which allows the non-defaulting party to only partially pay or not pay the defaulting party at all, even if the latter's balance were actually creditor.

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 be set to zero. 23

The net add-on shall be the sum of: 24

- 40% of the sum of the individual add-ons as per margin nos. 10– 11; and

- 60% of the product of the following two values 26

- the sum of the individual add-ons as per margin nos. 10– 11; 27

- the ratio of the net replacement value as per margin no. 23 to the sum of the positive replacement values. 28

The individual add-ons are the ones stipulated in margin nos. 10– 11 for the derivative contracts to which the bilateral netting with a counterparty as per Article 61 CAO relates. 29

List of amendments

The Circular has been amended as follows:

These amendments were passed on 20 June 2018 and shall enter into force on 30 June 2018.

Newly inserted margin nos.	569.1, 569.2
Amended margin nos.	568, 569
Repealed margin no.	571

These amendments were passed on 20 June 2018 and shall enter into force on 1 January 2019.

Newly inserted margin nos.	51.1, 326.1, 326.2, 326.3, 352.1, 352.2, 485.1, 567.1, 567.2
Amended margin nos.	9, 10, 13, 36, 51, 68, 109, 123, 133, 169, 192, 198, 209, 325, 352, 360
Repealed margin nos,	179, 190, 198
Other amendments	Footnotes to margin nos. 63, 108, 120, 495 New title before margin nos, 485.1, 567.1

These amendments were passed on 31 October 2019 and entered into force on 1 January 2020.

Amended margin nos.	32, 33
Repealed margin nos.	568, 569, 569.1, 569.2, 570
Other amendments	New title before margin no. 32

These amendments were passed on 4 December 2019 and entered into force on 1 July 2020.

Amended margin no.	13

The annexes to the circular were amended as follows:

These amendments were passed on 20 June 2018 and shall enter into force on 1 January 2019.

New	Annex 3 Concordance table
Amended	Annex 1: Multilateral development banks: last bullet point
Repealed	Annex 2 Abbreviations and Terms for IRB Annex 3 Amendments to the Basel Minimum Standards Annex 4 Examples of the Standardized Approach for CVA

	Risks (margin nos. 494 – 513)
Other amendments	Annex 5: Simplified SA-CCR now is Annex 2

These amendments were passed on 21 December 2018 and shall enter into force on 24 December 2018.

Amended	Annex 3 Concordance table Additions of long-term and short-term ratings to concordance table I and II for non-securitizations

In view of the transitional provisions of 1 June 2012 in Article 137 of the Capital Adequacy Ordinance (CAO; SR 952.03) the information on the risk-weighting for the Swiss Standardized Approach for non-securitizations concerning the short-term ratings has been deleted from Annex 3 "Concordance tables".

These amendments were passed on 31 October 2019 and entered into force on 1 January 2020.

New	Annex 4 Current exposure method for derivatives (Article 57 CAO in its version of 1 July 2016)

These amendments were passed on 4 December 2019 and entered into force on 1 January 2020.

Amended	Annex 3 Concordance tables Additions of long-term and short-term ratings to concordance tables I and II for non-securitizations

These amendments were passed on 4 December 2019 and entered into force on 1 July 2020.

Repealed	Annex 3 "Concordance tables" (now see www.finma.ch --> FINMA Public --> authorised companies)

Contacts

Philipp Rickert
Partner, Head of Financial Services,
Member of the Executive Committee
Zurich
Tel. +41 58 249 42 13
prickert@kpmg.com

Helen Campbell
Partner, Banking Transformation
Tel. +41 58 249 35 01
hcampbell@kpmg.com

Thomas Dorst
Partner, Assurance & Regulation
Tel. + 41 58 249 54 44
tdorst@kpmg.com

Nicolas Moser
Partner, Geneva Office
Tel. +41 58 249 37 87
nmoser@kpmg.com

www.kpmg.ch