# Guideline

**Subject:** **Margin Requirements for Non-Centrally Cleared Derivatives**

**Category:** **Sound Business and Financial Practices**

**No: E-22** **Effective Date: June 2017**

Canada, as a member of the Basel Committee on Banking Supervision (BCBS), participated in the development of the BCBS and the International Organization of Securities Commissions (IOSCO) policy framework *Margin requirements for non-centrally cleared derivatives*. This Guideline is based on the BCBS-IOSCO framework and establishes minimum standards for margin requirements for non-centrally cleared derivative transactions undertaken by federally-regulated financial institutions.

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## Section 1 – Scope of coverage

### *1.1 – Scope of applicability*

1. The margin requirements outlined in this Guideline apply to all federally-regulated financial institutions[1] (FRFIs).

2. A Covered Entity is defined as a financial entity belonging to a consolidated group[2] whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of 2016 and any year thereafter exceeds $12 billion. For purposes of determining whether a group's non-centrally cleared derivatives notional exceeds $12 billion, the following rules apply:

   - Inter-affiliates trades should not be counted.
   - All other non-centrally cleared derivatives must be counted.

   Once a counterparty becomes a Covered Entity, Covered FRFIs must exchange any applicable margin with that counterparty in accordance with this Guideline starting September 1 of the year in which it became a Covered Entity. Transactions entered into prior to the required exchange of margin are not subject to the margin requirements of this Guideline. See paragraph 9 and 10 below for more details on the applicability of this Guideline to trades with counterparties whose status vis-à-vis the definition of a Covered Entity changes over time.

   Sovereigns, central banks, public sector entities, multilateral development banks eligible for a zero risk weight in the Capital Adequacy Requirements (CAR) Guideline, the Bank for International Settlements and central counterparties are excluded from the definition of a Covered Entity.

   A financial entity is a legal entity whose main business includes: the management of financial assets, lending, factoring, leasing, provision of credit enhancements, securitisation, investments, financial custody, proprietary trading and other financial services activities. This would include (but is not limited to) deposit-taking institutions, insurance companies, pension funds, hedge funds, and asset managers.

   A Covered Entity will not include (i) treasury affiliates that undertake risk management activities on behalf of affiliates within a corporate group; (ii) any special purpose entity ("**SPE**") established for the purpose of financing a specific pool or pools of assets or underwriting a specific set of risk exposures, in each case, by incurring indebtedness; provided

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[1] For the purposes of this Guideline, federally-regulated financial institution refers to banks, foreign bank branches, bank holding companies, trust and loan companies, cooperative credit associations, cooperative retail associations, life insurance companies, property and casualty insurance companies and insurance holding companies.

[2] Investment funds that are managed by an investment advisor are considered distinct entities that are treated separately when applying the threshold as long as the funds are distinct legal entities that are not collateralised by or are otherwise guaranteed or supported by other investment funds or the investment advisor in the event of fund insolvency or bankruptcy.

that the indebtedness of the SPE, including obligations owing to the SPE's swap counterparties, is secured by the specific pool or pools of financed assets; (iii) any SPE established by an investment fund for the purpose of acquiring and holding real estate or other physical assets on behalf of or at the direction of the investment fund; (iv) any SPE established for the purpose of acquiring or investing in real estate; and (v) any collective investment vehicle established for the purpose of investing in real estate or other physical assets.

3. Public sector entities are defined as:

- entities directly or wholly-owned by a government;
- school boards, hospitals, universities and social service programs that receive regular government financial support; and
- municipalities.

4. Trades with the following multilateral development banks are exempt from the margin requirements[3]:

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

5. For the purpose of this Guideline, a foreign entity is defined as an entity that was incorporated or formed by or under the laws of a country other than Canada.

6. FRFIs that also meet the definition of a Covered Entity in paragraph 2 will be referred to as Covered FRFIs.

7. Non-FRFI counterparties that meet the definition of a Covered Entity in paragraph 2 will be referred to as Covered Counterparties.

[3] In addition, OSFI will exempt trades with the International Finance Facility for Immunisation (IFFIm) similar to the treatment for the listed multilateral development banks.

8. A consolidated entity is defined as a group of entities for which consolidated financial statements are prepared.

9. If a counterparty's status vis-à-vis a the definition of a Covered Entity changes such that it becomes a Covered Entity when it was not previously, the margin requirements of this Guideline apply to transactions between a Covered FRFI and the counterparty after the counterparty's status has changed.

10. Conversely, if a counterparty's status vis-à-vis the definition of a Covered Entity changes such that it ceases to be a Covered Entity, all trades (regardless of when they were entered into) between a Covered FRFI and the counterparty are not subject to the margin requirements of this Guideline.

11. If a Covered FRFI is transacting with a Covered Counterparty, then the definition of a Covered Entity from paragraph 2 still applies unless:

    - The counterparty is not subject to OSFI oversight; and
    - The Covered FRFI has documentary evidence that the counterparty is in a jurisdiction where BCBS-IOSCO margin requirements for non-centrally cleared derivatives framework has been implemented through published laws, rules or regulation that include:
        - The mandatory exchange of initial and variation margin for non-centrally cleared derivatives between covered entities;
        - A phase-in of the requirements that is not any longer than the one in paragraphs 70 and 71; and
        - The exchange of margin is subject to minimum transfer amounts and thresholds that are similar to or more conservative than those in paragraphs 15 and 33.

    If the above conditions are met, the rules of the counterparty's home jurisdiction can be deferred to for purposes of determine whether the counterparty is a Covered Entity.

12. Only non-centrally cleared derivatives between a Covered FRFI and a Covered Entity are subject to the margin requirements described below. Non-centrally cleared derivatives are defined as derivatives that are not cleared through a central counterparty. Non-centrally cleared derivatives between a Covered FRFI and its affiliates (i.e. intra-group trades) are not subject to the margin requirements of this Guideline.

13. A derivative is defined as a financial contract whose value depends on, or is derived from, the value of one or more underlying reference assets. The value can be determined by fluctuations of the underlying asset, which may include stocks, bonds, commodities,

currencies, interest rates and market indices. Derivatives include a wide assortment of financial contracts, including forwards, futures, swaps and options[4].

14. OSFI expects Covered FRFIs to self-declare themselves as Covered Entities prior to entering into transactions with other counterparties. Further, Covered FRFIs are responsible for verifying whether or not their counterparties are Covered Entities prior to entering into a transaction[5].

15. All margin transfers (combined variation and initial margin) are subject to a minimum transfer amount (MTA) not to exceed $750,000.

16. When a Covered FRFI transacts with a Covered Counterparty subject to a different MTA in its home jurisdiction (and the Covered Counterparty is from a jurisdiction in which the BCBS-IOSCO margin requirements for non-centrally cleared derivatives framework has been implemented and the conditions in paragraph 11 are satisfied), Covered FRFIs are permitted to use the MTAs applicable to the Covered Counterparty.

### *1.2 – Substituted Compliance*

#### *1.2.1 – Foreign Bank Branches and Foreign Insurance Company Branches in Canada*

17. To avoid duplicative or conflicting margin requirements on a single set of transactions, a foreign bank branch[6] (FBB) operating in Canada that is a Covered Entity will be deemed in compliance with OSFI's margin requirements if:

    - the FBB, established under the laws of a foreign jurisdiction, is required to comply with, and has complied with, the margin requirements of that foreign jurisdiction that have been implemented through published laws, rules or regulation; and
    - the FBB has documentary evidence that margin requirements of the foreign jurisdiction are comparable to the BCBS-IOSCO's margin requirements for non-centrally cleared derivatives framework[7].

#### *1.2.2 – Transactions with Foreign Counterparties*

18. To avoid duplicative or conflicting margin requirements on a single set of transactions, a Covered FRFI, trading with a foreign Covered Counterparty will be deemed in compliance with OSFI's margin requirements if:

[4] Physically settled commodity transactions are not included in the definition of a derivative and therefore not subject to the margin requirements of this Guideline.
[5] A self-declaration from the counterparty is an acceptable way to verify that a counterparty is indeed a Covered Entity, unless a FRFI has reason to believe otherwise.
[6] For the purposes of substituted compliance, foreign insurance companies operating in Canada on a branch basis are also subject to the provisions of paragraph 17.
[7] See http://www.bis.org/bcbs/publ/d317.pdf

- the Covered FRFI is required to comply with, and has complied with, the margin requirements imposed on the foreign Covered Counterparty by a foreign jurisdiction that have been implemented through published laws, rules or regulations; and
- the Covered FRFI has documentary evidence that the foreign jurisdiction's margin requirements are comparable to the BCBS-IOSCO margin requirements for non-centrally cleared derivatives framework[8].

19. To meet the requirements in paragraphs 17 and 18 above, a Covered FRFI should consult with OSFI regarding its documentary evidence and assessment of comparability of the foreign jurisdiction's margin requirements to the BCBS-IOSCO framework.

*1.3 – Instruments covered*

20. The margin requirements outlined in this Guideline apply to all non-centrally cleared derivatives with the exception of physically settled foreign exchange (FX) forwards and FX swaps.

21. Initial margin requirements for cross-currency swaps do not apply to the fixed physically settled FX transactions associated with the exchange of principal of cross-currency swaps. In practice, the initial margin requirements for cross-currency swaps may be computed in one of two ways: 1) Initial margin is calculated by reference to the "interest rate" portion of the standardised initial margin schedule from section 3.3, or 2) Initial margin is calculated pursuant to an initial margin model as discussed in section 3.2. In this second case, the initial margin model need not incorporate the risk associated with the fixed physically settled FX transactions associated with the exchange of principal. However, all the risks that affect cross-currency swaps must be considered in the calculation of the initial margin amount. Finally, the variation margin requirements that are described below apply to all components of cross-currency swaps.

## Section 2 – Variation margin requirements

22. The full amount necessary to fully collateralise the mark-to-market[9] exposure of the non-centrally cleared derivatives must be exchanged, subject to the MTA discussed in paragraph 15. To reduce adverse liquidity shocks and in order to effectively mitigate counterparty credit risk, variation margin should be calculated and exchanged for non-centrally cleared derivatives subject to a single, legally enforceable netting agreement. Where a legally enforceable netting agreement is not in place, variation margin must be exchanged on a gross basis except when paragraph 24 applies.

[8] ibid

[9] We note that for some complex or illiquid trades, a transparent mark-to-market may not be available. In these instances, the use of a mark-to-model (as subject to the conditions in paragraphs 27 and 28) is acceptable.

23. A netting agreement will be deemed legally enforceable if the following conditions are met:

- Covered FRFIs have executed a written, bilateral netting contract or agreement that creates a single legal obligation, covering all included bilateral transactions subject to netting. The result of such an arrangement would be that the institution only has one obligation for payment or one claim to receive funds based on the net sum of the positive and negative mark-to-market values of all of the transactions with that counterparty in the event that counterparty fails to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances;
- Covered FRFIs must conduct sufficient legal review and have a well-founded legal basis to verify that, in the event of any legal challenge, the relevant courts or administrative authorities would find the exposure under the netting agreement to be the net amount under the laws of all relevant jurisdictions. In reaching this conclusion, the legal review must address the validity and enforceability of the entire netting agreement under its terms.
  - The laws of "all relevant jurisdictions" are: a) the law of the jurisdictions where the Covered Entities are chartered and, if the foreign branch of a counterparty is involved, the laws of the jurisdiction in which the branch is located; b) the law governing the individual transactions; and c) the law governing any contracts or agreements required to effect netting.
- Covered FRFIs must have procedures in place to ensure continuing enforceability of the netting arrangements in light of possible changes in relevant law.
- The netting agreement does not contain a walkway clause. A walkaway clause is a provision within the contract that permits a non-defaulting counterparty to make only limited payments, or no payments, to the estate of the defaulter, even if the defaulter is a net creditor.
- Covered FRFIs maintain all required documentation in their files.

24. When a Covered FRFI enters into a netting agreement with a Covered Entity that is not legally enforceable as described in paragraph 23, Covered FRFIs must collect variation margin amounts on a gross basis. However, Covered FRFIs are permitted to post variation margin in accordance with the netting agreement.

25. Variation margin must be calculated and called within two business days of the execution of a trade. Thereafter, variation margin must be calculated and called on a daily basis.

26. Variation margin must be exchanged (posted/received) on or before the second[10] business day following each call for variation margin.

27. The valuation of a derivative's current exposure can be complex and, at times, become subject to question or dispute by one or both parties. In the case of non-centrally cleared

[10] For counterparties who are not subject to the initial margin requirements of their home regulator, the exchange of variation margin may occur up until the third business day after the calculation and call.

derivatives, these instruments are likely to be relatively illiquid. The associated lack of price transparency further complicates the process of agreeing on current exposure amounts for variation margin purposes.

28. To address valuation uncertainty, parties to derivatives contracts must have dispute resolution procedures in place with their counterparty before the onset of a transaction. In the event that a margin dispute arises, both parties should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and exchange the required amount of variation margin in a timely fashion.

## Section 3 – Initial margin requirements

### *3.1 – Overview*

29. The required amount of initial margin may be calculated by reference to either (i) a quantitative portfolio margin model or (ii) a standardised margin schedule.

30. The choice between model- and schedule-based initial margin calculations must, unless a counterparty otherwise requires, be made consistently over time for transactions within the same well defined asset class[11].

31. Initial margin must be calculated and called within two business days of the execution of a trade. Thereafter, initial margin must be calculated and called on a daily basis.

32. Initial margin must be exchanged (posted and received) on or before the second business day following each call for initial margin.

33. The exchange of initial margin is subject to a threshold not to exceed $75 million as well as the minimum transfer amount discussed in paragraph 15. The threshold is applied at the level of the consolidated group to which the threshold is being extended and is based on all non-centrally cleared derivatives between the two consolidated groups. When a Covered FRFI transacts with a Covered Counterparty subject to a different initial margin threshold in its home jurisdiction (and the Covered Counterparty is from a jurisdiction in which the BCBS-IOSCO margin requirements for non-centrally cleared derivatives framework has been implemented and the conditions in paragraph 11 are satisfied), Covered FRFIs are permitted to use the initial margin threshold applicable to the Covered Counterparty.

34. Covered FRFIs must have dispute resolution procedures in place with their counterparty prior to entering into transactions. In particular, the amount of initial margin to be collected from one party by another will be the result of either a quantitative portfolio model calculation or the standardised schedule. The specific method and parameters that will be used by each party to calculate initial margin should be agreed and recorded prior to entering into

[11] There may be exceptions to this rule for more complex and/or seldom used products within a well-defined asset class. However, any "cherry picking" between model-based and schedule based margin calculation is strictly prohibited.

transactions to reduce potential disputes. Moreover, Covered FRFIs and their counterparties may agree to use a single model for the purposes of such margin model calculations subject to bilateral agreement. In the event that a margin dispute arises, both Covered Entities should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and exchange the required amount of initial margin in a timely fashion.

35. Initial margin must be exchanged on a gross basis (i.e. no netting of initial margin amounts owed by two counterparties) and held in such a way as to ensure that (i) the margin exchanged is immediately available[12] to the collecting party in the event of the counterparty's default, and (ii) the exchanged margin must be subject to arrangements that protect the posting party to the extent possible under applicable law in the event that the collecting party enters bankruptcy.

36. Initial margin cannot be re-hypothecated.[13]

## *3.2 – Internal Model Approach*[14]

### *3.2.1 – Overview and Governance*

37. The use of internal models is predicated on meeting several prerequisite conditions included in paragraphs 38-42.

38. Initial margin models do not require formal approval from OSFI; however, OSFI reserves the right to conduct a formal review of the models against the criteria established for compliance.

39. Initial margin models must be subject to an internal governance process that regularly tests the model's assessments against realised data and experience, and validates the applicability of the model to the derivatives for which it is being used. The process must take into account the complexity of the products covered.

40. The initial margin model may not permit the calculation of any initial margin collection amount to be offset by, or otherwise take into account, any initial margin that may be owed or otherwise payable by the Covered FRFI to the counterparty.

41. A Covered FRFI must have a rigorous and well-defined process for re-estimating, re-evaluating, and updating its internal models to ensure continued applicability and relevance.

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[12] OSFI notes that there may be jurisdictions where stays or other restrictions as well as potential delays with collateral held at third party custodians which would make this requirement difficult to comply with. Those situations and other similar situations are deemed to be in compliance with this Guideline so long as the collateral is available to the surviving counterparty as soon as legally possible.

[13] That is, any collateral received as initial margin cannot be re-used in any way by the receiving counterparty. However, cash initial margin may be held in a general deposit account with a custodian in the name of the posting counterparty

[14] The term "internal model" includes third-party and vendor models in addition to internal models at FRFIs.

In the case of a third party vendor model, Covered FRFIs must be satisfied with the vendor's processes' ensured continued applicability and relevance.

42. A Covered FRFI must review and, as necessary, revise the data used to calibrate the initial margin model at least annually, and more frequently as market conditions warrant, to ensure that the data incorporate a period of significant financial stress appropriate to each of the assets classes for which the initial margin model is applied.

*3.2.2 – Modeling Requirements*

43. Covered FRFIs wishing to use an internal model to calculate initial margin requirements must meet the following conditions[15]:

- Initial margin requirements will be based on an estimate of potential future exposure of derivatives.
- The potential future exposure of non-centrally cleared derivatives must reflect an extreme but plausible estimate of an increase in the value of the instrument that is consistent with a one-tailed 99 per cent confidence interval over a minimum horizon of 10 days, based on historical data that incorporate a period of significant financial stress.
- All data used to calibrate the initial margin model must be based on an equally weighted historical observation period of at least one year and not more than five years and must incorporate a period of financial stress for each broad asset class that is appropriate to the non-cleared derivatives to which the initial margin model is applied.
- The initial margin model must use risk factors sufficient to measure all material price risks inherent in the transactions for which initial margin is being calculated. The risk categories must include, but should not be limited to, foreign exchange risk, interest rate risk, credit risk, equity risk and commodity risk, as appropriate. For material exposures in significant currencies and markets, modeling techniques must capture spread and basis risk and must incorporate a sufficient number of segments of the yield curve to capture differences in volatility and imperfect correlation of rates along the yield curve.
- Initial margin models may account for risk on a portfolio basis. More specifically, the initial margin model may consider all of the derivatives that are approved for model use that are subject to a single legally enforceable netting agreement. Derivatives between counterparties that are not subject to the same legally enforceable netting agreement must not be considered in the same initial margin model calculation.
- Derivative portfolios are often exposed to a number of offsetting risks that can and should be reliably quantified for the purposes of calculating initial margin requirements. Accordingly, initial margin models may account for diversification, hedging and risk offsets **within** well-defined asset classes such as currency/rates,

[15] These conditions are outlined as minimum requirements. If a Covered Entity can demonstrate that its internal model consistently produces results that are more conservative than those produced by a model that meets the conditions, then it may use such a model.

equity, credit, or commodities, but not **across** such asset classes, and provided these instruments are covered by the same legally enforceable netting agreement.

- However, any such incorporation of diversification, hedging and risk offsets by an initial margin model may be subject to review by OSFI. Initial margin calculations for derivatives in distinct asset classes must be performed without regard to derivatives in other asset classes.
- Derivatives for which a Covered Entity faces no (i.e. zero) counterparty risk do not require initial margin to be collected and may be excluded from the initial margin calculation.

*3.2.3 – Periodic review*

44. A Covered FRFI must periodically, but no less frequently than annually, review its initial margin model in light of developments in financial markets and modeling technologies, and enhance the initial margin model as appropriate to ensure that the initial margin model continues to meet the requirements in this section.

*3.2.4 – Control, oversight, and validation mechanism*

45. A Covered FRFI's initial margin model must be subject to an internal validation process prior to implementation and on an ongoing basis. A Covered FRFI's validation process must be independent of the development, implementation, and operation of the initial margin model, or the validation process must be subject to an independent review of its adequacy and effectiveness. The validation process must include:
    - An evaluation of the conceptual soundness of (including developmental evidence supporting) the initial margin model;
    - An outcomes analysis process that includes backtesting the initial margin model.

46. If the validation process reveals any material problems with the initial margin model, the Covered FRFI must notify OSFI of the problems, describe to OSFI the remedial actions being taken, and adjust the initial margin model to ensure an appropriately conservative amount of required initial margin is calculated.

47. The effectiveness of the controls supporting a Covered FRFI's initial margin model measurement systems must be assessed by an independent internal audit function with a frequency that is commensurate with the risk profile of the business. The assessment should include the activities of the business trading units and risk control unit, compliance with policies and procedures, and calculation of the Covered FRFI's initial margin requirements under this part.

*3.2.5 – Documentation*

48. A Covered FRFI must adequately document material aspects of its initial margin model, including the management and valuation of the non-cleared derivatives to which it applies,

the control, oversight, and validation of the initial margin model, any review processes and the results of such processes.

*3.2.6 – Escalation procedures*

49. A Covered FRFI must adequately document (i) internal authorization procedures, including escalation procedures, that require review and approval of any change to the initial margin calculation under the initial margin model; (ii) demonstrable analysis that any basis for any such change is consistent with the requirements of this section, and (iii) independent review of such demonstrable analysis and approval.

### *3.3 – Standardised Initial Margin Schedule*

50. For Covered FRFIs that do not wish to use a quantitative internal model to calculate initial margin requirements, the following standardised initial margin schedule must be used to determine initial margin requirements.

| **Asset class** | **Initial margin requirements (% of notional exposures)** |
|---|---|
| Credit: 0-2 years remaining maturity | 2 |
| Credit: 2-5 years remaining maturity | 5 |
| Credit: 5+ years remaining maturity | 10 |
| Commodity | 15 |
| Equity | 15 |
| Foreign Exchange | 6 |
| Interest rate: 0-2 years remaining maturity | 1 |
| Interest rate: 2-5 years remaining maturity | 2 |
| Interest rate: 5+ years remaining maturity | 4 |
| Other | 15 |

51. The required initial margin will be computed by referencing the standardised margin rates above and by adjusting the gross initial margin amount by an amount that relates to the net-to-gross ratio (NGR) pertaining to all derivatives in the legally enforceable netting set. The required initial margin amount is calculated in two steps. First, the margin rate in the provided schedule is multiplied by the gross notional size of the derivatives contract, and then this calculation is repeated for each derivatives contract. This amount is referred to as the gross initial margin. Second, the gross initial margin amount is adjusted by the ratio of the net current replacement cost to gross current replacement cost (NGR). This is expressed through the following formula:

*Net standardised initial margin = 0.4 * Gross initial margin + 0.6 * NGR * Gross initial margin*

where NGR is defined as the level of net replacement cost over the level of gross replacement cost for transactions subject to legally enforceable netting agreements. The total amount of initial margin required on a portfolio according to the standardised margin schedule is the net standardised initial margin amount.

52. As in the case where Covered FRFIs use quantitative models to calculate initial margin, derivatives for which a Covered Entity faces no (i.e. zero) counterparty risk require no initial margin to be collected and may be excluded from the standardised initial margin calculation.

## Section 4 – Collateral

### *4.1 - Eligible Collateral*

53. The following collateral instruments are eligible to satisfy the margin requirements of this Guideline (both variation and initial margin):

    a) Cash (in the form of money credited to an account or similar claims for the repayment of money, such as certificates of deposit or comparable instruments issued by a Covered Entity).

    b) Gold

    c) Debt securities rated by a recognised external credit assessment institution where these are either:

    - at least BB- when issued by sovereigns or PSEs that are treated as sovereigns by the national supervisor; or
    - at least BBB- when issued by other entities (including banks and securities firms); or
    - at least A-3/P-3 for short-term debt instruments

    d) Debt securities not rated by a recognised external credit assessment institution where these are:

    i. issued by a sovereign, or PSE treated as a sovereign by the national supervisor, that has an issuer rating of BB- or better; or

    ii. issued by a bank; and
        - listed on a recognised exchange; and
        - classified as senior debt; and
        - all rated issues of the same seniority by the issuing bank must be rated at least BBB- or A-3/P-3 by a recognised external credit assessment institution; and
        - the institution holding the securities as collateral has no information to suggest that the issue justifies a rating below BBB- or A-3/P-3 (as applicable).

    e) Equities (including convertible bonds) that are included in a main index.

    f) Equities (including convertible bonds) which are not included in a main index but which are listed on a recognised exchange;

g) Undertakings for Collective Investments in Transferable Securities (UCITS) and mutual funds where:

- a price for the units is publicly quoted daily; and
- the UCITS/mutual fund is limited to investing in the instruments listed in this paragraph.

54. Securities issues by the posting counterparty are not eligible collateral.

*4.2 - Haircuts*

*4.2.1 - Overview*

55. Any margin exchanged must be haircutted to account for potential changes in the value of the collateral. Haircuts may be computed using an internal model if the internal model meets the requirements set out in this Guideline.

56. Cash variation margin is not subject to the additional haircut when the currency of the asset differs from the currency of collateral.

57. Non-cash variation margin exchanged in a currency other than the ones agreed in the relevant contract (either an individual derivative contract or a master netting agreement) is subject to the additional haircut when the currency of the asset differs from the currency of the collateral. All other non-cash variation margin is not subject to this additional haircut.

58. Initial margin exchanged in a currency other than the termination currency that the posting party has designated in the relevant contract (either an individual derivative contract or a master netting agreement) is not subject to the additional haircut when the currency of the asset differs from the currency of collateral. All other initial margin is subject to the additional haircut.

*4.2.2 - Model Based Haircuts*

59. Covered FRFIs wishing to use an internal model to calculate collateral haircut amounts must estimate the volatility of the collateral instrument or foreign exchange mismatch individually: estimated volatilities for each transaction must not take into account the correlations between unsecured exposure, collateral and exchange rates.

60. In calculating the haircuts, a 99th percentile, one-tailed confidence interval is to be used.

61. The minimum holding period is 10 days. Covered FRFIs may use haircut numbers calculated according to shorter holding periods, scaled up to the appropriate holding period by the square root of time formula.

62. Covered FRFIs must take into account the illiquidity of lower quality assets. The holding period must be adjusted upwards in cases where such a holding period would be inappropriate given the liquidity of the collateral. They must also identify where historical

data may understate potential volatility, e.g. a pegged currency. Such cases must be dealt with by subjecting the data to stress testing.

63. The choice of historical observation period (sample period) for calculating haircuts shall be a minimum of one year. For Covered FRFIs that use a weighting scheme or other methods for the historical observation period, the effective observation period must be at least one year (that is, the weighted average time lag of the individual observations cannot be less than 6 months).

64. Covered FRFIs must update their data sets no less frequently than once every three months and must also reassess them whenever market prices are subject to material changes. This implies that haircuts must be computed at least every three months. OSFI may also require a Covered FRFI to calculate its haircuts using a shorter observation period if, in OSFI's judgement, this is justified by a significant upsurge in price volatility.

65. The estimated volatility data (and holding period) must be used in the day-to-day risk management process of the Covered FRFI.

66. Covered FRFIs must have robust processes in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operation of the risk measurement system.

67. The risk measurement system must be used in conjunction with internal exposure limits.

68. An independent review of the risk measurement system must be carried out regularly in the Covered FRFI's own internal auditing process. A review of the overall risk management process must take place at regular intervals (ideally not less than once a year) and must specifically address, at a minimum:

- the integration of risk measures into daily risk management;
- the validation of any significant change in the risk measurement process;
- the accuracy and completeness of position data;
- the verification of the consistency, timeliness and reliability of data sources used to run internal models, including the independence of such data sources; and
- the accuracy and appropriateness of volatility assumptions.

*4.2.3 - Standardized Haircuts*

69. Otherwise, standard supervisory haircuts from the table below must be used.

| Issuer rating for unrated sovereign securities or Issue rating for debt securities | Residual Maturity | Sovereigns[16] | Other issuers | Securitization Exposures |
|---|---|---|---|---|
| **AAA to AA-/A-1** | ≤ 1 year | 0.5 | 1 | 2 |
| | >1 year, ≤ 5 years | 2 | 4 | 8 |
| | > 5 years | 4 | 8 | 16 |
| **A+ to BBB-/ A-2/A-3/P-3 and unrated bank securities per para. 36(d)** | ≤ 1 year | 1 | 2 | 4 |
| | >1 year, ≤ 5 years | 3 | 6 | 12 |
| | > 5 years | 6 | 12 | 24 |
| **BB+ to BB-** | All | 15 | Not eligible | Not eligible |
| **Main index equities (including convertible bonds) and Gold** | | 15 | | |
| **Other equities (including convertible bonds) listed on a recognised exchange** | | 25 | | |
| **UCITS/Mutual funds** | | Highest haircut applicable to any security in which the fund can invest | | |
| **Cash in the same currency** | | 0 | | |
| **Additional haircut on asset in which the currency of the derivative differs from the currency of the collateral** | | 8 | | |

The table below provides a mapping of the ratings listed in the table above to those of the four external credit assessment institutions recognized by OSFI.

| Long Term Rating | | | | |
|---|---|---|---|---|
| **Long term rating** | **DBRS** | **Moody's** | **S&P** | **Fitch** |
| AAA to AA- | AAA to AA(low) | Aaa to Aa3 | AAA to AA- | AAA to AA- |
| A+ to A- | A(high) to A(low) | A1 to A3 | A+ to A- | A+ to A- |
| BBB+ to BBB- | BBB(high) to BBB(low) | Baa1 to Baa3 | BBB+ to BBB- | BBB+ to BBB- |
| BB+ to BB- | BB(high) to BB(low) | Ba1 to Ba3 | BB+ to BB- | BB+ to BB- |
| B+ to B- | B(high) to B(low) | B1 to B3 | B+ to B- | B+ to B- |
| Below B- | CCC or lower | Below B3 | Below B- | Below B- |

[16] This includes public sector entities and multilateral development banks which are exempt from the margin requirements of this Guideline.

## Section 5 – Phase-in of requirements

70. The requirement to exchange variation margin will be phased-in as follows:

- From September 1, 2016 to February 28, 2017, any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of 2016 exceeds $5 trillion will be subject to the requirements when transacting with a Covered Entity (provided that it also meets that condition).
- On a permanent basis (i.e. from March 1, 2017) all other Covered FRFIs will be subject to the requirements when transacting with another Covered Entity.

71. The requirement to exchange two-way initial margin with a threshold of up to $75 million will be phased-in as follows.

- From September 1, 2016 to August 31, 2017, any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of 2016 exceeds $5 trillion will be subject to the requirements when transacting with a Covered Entity (provided that it also meets that condition).
- From September 1, 2017 to August 31, 2018, any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of 2017 exceeds $3.75 trillion will be subject to the requirements when transacting with a Covered Entity (provided that it also meets that condition).
- From September 1, 2018 to August 31, 2019, any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of 2018 exceeds $2.5 trillion will be subject to the requirements when transacting with a Covered Entity (provided that it also meets that condition).
- From September 1, 2019 to August 31, 2020, any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of 2019 exceeds $1.25 trillion will be subject to the requirements when transacting with a Covered Entity (provided that it also meets that condition).
- On a permanent basis (i.e. from September 1, 2020 onwards), any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of that year exceeds $12 billion will be subject to the requirements described in this Guideline during the one-year period from September 1 of that year to August 31 of the following year when transacting with another Covered Entity (provided that it also meets that condition). Any Covered FRFI belonging to a group whose aggregate month-end average notional amount of non-centrally cleared derivatives for March, April, and May of that year is less than $12 billion will not be subject to the initial margin requirements described in this Guideline.

72. For the purposes of calculating the group aggregate month-end average notional amount for determining whether a Covered Entity will be subject to the initial margin and variation margin requirements described in this Guideline, all of the group's non-centrally cleared derivatives, including physically settled FX forwards and FX swaps, must be included. Inter-affiliate trades should not be included in this calculation.

73. Initial margin and variation margin requirements will apply to all new contracts[17] entered into during the periods described above. Applying the initial margin and variation margin requirements to existing derivatives contracts is not required[18].

[17] Genuine amendments to existing derivatives contracts do not qualify as a new derivatives contract. Any amendment that is intended to extend an existing derivatives contract for the purpose of avoiding margin requirements will be considered a new derivatives contract. Novation of grandfathered trades as well as "new" non-centrally cleared derivatives that result from portfolio compression of grandfathered trades do not qualify as a new derivative contract. However, new non-centrally cleared transactions resulting from compressions of both grandfathered transactions and transactions which are subject to mandatory margin requirements are also subject to the margin requirements in this Guideline.

[18] However, a Covered FRFI may choose to do so as long as this is bilaterally agreed upon with the counterparty. A Covered FRFI cannot alternate between applying the margin requirements to all non-centrally cleared derivatives and only applying them to new non-centrally derivatives to reduce margin requirements. This choice must be made consistently over time on a counterparty by counterparty basis.