association must apply the following adjustment to reduce the effective notional amount of the credit risk mitigant: Pm = E × (t − 0.25) / (T − 0.25), where:

(i) Pm = effective notional amount of the credit risk mitigant, adjusted for maturity mismatch;

(ii) E = effective notional amount of the credit risk mitigant;

(iii) t = the lesser of T or the residual maturity of the credit risk mitigant, expressed in years; and

(iv) T = the lesser of five or the residual maturity of the hedged exposure, expressed in years.

(e) *Adjustment for credit derivatives without restructuring as a credit event.* If a national bank or Federal savings association recognizes an eligible credit derivative that does not include as a credit event a restructuring of the hedged exposure involving forgiveness or postponement of principal, interest, or fees that results in a credit loss event (that is, a charge-off, specific provision, or other similar debit to the profit and loss account), the national bank or Federal savings association must apply the following adjustment to reduce the effective notional amount of the credit derivative: Pr = Pm × 0.60, where:

(1) Pr = effective notional amount of the credit risk mitigant, adjusted for lack of restructuring event (and maturity mismatch, if applicable); and

(2) Pm = effective notional amount of the credit risk mitigant (adjusted for maturity mismatch, if applicable).

(f) *Currency mismatch adjustment.* (1) If a national bank or Federal savings association recognizes an eligible guarantee or eligible credit derivative that is denominated in a currency different from that in which the hedged exposure is denominated, the national bank or Federal savings association must apply the following formula to the effective notional amount of the guarantee or credit derivative: Pc = Pr × (1−H_{FX}), where:

(i) Pc = effective notional amount of the credit risk mitigant, adjusted for currency mismatch (and maturity mismatch and lack of restructuring event, if applicable);

(ii) Pr = effective notional amount of the credit risk mitigant (adjusted for maturity mismatch and lack of restructuring event, if applicable); and

(iii) H_{FX} = haircut appropriate for the currency mismatch between the credit risk mitigant and the hedged exposure.

(2) A national bank or Federal savings association must set H_{FX} equal to eight percent unless it qualifies for the use of and uses its own internal estimates of foreign exchange volatility based on a ten-business-day holding period. A national bank or Federal savings association qualifies for the use of its own internal estimates of foreign exchange volatility if it qualifies for the use of its own-estimates haircuts in § 3.37(c)(4).

(3) A national bank or Federal savings association must adjust H_{FX} calculated in paragraph (f)(2) of this section upward if the national bank or Federal savings association revalues the guarantee or credit derivative less frequently than once every 10 business days using the following square root of time formula:

$$H_{FX} = 8\% \sqrt{\frac{T_M}{10}}$$, where T_M equals the greater of 10 or the number of days between revaluation.

[78 FR 62157, 62273, Oct. 11, 2013, as amended at 84 FR 35255, July 22, 2019]

§ 3.37 Collateralized transactions.

(a) *General.* (1) To recognize the risk-mitigating effects of financial collateral, a national bank or Federal savings association may use:

(i) The simple approach in paragraph (b) of this section for any exposure; or

(ii) The collateral haircut approach in paragraph (c) of this section for

repo-style transactions, eligible margin loans, collateralized derivative contracts, and single-product netting sets of such transactions.

(2) A national bank or Federal savings association may use any approach described in this section that is valid for a particular type of exposure or transaction; however, it must use the same approach for similar exposures or transactions.

(b) *The simple approach*—(1) *General requirements.* (i) A national bank or Federal savings association may recognize the credit risk mitigation benefits of financial collateral that secures any exposure.

(ii) To qualify for the simple approach, the financial collateral must meet the following requirements:

(A) The collateral must be subject to a collateral agreement for at least the life of the exposure;

(B) The collateral must be revalued at least every six months; and

(C) The collateral (other than gold) and the exposure must be denominated in the same currency.

(2) *Risk weight substitution.* (i) A national bank or Federal savings association may apply a risk weight to the portion of an exposure that is secured by the fair value of financial collateral (that meets the requirements of paragraph (b)(1) of this section) based on the risk weight assigned to the collateral under this subpart D. For repurchase agreements, reverse repurchase agreements, and securities lending and borrowing transactions, the collateral is the instruments, gold, and cash the national bank or Federal savings association has borrowed, purchased subject to resale, or taken as collateral from the counterparty under the transaction. Except as provided in paragraph (b)(3) of this section, the risk weight assigned to the collateralized portion of the exposure may not be less than 20 percent.

(ii) A national bank or Federal savings association must apply a risk weight to the unsecured portion of the exposure based on the risk weight applicable to the exposure under this subpart.

(3) *Exceptions to the 20 percent risk-weight floor and other requirements.* Notwithstanding paragraph (b)(2)(i) of this section:

(i) A national bank or Federal savings association may assign a zero percent risk weight to an exposure to an OTC derivative contract that is marked-to-market on a daily basis and subject to a daily margin maintenance requirement, to the extent the contract is collateralized by cash on deposit.

(ii) A national bank or Federal savings association may assign a 10 percent risk weight to an exposure to an OTC derivative contract that is marked-to-market daily and subject to a daily margin maintenance requirement, to the extent that the contract is collateralized by an exposure to a sovereign that qualifies for a zero percent risk weight under § 3.32.

(iii) A national bank or Federal savings association may assign a zero percent risk weight to the collateralized portion of an exposure where:

(A) The financial collateral is cash on deposit; or

(B) The financial collateral is an exposure to a sovereign that qualifies for a zero percent risk weight under § 3.32, and the national bank or Federal savings association has discounted the fair value of the collateral by 20 percent.

(c) *Collateral haircut approach*—(1) *General.* A national bank or Federal savings association may recognize the credit risk mitigation benefits of financial collateral that secures an eligible margin loan, repo-style transaction, collateralized derivative contract, or single-product netting set of such transactions, and of any collateral that secures a repo-style transaction that is included in the national bank's or Federal savings association's VaR-based measure under subpart F of this part by using the collateral haircut approach in this section. A national bank or Federal savings association may use the standard supervisory haircuts in paragraph (c)(3) of this section or, with prior written approval of the OCC, its own estimates of haircuts according to paragraph (c)(4) of this section.

(2) *Exposure amount equation.* A national bank or Federal savings association must determine the exposure amount for an eligible margin loan, repo-style transaction, collateralized

derivative contract, or a single-product netting set of such transactions by setting the exposure amount equal to max {0, [(ΣE − ΣC) + Σ(Es × Hs) + Σ(Efx × Hfx)]}, where:

(i)(A) For eligible margin loans and repo-style transactions and netting sets thereof, ΣE equals the value of the exposure (the sum of the current fair values of all instruments, gold, and cash the national bank or Federal savings association has lent, sold subject to repurchase, or posted as collateral to the counterparty under the transaction (or netting set)); and

(B) For collateralized derivative contracts and netting sets thereof, ΣE equals the exposure amount of the OTC derivative contract (or netting set) calculated under § 3.34(b)(1) or (2).

(ii) ΣC equals the value of the collateral (the sum of the current fair values of all instruments, gold and cash the national bank or Federal savings association has borrowed, purchased subject to resale, or taken as collateral from the counterparty under the transaction (or netting set));

(iii) Es equals the absolute value of the net position in a given instrument or in gold (where the net position in the instrument or gold equals the sum of the current fair values of the instrument or gold the national bank or Federal savings association has lent, sold subject to repurchase, or posted as collateral to the counterparty minus the sum of the current fair values of that same instrument or gold the national bank or Federal savings association has borrowed, purchased subject to resale, or taken as collateral from the counterparty);

(iv) Hs equals the market price volatility haircut appropriate to the instrument or gold referenced in Es;

(v) Efx equals the absolute value of the net position of instruments and cash in a currency that is different from the settlement currency (where the net position in a given currency equals the sum of the current fair values of any instruments or cash in the currency the national bank or Federal savings association has lent, sold subject to repurchase, or posted as collateral to the counterparty minus the sum of the current fair values of any instruments or cash in the currency the national bank or Federal savings association has borrowed, purchased subject to resale, or taken as collateral from the counterparty); and

(vi) Hfx equals the haircut appropriate to the mismatch between the currency referenced in Efx and the settlement currency.

(3) *Standard supervisory haircuts.* (i) A national bank or Federal savings association must use the haircuts for market price volatility (Hs) provided in Table 1 to § 3.37, as adjusted in certain circumstances in accordance with the requirements of paragraphs (c)(3)(iii) and (iv) of this section.

TABLE 1 TO § 3.37—STANDARD SUPERVISORY MARKET PRICE VOLATILITY HAIRCUTS [1]

Residual maturity	Haircut (in percent) assigned based on:						Investment grade securitization exposures (in percent)
	Sovereign issuers risk weight under § 3.32 (in percent) [2]			Non-sovereign issuers risk weight under § 3.32 (in percent)			
	Zero	20 or 50	100	20	50	100	
Less than or equal to 1 year	0.5	1.0	15.0	1.0	2.0	4.0	4.0
Greater than 1 year and less than or equal to 5 years	2.0	3.0	15.0	4.0	6.0	8.0	12.0
Greater than 5 years	4.0	6.0	15.0	8.0	12.0	16.0	24.0
Main index equities (including convertible bonds) and gold	15.0						
Other publicly traded equities (including convertible bonds)	25.0						
Mutual funds	Highest haircut applicable to any security in which the fund can invest.						
Cash collateral held	Zero.						
Other exposure types	25.0						

[1] The market price volatility haircuts in Table 1 to § 3.37 are based on a 10 business-day holding period.
[2] Includes a foreign PSE that receives a zero percent risk weight.

(ii) For currency mismatches, a national bank or Federal savings association must use a haircut for foreign exchange rate volatility (Hfx) of 8.0 percent, as adjusted in certain circumstances under paragraphs (c)(3)(iii) and (iv) of this section.

(iii) For repo-style transactions and client-facing derivative transactions, a national bank or Federal savings association may multiply the standard supervisory haircuts provided in paragraphs (c)(3)(i) and (ii) of this section by the square root of ½ (which equals 0.707107). For client-facing derivative transactions, if a larger scaling factor is applied under §3.34(f), the same factor must be used to adjust the supervisory haircuts.

(iv) If the number of trades in a netting set exceeds 5,000 at any time during a quarter, a national bank or Federal savings association must adjust the supervisory haircuts provided in paragraphs (c)(3)(i) and (ii) of this section upward on the basis of a holding period of twenty business days for the following quarter except in the calculation of the exposure amount for purposes of §3.35. If a netting set contains one or more trades involving illiquid collateral or an OTC derivative that cannot be easily replaced, a national bank or Federal savings association must adjust the supervisory haircuts upward on the basis of a holding period of twenty business days. If over the two previous quarters more than two margin disputes on a netting set have occurred that lasted more than the holding period, then the national bank or Federal savings association must adjust the supervisory haircuts upward for that netting set on the basis of a holding period that is at least two times the minimum holding period for that netting set. A national bank or Federal savings association must adjust the standard supervisory haircuts upward using the following formula:

$$H_A = H_S \sqrt{\frac{T_M}{T_S}}, \text{ where}$$

(A) T_M equals a holding period of longer than 10 business days for eligible margin loans and derivative contracts other than client-facing derivative transactions or longer than 5 business days for repo-style transactions and client-facing derivative transactions;

(B) H_S equals the standard supervisory haircut; and

(C) T_S equals 10 business days for eligible margin loans and derivative contracts other than client-facing derivative transactions or 5 business days for repo-style transactions and client-facing derivative transactions.

(v) If the instrument a national bank or Federal savings association has lent, sold subject to repurchase, or posted as collateral does not meet the definition of financial collateral, the national bank or Federal savings association must use a 25.0 percent haircut for market price volatility (H_s).

(4) *Own internal estimates for haircuts.* With the prior written approval of the OCC, a national bank or Federal savings association may calculate haircuts (Hs and Hfx) using its own internal estimates of the volatilities of market prices and foreign exchange rates:

(i) To receive OCC approval to use its own internal estimates, a national bank or Federal savings association must satisfy the following minimum standards:

(A) A national bank or Federal savings association must use a 99th percentile one-tailed confidence interval.

(B) The minimum holding period for a repo-style transaction and client-facing derivative transaction is five business days and for an eligible margin loan and a derivative contract other than a client-facing derivative transaction is ten business days except for transactions or netting sets for which paragraph (c)(4)(i)(C) of this section applies. When a national bank or Federal savings association calculates an own-estimates haircut on a T_N-day holding

period, which is different from the minimum holding period for the transaction type, the applicable haircut (H_M) is calculated using the following square root of time formula:

$$H_M = H_N \sqrt{\frac{T_M}{T_N}}, \text{ where}$$

(*1*) T_M equals 5 for repo-style transactions and client-facing derivative transactions and 10 for eligible margin loans and derivative contracts other than client-facing derivative transactions;

(*2*) T_N equals the holding period used by the national bank or Federal savings association to derive H_N; and

(*3*) H_N equals the haircut based on the holding period T_N.

(C) If the number of trades in a netting set exceeds 5,000 at any time during a quarter, a national bank or Federal savings association must calculate the haircut using a minimum holding period of twenty business days for the following quarter except in the calculation of the exposure amount for purposes of § 3.35. If a netting set contains one or more trades involving illiquid collateral or an OTC derivative that cannot be easily replaced, a national bank or Federal savings association must calculate the haircut using a minimum holding period of twenty business days. If over the two previous quarters more than two margin disputes on a netting set have occurred that lasted more than the holding period, then the national bank or Federal savings association must calculate the haircut for transactions in that netting set on the basis of a holding period that is at least two times the minimum holding period for that netting set.

(D) A national bank or Federal savings association is required to calculate its own internal estimates with inputs calibrated to historical data from a continuous 12-month period that reflects a period of significant financial stress appropriate to the security or category of securities.

(E) A national bank or Federal savings association must have policies and procedures that describe how it determines the period of significant financial stress used to calculate the national bank's or Federal savings association's own internal estimates for haircuts under this section and must be able to provide empirical support for the period used. The national bank or Federal savings association must obtain the prior approval of the OCC for, and notify the OCC if the national bank or Federal savings association makes any material changes to, these policies and procedures.

(F) Nothing in this section prevents the OCC from requiring a national bank or Federal savings association to use a different period of significant financial stress in the calculation of own internal estimates for haircuts.

(G) A national bank or Federal savings association must update its data sets and calculate haircuts no less frequently than quarterly and must also reassess data sets and haircuts whenever market prices change materially.

(ii) With respect to debt securities that are investment grade, a national bank or Federal savings association may calculate haircuts for categories of securities. For a category of securities, the national bank or Federal savings association must calculate the haircut on the basis of internal volatility estimates for securities in that category that are representative of the securities in that category that the national bank or Federal savings association has lent, sold subject to repurchase, posted as collateral, borrowed, purchased subject to resale, or taken as collateral. In determining relevant categories, the national bank or Federal savings association must at a minimum take into account:

(A) The type of issuer of the security;

(B) The credit quality of the security;

(C) The maturity of the security; and

(D) The interest rate sensitivity of the security.

(iii) With respect to debt securities that are not investment grade and equity securities, a national bank or Federal savings association must calculate a separate haircut for each individual security.

(iv) Where an exposure or collateral (whether in the form of cash or securities) is denominated in a currency that differs from the settlement currency, the national bank or Federal savings association must calculate a separate currency mismatch haircut for its net position in each mismatched currency based on estimated volatilities of foreign exchange rates between the mismatched currency and the settlement currency.

(v) A national bank's or Federal savings association's own estimates of market price and foreign exchange rate volatilities may not take into account the correlations among securities and foreign exchange rates on either the exposure or collateral side of a transaction (or netting set) or the correlations among securities and foreign exchange rates between the exposure and collateral sides of the transaction (or netting set).

[78 FR 62157, 62273, Oct. 11, 2013, as amended at 84 FR 35256, July 22, 2019; 85 FR 4404, Jan. 24, 2020; 85 FR 57959, Sept. 17, 2020]

RISK-WEIGHTED ASSETS FOR UNSETTLED TRANSACTIONS

§ 3.38 Unsettled transactions.

(a) *Definitions.* For purposes of this section:

(1) Delivery-versus-payment (DvP) transaction means a securities or commodities transaction in which the buyer is obligated to make payment only if the seller has made delivery of the securities or commodities and the seller is obligated to deliver the securities or commodities only if the buyer has made payment.

(2) Payment-versus-payment (PvP) transaction means a foreign exchange transaction in which each counterparty is obligated to make a final transfer of one or more currencies only if the other counterparty has made a final transfer of one or more currencies.

(3) A transaction has a normal settlement period if the contractual settlement period for the transaction is equal to or less than the market standard for the instrument underlying the transaction and equal to or less than five business days.

(4) Positive current exposure of a national bank or Federal savings association for a transaction is the difference between the transaction value at the agreed settlement price and the current market price of the transaction, if the difference results in a credit exposure of the national bank or Federal savings association to the counterparty.

(b) *Scope.* This section applies to all transactions involving securities, foreign exchange instruments, and commodities that have a risk of delayed settlement or delivery. This section does not apply to:

(1) Cleared transactions that are marked-to-market daily and subject to daily receipt and payment of variation margin;

(2) Repo-style transactions, including unsettled repo-style transactions;

(3) One-way cash payments on OTC derivative contracts; or

(4) Transactions with a contractual settlement period that is longer than the normal settlement period (which are treated as OTC derivative contracts as provided in § 3.34).

(c) *System-wide failures.* In the case of a system-wide failure of a settlement, clearing system or central counterparty, the OCC may waive risk-based capital requirements for unsettled and failed transactions until the situation is rectified.

(d) *Delivery-versus-payment (DvP) and payment-versus-payment (PvP) transactions.* A national bank or Federal savings association must hold risk-based capital against any DvP or PvP transaction with a normal settlement period if the national bank's or Federal savings association's counterparty has not made delivery or payment within five business days after the settlement date. The national bank or Federal savings association must determine its risk-weighted asset amount for such a transaction by multiplying the positive current exposure of the transaction for the national bank or Federal savings association by the appropriate risk weight in Table 1 to § 3.38.