

Policy guidance on the Bank of Canada's risk-management standards for designated financial market infrastructures

Standard 5: Collateral

The CPMI-IOSCO [Principles for Financial Market Infrastructures](#) (the Principles)¹ establish the form and attributes of collateral that an FMI holds to manage its own credit exposures or those of its participants.

This note provides additional guidance for Canadian FMIs to meet the components of the collateral principle related to: (i) acceptance of collateral with low credit, liquidity and market risk; (ii) concentrated holdings of certain assets; and (iii) calculating haircuts. This guidance was prepared jointly by the Bank of Canada and the Canadian Securities Administrators to supply additional clarity on certain aspects of these new standards within the Canadian context. In certain circumstances, regulators may allow exceptions to the collateral policy on a case-by-case basis if the FMI demonstrates that the risks can be adequately managed..

Acceptable collateral

An FMI should conduct its own assessment of risks when determining collateral eligibility. In general, collateral held to manage the credit exposures of the FMI or those of its participants should have minimal credit, liquidity and market risk, even in stressed market conditions. However, asset categories with additional risk may be accepted when subject to conservative haircuts and adequate concentration limits.²

The following clarifies regulators' expectations on what is acceptable collateral.

[Minimum requirements for acceptable collateral](#)

An FMI should conduct its own internal assessment of the credit, liquidity and market risk of the assets eligible as collateral. The FMI should review its collateral policy at least annually, and whenever market factors justify a more frequent review. At a minimum, acceptable assets should:

- ❖ **be freely transferable without legal, regulatory, contractual or any other constraints that would impair liquidation in a default;**
- ❖ **be marketable securities that have an active outright sale market even in stressed market conditions;**
- ❖ **have reliable price data published on a regular basis;**
- ❖ **be settled over a securities settlement system compliant with the Principles; and**
- ❖ **be denominated in the same currency as the credit exposures being managed, or in a currency that the FMI can demonstrate it has the ability to manage**

¹ Committee on Payments and Market Infrastructures and Technical Committee of the International Organization of Securities Commissions (CPMI-IOSCO), "Principles for Financial Market Infrastructures" (April 2012).

² The guidance for acceptable collateral is based on Principle 5 - Key Considerations 1 and 4.

An FMI should not rely only on external opinions to determine what acceptable collateral is. The FMI should conduct its own assessment of the riskiness of assets, including differences within a particular asset category, to determine whether the risks are acceptable. Since the primary purpose of accepting collateral is to manage the credit exposures of the FMI and its participants, it is paramount that assets eligible as collateral can be liquidated for fair value within a reasonable time frame to cover credit losses following a default. The annual review of the FMI's collateral policy provides an opportunity to assess whether risks continue to be adequately managed. Owing to the dynamic nature of capital markets, the FMI should monitor changes in the underlying risk of the specific assets accepted as collateral, and should adjust its collateral policy in the interim period between annual reviews, when required.

At a minimum, an asset should have certain characteristics in order to provide sufficient assurance that it can be liquidated for fair value within a reasonable time frame. These characteristics relate primarily to the FMI's ability to reliably sell the asset as required to manage its credit exposures. The asset should be unencumbered, that is, it must be free of legal, regulatory, contractual or other restrictions that would impede the FMI's ability to sell it. The challenges associated with selling or transferring non-marketable assets, or those without an active secondary market, preclude their acceptance as collateral.

Accepted asset categories

Assets generally judged to have minimal credit, liquidity and market risk are the following:

- ❖ cash
- ❖ securities issued or guaranteed³ by the Government of Canada;
- ❖ securities issued or guaranteed by a provincial government; and
- ❖ securities issued by the U.S. Treasury.

In general, the assets judged to have minimal risk are cash and debt securities issued by government entities with unique powers, such as the ability to raise taxes and set laws, and that have a low probability of default. Total Canadian debt outstanding is currently dominated by securities issued or guaranteed by the Government of Canada and by provincial governments. The relatively large supply of securities issued by these entities and their generally high creditworthiness contribute to the liquidity of these assets in the domestic capital market. Securities issued by the U.S. Treasury are also deemed to be of high quality for the same reasons. The overall riskiness of securities issued by the Government of Canada and the U.S. Treasury is further reduced by their previous record of maintaining value in stressed market conditions, when they tend to benefit from a "flight to safety."

It is essential that an FMI regularly assesses the riskiness of even the specific high-quality assets identified in this section to determine their adequacy as eligible collateral. In some cases, only certain assets within the more general asset category may be deemed acceptable.

³ Guarantees include securities issued by federal and provincial Crown corporations or other entities with an explicit statement that debt issued by the entity represents the general obligations of the sovereign.

Additional asset categories

An FMI should consider its own distinct arrangements for allocating credit losses and managing credit exposures when accepting a broader range of assets as collateral. The following asset classes may be acceptable as collateral if they are subject to conservative haircuts and concentration limits:

- ❖ securities issued by a municipal government;
- ❖ bankers' acceptances;
- ❖ commercial paper;
- ❖ corporate bonds;
- ❖ asset-backed securities that meet the following criteria: (1) sponsored by a deposit-taking financial institution that is prudentially regulated at either the federal or provincial level, (2) part of a securitization program supported by a liquidity facility, and (3) backed by assets of an acceptable credit quality;
- ❖ equity securities traded on marketplaces regulated by a member of the CSA and the Investment Industry Regulatory Organization of Canada; and
- ❖ other securities issued or guaranteed by a government, central bank or supranational institution classified as Level 1 high-quality assets by the Basel Committee on Banking Supervision.

An FMI should take into account its specific risk profile when assessing whether accepting certain assets as collateral would be appropriate. The decision to broaden the range of acceptable collateral should also consider the size of collateral holdings to cover the credit exposures of the FMI relative to the size of asset markets. In cases where the total collateral required to cover credit exposures is small compared with the market for high-quality assets, there is less potential strain on participants to meet collateral requirements.

Accepting a broader range of collateral has certain advantages. Most importantly, it provides participants with more flexibility to meet the FMI's collateral requirements, which may be especially important in stressed market conditions. A broader range of collateral diversifies the risk exposures faced by the FMI, since it may be easier to liquidate diversified collateral holdings when liquidity unexpectedly dries up for a particular asset class. It also diversifies market risk by reducing potential exposure to idiosyncratic shocks. Accepting a broader range of assets recognizes the increased cost to market participants of posting only the highest-quality assets, as well as the increasing encumbrance of these assets in order to meet new regulatory standards.⁴

Concentration Limits

An FMI should avoid concentrated holding of assets where this could potentially introduce credit, market and liquidity risk beyond acceptable levels. In addition, the FMI should mitigate specific wrong-way risk by limiting the acceptance of collateral that would likely lose value in the event of a participant default, and prevent participants from posting assets they or their affiliates have issued. The FMI should measure and monitor the collateral posted by participants on a regular basis, with more frequent analysis required when more flexible collateral policies have been implemented.⁵

⁴ The encumbrance of high-quality assets is expected to increase through a number of regulatory reforms, including Basel III, over-the-counter derivatives reform and the Principles.

⁵ The guidance on concentration limits is based on Principle 5 - Key Considerations 1 and 4.

The following points clarify regulators' expectations regarding the composition of collateral accepted by an FMI.

Concentration risk limits

An FMI should limit assets from the broader range of acceptable assets identified in the previous section ("Additional asset categories") to a maximum of 40 per cent of the total collateral posted from each participant. Within the broader range of acceptable assets, the FMI should consider implementing more specific concentration limits for different asset categories.

An FMI should limit securities issued by a single issuer from the broader range of acceptable assets to a maximum of 5 per cent of total collateral from each participant.

The guidance limits the acceptance of collateral from the broader range of assets to a maximum of 40 per cent because a higher proportion could potentially create unacceptable risks to FMIs and their participants. This limit is currently applied to the Bank's Standing Liquidity Facility and the Liquidity Coverage Ratio under Basel III. The benefits of expanding collateral—namely, providing participants with more flexibility and achieving greater diversification—are achieved within the limit of 40 per cent, with collateral in excess of this limit increasing the overall risk exposures with less benefit. In some circumstances, regulators may permit an FMI to accept more than 40 per cent of total collateral from the broader range of assets if the risk from a particular participant is low.

Employing a limit of 5 per cent of total collateral for securities issued by a single issuer is a prudent measure to limit exposures from idiosyncratic shocks. It also reduces the need for procyclical adjustments to collateral requirements following a decline in value.

An FMI should consider implementing more stringent concentration limits, as well as imposing limits on certain asset categories, depending on the FMI's specific arrangements for managing credit exposures. The considerations described in the previous section ("Additional asset categories") for accepting a broader range of assets as collateral apply equally to the decision over whether more stringent concentration limits should be implemented.

Specific wrong-way risk limits

An FMI should limit the collateral from financial sector issuers to a maximum of 10 per cent of total collateral pledged from each participant. The FMI should not allow participants to post their own securities or those of their affiliates as collateral.

An FMI is exposed to specific wrong-way risk when the collateral posted is highly likely to decrease in value following a participant default. It is highly likely that the value of debt and equity securities issued by companies in the financial sector would be adversely affected by the default of an FMI participant, introducing wrong-way risk. This is especially the case for interconnected FMI participants with activities that are concentrated in domestic financial markets. Implementing a limit on financial sector issuers mitigates potential risk exposures from specific wrong-way risk. More stringent limits should be implemented where appropriate.



Collateral monitoring

In cases where only the highest-quality assets are accepted, an FMI is required to measure and monitor the collateral posted by participants during periodic evaluations of participant creditworthiness. The FMI should measure and monitor the correlation between a participant's creditworthiness and the collateral posted more frequently when a broader range of collateral is accepted. The FMI should have the ability to adjust the composition and to increase the collateral required from participants experiencing a reduction in creditworthiness.

When only the highest-quality assets are accepted as collateral, there is less risk associated with the composition of collateral posted by a participant; hence, such risk does not need to be monitored as closely. The FMI should monitor the composition of collateral pledged by participants more frequently when riskier assets are eligible, since such assets are more likely to be correlated with the participant's creditworthiness. FMIs should also consider the general credit risk of their participants when deciding how frequently monitoring should be conducted. In all circumstances, the FMI should have the contractual and legal ability to unilaterally require more collateral and to request higher-quality collateral from a participant that is judged to present a greater risk.

Haircuts

An FMI should establish stable and conservative haircuts that consider all aspects of the risks associated with the collateral. An FMI should evaluate the performance of haircuts by conducting backtesting and stress testing on a regular basis.⁶

The following points clarify regulators' expectations regarding the calculation and testing of haircuts.

Calculating haircuts

An FMI should apply stable and conservative haircuts that are calibrated against stressed market conditions. When the same haircut is applied to a group of securities, it should be sufficient to cover the riskiest security within the group. Haircuts should reflect both the specific risks of the collateral accepted and the general risks of an FMI's collateral policy.

Including periods of stressed market conditions in the calibration of haircuts should increase the haircut rate. In addition to representing a conservative approach, this helps to mitigate the risk of a procyclical increase in haircuts during a period of high volatility. Typically, FMIs group similar securities by shared characteristics for the purposes of calculating haircuts (e.g., Government of Canada bonds with similar maturities). An FMI should recognize the different risks associated with each individual security by ensuring that the haircut is sufficient to cover the security with the most risk within each group. Haircuts should always account for all of the specific risks associated with each asset accepted as collateral. However, the FMI should also consider the portfolio risk of the total collateral posted by a participant; the FMI may consider employing deeper haircuts for concentration and wrong-way risk above certain thresholds.

⁶ The guidance on haircuts is based on Principle 5 - Key Considerations 2 and 3.



[Verifying the adequacy of haircuts and overall collateral accepted](#)

An FMI should perform backtesting of its collateral haircuts on at least a monthly basis, and conduct a more thorough review of haircuts quarterly. The FMI's stress tests should take into account the collateral posted by participants.

FMI's are expected to calculate stable and conservative haircuts by considering stressed market conditions. In general, including stressed market conditions in the calibration of haircuts should provide a high level of coverage that does not require continuous testing and verification. Nonetheless, backtesting on a monthly basis allow the adequacy of haircuts to be evaluated against observed outcomes. A quarterly review of haircuts balances the objective of stable haircuts with the need to adjust haircuts as required. Including changes to collateral values as part of stress testing provides a more accurate assessment of potential losses in a default scenario.