BANK OF CANADA
BANQUE DU CANADA

Guideline Related to Bank of Canada's Role as FMI Resolution Authority

June 2020[1]

[1] Section 17 of the *Payment Clearing and Settlement Act* allows the Bank to issue guidelines in respect of the administration or enforcement of the Act. This Guideline, which is subject to periodic revisions at the Bank's discretion, was last updated in June 2020.

Introduction

The *Payment Clearing and Settlement Act* (PCSA) establishes the Bank of Canada as the resolution authority for clearing and settlement systems located in Canada that are designated by the Governor for oversight by the Bank.[2] This mandate is distinct from the Bank's oversight responsibilities with respect to these systems which are described in a separate Guideline. The Bank's responsibilities as the Canadian FMI resolution authority are set out in Part I.1 of the PCSA and accompanying *Payment Clearing and Settlement Regulations* (Regulations).[3]

FMIs within the scope of Canada's resolution regime are domestic clearing and settlement systems designated by the Governor of the Bank of Canada as having the potential to pose systemic or payments system risk. Foreign-domiciled designated FMIs are not in scope. However, the Bank cooperates with the home resolution authorities of these foreign FMIs in resolution planning, and would continue to do so if a resolution event ever occurred. Further use of "FMI" in this document refers to the domestic designated clearing and settlement systems within scope of Canada's resolution regime; it is also used interchangeably to refer to both the clearing and settlement system as well as its operator.

The Bank views FMI resolution to be a last resort, to be considered only after all efforts by an FMI to respond to a stress event have failed or appear likely to fail. In such circumstances, having a resolution authority that has the powers to plan for and respond to an FMI failure is important for financial stability. An interruption in an FMI's critical functions could disrupt the financial system and economic activity in Canada (e.g. simple financial transactions could become difficult or impossible). Applying traditional bankruptcy and insolvency laws to a failing FMI may not prevent a loss of crucial services to the financial system, which could transmit financial stress to market participants and amplify the failure's effect.[4] A specialized regime has therefore been put into place.

Canada's FMI resolution regime was developed to be consistent with standards set out by the Financial Stability Board's Key Attributes of Effective Resolution Regimes for Financial Institutions (Key Attributes) and Guidance on Central Counterparty Resolution and Resolution Planning, in a manner appropriate to the Canadian context and informed by consultation with stakeholders. For further background, please see Establishing a Resolution Regime for Canada's Financial Market Infrastructures. In line with the *Key Attributes*, the policy objectives of the regime are to: 1) promote financial stability; 2) maintain the continuity of FMIs' critical services; and 3) minimize the exposure of public moneys to loss. These policy objectives form the objects of the Bank as resolution authority (PCSA, section 11.02).

The scope of the regime includes FMIs established under traditional corporate law, such as *the Canada Business Corporations Act*, as well as Payments Canada,[5] a statutory corporation established via the *Canadian Payments Act* to establish and operate national systems for the clearing and settlement of payments. Certain features of the regime were modified to support Payments Canada's resolution, as identified in the respective sections of this Guideline.

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[2] At the time this guideline was published these clearing and settlement systems are: CDSX, operated by CDS Clearing and Depository Services Inc.; Canadian Derivatives Clearing Service (CDCS), operated by Canadian Derivatives Clearing Corporation; Large Value Transfer System (LVTS); and Automated Clearing and Settlement System (ACSS), both of which are operated by Payments Canada.

[3] Provisions contained in other Parts of the PCSA may also apply within the context of FMI resolution.

[4] See Regulatory Impact Analysis Statement, Department of Finance, Payment Clearing and Settlement Regulations, March 9, 2019

[5] The Canadian Payments Association operates under the brand name of Payments Canada.

Purpose of the Guideline

The purpose of this Guideline is to describe how the Bank expects to carry out its main statutory responsibilities as the FMI resolution authority. Specifically, it will describe the Bank's approach to:

1. Preparing for Resolution
2. Initiating Resolution
3. Executing a Resolution, including Exiting from Resolution
4. Post Resolution Responsibilities

The Guideline describes the Bank's views at its date of publication to assist FMIs and other interested persons to understand the regime. It is designed to give a plain language account of the legislation. The Guideline does not have the force of law; in the event of an inconsistency the legislation governs. The Bank is not bound by the Guideline and will respond to specific situations in accordance with its legislative responsibilities.

1. Preparing for Resolution

The Bank has several responsibilities that it will need to carry out so that it is prepared to effectively resolve FMIs subject to the legal framework. The focus in this section is on the Bank's statutory duty to develop and update resolution plans in consultation with relevant provincial and federal authorities.

Resolution Plans

The Bank is developing a resolution plan for each designated domestic FMI (PCSA, section 11.05). The essential elements to be included in these plans are set out in the Regulations (section 3), including:

- Risk profile of the system: the organizational structure, ownership, intra-group relationships, and critical services provided
- Resolution strategy: the approach that is likely to be used to resolve the FMI in a manner consistent with the main policy objectives of the regime
- Financial resources assessment: a comparison of the potential costs of resolution to the available resources, including the financial resources of the FMI and the loss allocation tools set out in its rules
- Operational plan: the steps to follow to resolve the FMI and any potential barriers to resolution

Resolution plans will be based on hypothetical scenarios that lead to the non-viability of an FMI due to losses incurred through the default of one or more participants or due to a non-default event.[6] The Bank will develop a strategy for resolving the FMI in consideration of these hypothetical scenarios. The strategy will be based on an assessment of the adequacy of the financial resources available to the FMI in its rules, by-laws and recovery plans. When completing financial resources assessments for CCPs, the Bank will follow the Financial Stability Board's five step process.[7] The Bank expects that the proposed tools and

[6] For some types of FMIs, it may not be necessary for the Bank to develop a resolution strategy that is based on a hypothetical default event. If an FMI does not face credit risk in relation to its participants, it is unlikely that a participant default would put the FMI into resolution.

[7] See Guidance on financial resources to support CCP resolution and on the treatment of CCP equity in resolution: Consultative document. May 2020.

actions for resolving the FMI would be closely aligned with the FMI's own rules and recovery plans. While the resolution plans are intended to guide the actions of the Bank in resolution, it is possible that extreme circumstances may require the Bank to take different actions.

In developing a resolution plan, the Bank has a statutory obligation to consult with relevant stakeholders, including the federal committee and provincial authorities with whom it will sign a Memorandum of Understanding (PCSA, subsection 11.05(2)). This is discussed in detail under Consultation and Information Sharing below. The Bank also expects to consult with the FMI and its participants in developing the resolution plan.

Annual and Special Reviews and Resolvability Assessments

The Bank is required to review each resolution plan on an annual basis to ensure that it considers any material changes that could affect the Bank's ability to resolve the FMI and, in addition, without delay after certain changes specified in the PCSA have occurred (Regulations, section 4). Changes that could require revisions to a resolution plan could relate to the FMI's ownership, legal structure, financial guarantees, and rule changes that may affect the FMI's loss absorbing capacity. Both initial resolution plans and subsequent revisions need to be reviewed and approved by the Governor of the Bank (Regulations, paragraphs 3(e) and 4). Resolution plans will not be made publicly available, however the Bank will report on its resolution activities including its progress in developing resolution plans.[8]

As part of this process, the Bank conducts resolvability assessments to evaluate the feasibility and credibility of the resolution plans, and to identify any legal or operational impediments to resolvability. While the Bank has the authority to issue a directive[9], it is anticipated that it would work cooperatively with the FMI to make operational or structural changes to address impediments to resolution if necessary.

Consultation and Information Sharing

To effectively resolve an FMI, the Bank needs to consult and coordinate with relevant federal and provincial authorities, both in planning for and executing a resolution. The PCSA sets out a framework to support information disclosure, consultation and coordination on matters related to FMI resolution, among relevant federal and provincial authorities.

In accordance with the PCSA (section 11.04) the Bank engages with its federal partners through a committee, chaired by the Governor, that includes representation from the Office of the Superintendent of Financial Institutions, the Canada Deposit Insurance Corporation, and the Department of Finance. In most resolution scenarios it is likely that FMI participants, many of which are federally regulated financial institutions (FRFIs), would be affected. Thus, the Bank needs to share information, consult and coordinate with its federal partners, particularly in relation to resolution activities that could affect FRFIs.

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[8] The Bank reports annually on its FMI Oversight activities. See [Bank of Canada Oversight Activities for Financial Market Infrastructures - 2019 Annual Report].

[9] Under Section 6 of the PCSA, if the Governor is of the opinion that systemic risk or payments system risk are being, or are likely to be, inadequately controlled by a designated FMI, he or she may issue a directive in writing to the FMI requiring it to take – and to have the participants take – any corrective actions that the Governor considers necessary within a time frame set by the Governor. The Governor requires the consent of the Minister of Finance to issue a directive to an FMI established by or under a statute.

The Ontario Securities Commission, the Autorité des marchés financiers, and the British Columbia Securities Commission have regulatory responsibilities with respect to certain FMIs included in the scope of the FMI resolution regime. To support its engagement with these provincial partners, the Bank and these authorities are in the process of establishing a Memorandum of Understanding (MoU) (PCSA, section 13.3). The MoU will outline how the parties share information, consult and coordinate on both resolution planning and execution. The Bank will draw on these authorities' expertise and knowledge of FMIs in developing resolution plans, and coordinate in the event of a resolution.

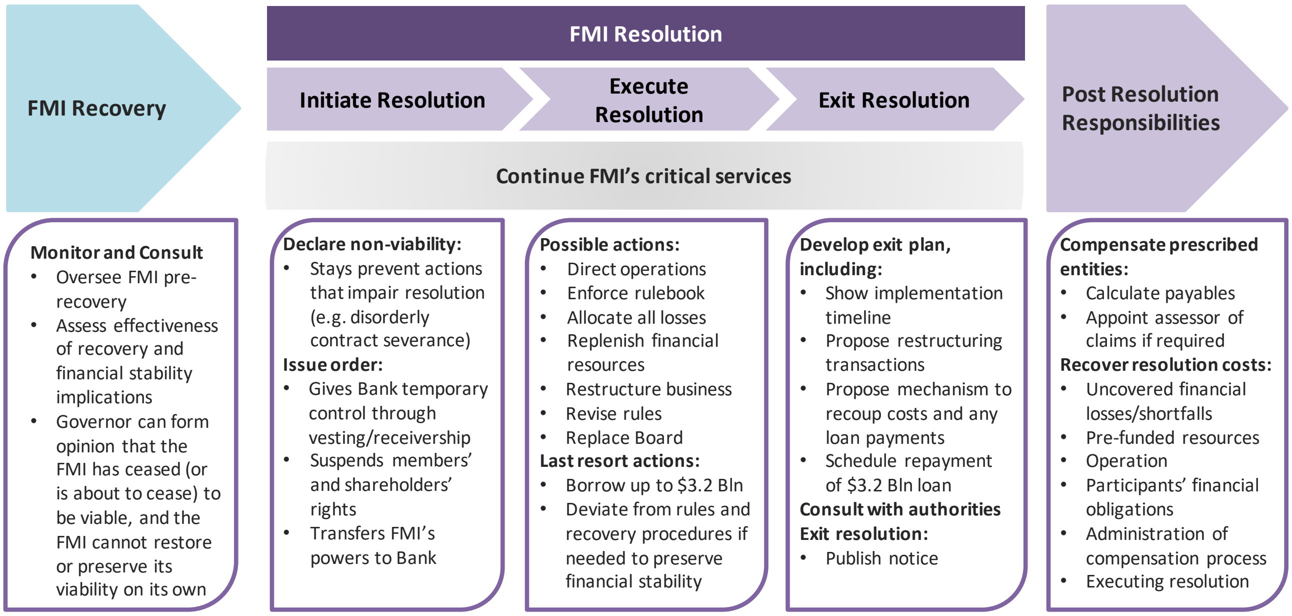
The Bank will develop and maintain crisis communication protocols for coordinating an FMI resolution with federal and provincial authorities. These protocols will be periodically tested using scenario-based table top exercises of a resolution event. The results of these exercises may lead to improvements in the Bank's ability to execute resolution, for example by revealing a potential obstacle to the Bank's use of a particular resolution tool.

Memoranda of Understanding with Foreign Regulators and Participants

The Bank may also need to establish MoUs with relevant foreign regulators related to both domestic and foreign designated FMIs. For example, it is important that placing an FMI into resolution in one jurisdiction does not result in its authorizations, licenses or designations being automatically revoked in another jurisdiction. The cooperation of foreign regulators is needed to ensure that foreign participants of a domestic designated FMI can continue their participation during its resolution, which helps maintain the FMI's ongoing viability. It is also important to maintain any interoperability arrangements between designated domestic FMIs and foreign FMIs in the event of a resolution.

The remaining sections of this Guideline focus on how the Bank would execute an FMI resolution at various stages in the process. Figure 1 provides a comprehensive overview of these stages, from initiation to post-resolution, highlighting the main responsibilities of the Bank. Figure 1 also shows the responsibilities of the Bank, as resolution authority, when an FMI is in recovery. These responsibilities are discussed in detail in the remainder of the Guideline.

Figure 1: Bank's Main Responsibilities in Executing Resolution



FMI Recovery
FMI Resolution
Initiate Resolution
Execute Resolution
Exit Resolution
Post Resolution Responsibilities
Continue FMI's critical services
Monitor and Consult
• Oversee FMI pre-recovery
• Assess effectiveness of recovery and financial stability implications
• Governor can form opinion that the FMI has ceased (or is about to cease) to be viable, and the FMI cannot restore or preserve its viability on its own
Declare non-viability:
• Stays prevent actions that impair resolution (e.g. disorderly contract severance)
Issue order:
• Gives Bank temporary control through vesting/receivership
• Suspends members' and shareholders' rights
• Transfers FMI's powers to Bank
Possible actions:
• Direct operations
• Enforce rulebook
• Allocate all losses
• Replenish financial resources
• Restructure business
• Revise rules
• Replace Board
Last resort actions:
• Borrow up to $3.2 Bln
• Deviate from rules and recovery procedures if needed to preserve financial stability
Develop exit plan, including:
• Show implementation timeline
• Propose restructuring transactions
• Propose mechanism to recoup costs and any loan payments
• Schedule repayment of $3.2 Bln loan
Consult with authorities
Exit resolution:
• Publish notice
Compensate prescribed entities:
• Calculate payables
• Appoint assessor of claims if required
Recover resolution costs:
• Uncovered financial losses/shortfalls
• Pre-funded resources
• Operation
• Participants' financial obligations
• Administration of compensation process
• Executing resolution

2. Initiating Resolution

To initiate the resolution of an FMI, the Governor must issue a declaration of non-viability. In this section, the Guideline describes this action and its effects but first provides context around the link between FMI recovery and resolution.

The Link Between Recovery and Resolution

The Bank of Canada is responsible for the regulatory oversight of designated FMIs with a view to ensuring that systemic and payments system risk are adequately controlled. Consequently, the Bank requires that FMIs establish controls to address a variety of risks they face, including financial, operational, and business risks.[10] These risk controls are designed so that the FMI can operate safely and efficiently in normal times and during periods of stress. FMIs are also required to create recovery plans. These plans include additional tools to further strengthen their ability to recover from a severe stress event.

Although highly unlikely, it is still possible that an FMI could become non-viable despite having these risk controls in place. It is difficult to assess *ex ante* exactly what events could lead to non-viability. However, such an event is likely to be severe enough to generate financial losses that exceed the FMI's pre-funded resources and recovery measures, and from which the FMI is, or may be, unable to continue to operate its critical functions. Broadly, such losses could arise through two types of hypothetical loss scenarios: 1) the default of more than one participant; or 2) an event that does not involve a participant default (non-default event) but rather a significant direct loss at the FMI. In the first instance, if multiple participants were to default on their payment obligations, the FMI may not have enough prefunded resources to address the associated losses. Examples of a non-default scenario include a major lawsuit or severe operational incident, such as corruption of data caused by a cyber attack that results in a prolonged system outage. The stages leading up to a potential declaration of an FMI's non-viability can be generalized as follows:

1. The FMI is operating as normal, it has not experienced a stress event.
2. The FMI has experienced a stress event which it is seeks to manage through its risk management controls.
3. The FMI is unable to manage the stress event using its risk management controls, and will likely execute its recovery plan.
4. The FMI is executing its recovery plan.

If the execution of the recovery plan does not appear sufficient to resolve the stress event, then the Governor, as described below, would make a declaration of non-viability.

Declaration of Non-Viability

The Bank, in its capacity as the FMI resolution authority, would closely monitor an FMI's execution of its recovery plan. The Bank would consult with the relevant federal and provincial authorities, as it seeks to determine whether the FMI is able to recover through its own actions. Before the Governor can make a declaration of non-viability, he or she must be of the opinion that the FMI or its operator has ceased, or is about to cease, to be viable, and cannot preserve or restore viability on its own initiative (PCSA, subsection 11.06(1)).

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[10] For further details, see The Bank of Canada's Risk-Management Standards for Designated FMIs and the Criteria and Risk-Management Standards for Prominent Payment Systems.

The PCSA (subsection 11.06(2)) also directs the Governor to take into account all matters that he or she considers relevant in making this decision, including, whether in his or her opinion[11]:

- The FMI has exhausted its measures to address financial shortfalls, including recovery actions.
- These measures will not be enough for continued operation or will destabilize the financial system.
- The FMI has lost participants' confidence.
- Systemic or payment systems risk is, or is likely to be, controlled inadequately.

To determine whether an FMI is no longer viable, the Governor would carefully weigh his or her support of the FMI's own actions to recover from a stress event against the potential implications of these actions for financial stability. In extreme circumstances, allowing the FMI to continue its recovery actions could threaten the solvency of FMI participants, which could further destabilize the FMI and the broader financial system. For example, if a CCP's two largest participants were to default simultaneously, it would be very difficult for the CCP to address the losses arising from these defaults. It is unlikely that the CCP's pre-funded resources and recovery tools would be calibrated for such an extreme event. Furthermore, when possible, the Bank's intervention must come early enough in the recovery process that the financial resources available to the FMI have not yet been fully exhausted. This would support an effective resolution that minimizes the exposure of public moneys to losses.

If the Governor has determined that the FMI is no longer viable, he or she may make a written declaration of non-viability, which would indicate the date and time at which the FMI is declared non-viable and placed into resolution. The Governor must also formally notify the Minister of Finance, relevant federal and provincial authorities, and the FMI's operator (PCSA, subsection 11.06(3)). To the extent possible, the Bank would have consulted with relevant federal and provincial authorities prior to the declaration of non-viability. The declaration must also be published in the *Canada Gazette*, however, this does not influence the effect or timing of the declaration (PCSA, subsection 11.06(5)).

Effect of Declaration of Non-Viability

The declaration of non-viability results in the FMI entering resolution. Furthermore, it immediately brings stays into effect (PCSA, section 11.07). Stays are necessary to prevent unsecured creditors or participants from taking actions that could impair the Bank's ability to execute an orderly resolution of an FMI, which could include launching or continuing lawsuits. Once a declaration of non-viability occurs, a general stay comes into effect that prevents parties from taking these types of actions (specified in PCSA, subsection 11.07(1)). Parties are not permitted to terminate or amend contracts with the FMI solely because it has been declared non-viable.

During a general stay, parties have no legal recourse to seek remedies or to seek recovery of any claims from the Bank. However, the Bank, acting as receiver or pursuant to a vesting order, would be able to terminate a contract according to its terms and conditions or negotiate any necessary amendments. In general, the stay remains in effect until the Bank issues a declaration to end resolution (PCSA, subsection 11.07(2)). These stays have unique provisions in relation to two types of contracts: 1) contracts in respect of a service that is critical to the operation of the FMI or its operator; and 2) eligible financial contracts.

The Bank considers a critical service as a service provided to the FMI that is essential to maintaining the

[11] The PCSA requires that the Governor take into account all matters that he or she considers relevant, including the factors mentioned in sub-section 11.06(2). However, not all of these factors must be met in order for the Governor to make a declaration of non-viability.

continuity of an FMI's critical clearing and settlement system functions. Consistent with the Bank's risk management standards, FMIs are expected to have a policy in place to manage the risks they are exposed to from any critical service providers (CSPs) that they have identified. The Bank will confirm whether the CSPs on an FMI's list are also essential to maintaining the continuity of the FMI's critical clearing and settlement system functions in resolution. Within this context, the stay that applies to contracts with CSPs has been strengthened to prevent a CSP from amending or terminating a contract early for any reason (PCSA, paragraph 11.07(1)(f)). The Bank recognizes the important role of CSPs and in its role as resolution authority expects to make timely payments for services rendered during the period in which the FMI is in resolution. In contrast, in liquidation, CSPs would likely receive very little in terms of payment, being unsecured creditors and low on the priority list for any amounts owed.

Eligible financial contracts (EFCs) are agreements that support certain transactions that may be cleared and settled through an FMI, notably derivatives and repurchase/reverse repurchase of securities (see the Eligible Financial Contract definition from the *Canada Deposit Insurance Corporation Act* (subsection 39.15(9)). The PCSA contains safe-harbour provisions that protect existing EFC rights. However, the rights to take certain actions by reason only of the FMI being declared non-viable are temporarily suspended for a two-day period that begins at the declaration of non-viability (PCSA, section 11.08).[12] The suspended rights include: termination or amendment of the contract, accelerated payment or forfeiture of the term under the contract, and certain dealings with respect to financial collateral (PCSA, subsection 11.08(3)). The purpose is to avoid the disruption that might occur if participants started unwinding positions at the same time that the Bank is trying to stabilize the FMI. The policy intent of limiting these stays to two days is to avoid unduly restricting participants' ability to manage their financial risk. Restoring the legal enforceability of close-out rights under EFCs, after the two-day suspension, supports financial stability.

It is also important that an FMI is not considered to be insolvent by its entry into resolution, since such an event of insolvency may trigger early termination rights or close-out. Accordingly, the PCSA clarifies that a declaration of non-viability does not constitute an act of bankruptcy or default by the operator of the FMI, and it shall not be considered insolvent by reason only of a declaration of non-viability (PCSA, subsection 11.06(4)).

The declaration of non-viability provides the Bank with the authority to take certain actions consistent with carrying out its mandate as FMI resolution authority. For example, the Bank may lend to an FMI or a participant of an FMI on a secured or unsecured basis (PCSA, paragraph 11.03(b)). For this purpose, the Bank would request a loan from the Government of Canada, as described in the Funding section below.

Vesting or Receivership Order

While the FMI is in resolution, the Bank may access further powers by taking control of the FMI. An order is required for the Bank to take control and it can be one of two types: vesting or receivership. Once an FMI has been declared non-viable and is in resolution, the Governor may issue an order (PCSA, section 11.09) appointing the Bank as the receiver in respect of the FMI or, alternatively, vesting the shares of the FMI in the Bank. From a practical perspective, both powers have the effect of transferring control of the FMI to the Bank and allowing the Bank to carry on the business of the FMI. These transfers permit the Bank to take further actions to execute a resolution, which are described in the next section. Notice of the vesting or receivership order must be given to the FMI's operator, the Minister of Finance, and relevant federal and provincial authorities, which will communicate whether the Bank has chosen to use receivership or vesting

[12] The two day stay period for EFCs is consistent with the resolution regime for banks in Canada.

(PCSA, subsection 11.09(12)). The order must also be published in the *Canada Gazette* (PCSA, subsection 11.09(13)).

Vesting does not apply in the case of Payments Canada, which is a non-share capital corporation.[13] The *Canadian Payments Act* expressly provides that no laws relating to insolvency or winding up of corporations apply to Payments Canada, and it can only be wound up by an act of Parliament. Canada's FMI resolution regime has been adapted to reflect this unique characteristic, ensuring that Payments Canada could be resolved if necessary. As Payments Canada does not issue shares, the only method available for the Bank to take control would be through receivership.

Furthermore, the PCSA requires that certain sections of the *Canadian Payments Act* be suspended while Payments Canada is in resolution (PCSA, subsection 11.15(1)). Some of these suspensions are needed to allow the Bank to quickly take the necessary resolution actions, without having to first seek the approvals normally required. For instance, the suspensions allow the Bank to appoint a Board of directors and management while Payments Canada is in resolution. Other suspensions allow the Bank to avoid meeting some of the typical corporate requirements faced by Payments Canada in normal times.

For other FMIs, a vesting or receivership order will have the effect of transferring the powers and duties of the FMI's directors and officers to the Bank, with exceptions specified in writing by the Bank (PCSA, subsection 11.1(1)). Taking control of the FMI, either through vesting or receivership, means that all the legal powers held by the FMI's directors and officers would be transferred to the Bank while the FMI is in resolution. The Bank can take control of and sell the FMI's assets, arrange for assumption of the FMI's liabilities by another party, carry on the FMI's business, start legal proceedings on behalf of the FMI, and execute or sign any documents in the name of the FMI.

3. Executing a Resolution

To avoid disrupting the FMI's critical clearing and settlement functions once resolution is initiated, the Bank would need to quickly stabilize the FMI by addressing financial losses and assuming its operations. The Bank's actions would be guided by the resolution plan that was developed for the FMI. However, the Bank may need to exercise discretion depending upon the actual circumstances that led to resolution. To restore confidence in the FMI and mitigate potential risks to financial stability, the PCSA provides the Bank with powers and tools that allow the Bank to operate the FMI and execute its rules. It also provides additional tools if required, such as borrowing public moneys and taking extraordinary measures to preserve financial stability. All the powers and tools are described below. Guided by the resolution plan, the Bank would explore the feasibility of various options for the FMI to exit from resolution, in consultation with relevant federal and provincial authorities.

Addressing Financial Losses

The first action the Bank would need to take in executing a resolution is to allocate any uncovered losses and replenish the FMI's financial resources. Once the vesting or receivership order is made, the Bank has the legal authority to execute the FMI's rules, including any recovery measures, and can take any actions that the FMI operator could take.

To address losses arising from the default of a participant, the Bank would rely principally on the

[13] Payments Canada is funded entirely by dues and fees of its members.

arrangements in the FMI's rules to the extent that these have not yet been exhausted. In the case of a CCP in resolution, the Bank would first need to restore its matched book to prevent further losses from accumulating. A CCP holds a matched book when each contract it clears is balanced by an equal and offsetting contract. The Bank could use all available tools in the CCP's rules to do so; these would likely include auctions, market transactions, and voluntary contract tear-up. There are limitations on the Bank's use of some of its available tools with respect to participants that are limited clearing members (PCSA, subsection 11.11(4)).[14]

To allocate non-default losses, the Bank would turn to the provisions in the FMI's recovery plan and related arrangements. Non-default losses would typically be addressed by drawing on the FMI's liquid assets and any parental support or guarantees that may exist if the FMI is part of a corporate group.

The financial resources of the FMI must be replenished, consistent with regulatory requirements. Participants of a CCP may be required to top up their contributions to the default fund, and the CCP equity share of the default waterfall would also need to be replenished. Capital set aside to manage non-default losses would need to be replenished at any type of FMI. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. This amount is set aside to implement a viable recovery or orderly wind-down plan. If the Bank decides to temporarily absorb some of these replenishment costs for financial stability reasons, the costs would be recovered following resolution.

Operating the FMI

A key objective of resolution is to maintain continuity of the FMI's critical services. During resolution, the Bank would step in and oversee the FMI's operations and continue to enforce its rules. In resolution planning, the Bank identifies staff that are essential to the continuity of the FMI's operations, and assesses options for retaining them in resolution. The Bank has the power to retain any personnel that the Bank views as essential to ensure smooth operations in resolution. If needed, the Bank can also engage external experts, and appoint a third-party administrator to assist in operating the FMI. Furthermore, the Bank could direct the FMI's Board to carry out the Bank's instructions. The Bank would also be authorized to remove any director on the FMI's Board and/or senior management if warranted. Also, if a vesting order is made, the powers, rights and privileges of its shareholders to vote or give approvals are suspended and the Bank would have the authority to exercise those powers, rights and privileges. PCSA section 11.1 describes the authorities that the Bank has available to assume control of an FMI while it is in resolution.

It is expected that the Bank's presence in running the FMI would act as a stabilizing force in the eyes of the FMI's stakeholders. Depending upon the severity of the scenario that caused resolution and how the resolution plays out, the Bank would also have the following tools available to draw upon.

Funding

The execution of resolution will incur costs. In principle, it should be the FMI and its participants who are responsible for absorbing these resolution costs. However, the Bank may need to temporarily fund certain costs to achieve the objectives of resolution. For instance, at the time a declaration of non-viability is made, the financial system would be under considerable stress and may become less stable if the Bank requires participants to provide additional resources as per the FMI's rules (e.g. multiple rounds of cash calls),

[14] See subsection 1(5) of the Regulations which provides a complete definition of limited clearing member. The essential element of the definition is that an LCM is not required to absorb losses from the default of another participant in the system, except in certain circumstances.

particularly if multiple participants have defaulted.

To this end, the FMI resolution regime includes statutory powers that allow the Minister of Finance to lend public moneys to the Bank at the request of the Governor (PCSA, subsection 11.19(1)), which the Bank can lend to the FMI or its participants on a secured or unsecured basis (PCSA, paragraph 11.03(b)). Public moneys are intended to be used as a last-resort to stabilize the system and must be repaid, consistent with the statutory objective to minimize the exposure of public moneys to loss. To ensure that the loan is repaid, the Bank has the authority to recover the costs from the FMI and its participants, *ex-post* of resolution.[15]

The loan from the Government of Canada could be up to $3.2 billion (PCSA, subsection 11.19(2)). The $3.2 billion limit was calculated using a loss scenario involving multiple participants defaulting on the same day across all four designated FMIs under the resolution regime. The Bank would be able to place all four FMIs into resolution on the same day and still address all required expenses with a high degree of confidence.

Additional Powers

The Governor has the authority, under Section 11.11 of the PCSA, to depart from the FMI's rules and recovery measures and use any of the specific authorities listed in that section or take any measures he or she considers necessary to allocate among the participants the amount of the shortfall due to the FMI to execute a resolution. This authority is intended as a fail-safe, to be used only as a last resort if the Bank considers it necessary to preserve financial stability. Generally, the Governor would consider exercising these authorities only if all other measures have been inadequate. The Governor must make a further order to use the authority described in section 11.11. After making such an order, notice must be given to the FMI's operator, the Minister of Finance, and relevant federal and provincial authorities (PCSA, subsection 11.11(7)). The order must also be published in the *Canada Gazette* (PCSA, subsection 11.11(8)).

Consistent with international guidance,[16] the Bank would use the tools provided for in Section 11.11 only if no other option would likely result in a better outcome for financial stability (PCSA, subsection 11.11(2)). Participants would be eligible for compensation, determined in accordance with the PCSA and Regulations, if the Bank used these tools.

The Bank *may* need to use its additional powers, if, for example, it has not been possible to restore a CCP to a matched book, or if an FMI's capital has been depleted by a non-default loss and its stakeholders are not willing to inject more capital. Ultimately though it will depend on the situation, and in particular on whether the Bank needs to draw on these additional powers to restore financial stability.

Nevertheless, the Bank does not expect to use haircutting of initial margin (IM) to address outstanding default losses or replenish financial resources at a CCP. This use of this tool may have an adverse impact on financial stability and clearing members' incentives to centrally clear. The potential benefits of using other last-resort tools such as a cash call or temporary use of public funds far outweigh the potential costs of IM haircutting.

For similar reasons, the Bank does not anticipate using forced allocation as a means of restoring a matched book. If market-based actions fail (e.g., additional auction; direct liquidation) the Bank would use voluntary partial tear-up to restore a CCP's matched book, and if it became necessary would execute a non-voluntary

[15] Authorities considered establishing a resolution fund that participants and FMIs would contribute to *ex-ante,* but decided against it for various reasons, including the low likelihood of an FMI failure.
[16] Guidance on Central Counterparty Resolution and Resolution Planning, Financial Stability Board, July 2017.

partial tear-up.

Exiting from Resolution

The Bank will consider strategies for returning the FMI to independent operation once the FMI has been stabilized. Possible exit strategies include returning control of the FMI to its original owners, or selling the FMI. The Bank may first restructure the FMI. For example, non-core assets could be sold to generate resources for resolution or to make the FMI more attractive to a potential new operator. The Bank may also need to make changes to the FMI operator's legal structure or ownership before the FMI can exit resolution. The range of exit strategies are relatively more limited for an FMI operated by Payments Canada; the Bank could not sell the FMI but could sell its assets or transfer its liabilities, using receivership powers.

The Bank has an obligation under the PCSA to consult with relevant federal and provincial authorities in developing a plan to end resolution (PCSA, subsection 11.2(2)), and the exit plan must be approved by the Minister of Finance (PCSA, subsection 11.2(5)). For example, it is important that the exit strategy consider potential impacts on financial stability and specific requirements of provincial regulators, where applicable.

In the exit plan, the Bank will include the expected timeline to implement the plan, any proposed transactions to restructure the FMI, a plan for recovering the costs of resolution, as well as a repayment schedule to pay back any moneys that were borrowed from the Government of Canada. The terms and conditions specified by the Minister (PCSA, subsection 11.19(1)) will establish this repayment schedule. The Bank will not end resolution until the exit plan has been substantially implemented and the full costs of resolution are known. This means that the Bank would have negotiated the terms and conditions of any sale or transfer of ownership. Once the Bank considers that the exit plan has been substantially implemented, it will publish a notice in the *Canada Gazette* which specifies the day on which the FMI is no longer in resolution (PCSA, section 11.24).

4. Post Resolution Responsibilities

Once the FMI has left resolution and is operating independently, the Bank is required to calculate and pay appropriate compensation, and to recover certain costs of resolution.

Compensation

The FMI resolution regime is designed so that losses are absorbed by shareholders, participants and creditors. This supports the objective of resolution to minimize the exposure of public moneys to loss. In resolution, losses would continue to be allocated in accordance with the FMI's rules, by-laws and other arrangements for loss allocation, assuming that these measures had not yet been exhausted before the FMI entered into resolution. In more extreme resolution scenarios, participants may be called upon to bear additional losses through actions that deviate from the FMI rules.

If the Bank deviates from the FMI rules, this would open the potential for participants to be compensated. Consistent with international guidance, the framework is designed to ensure that creditors, participants and shareholders are not made worse off *in resolution*[17] compared with what they would have received if the FMI had been liquidated under the applicable insolvency laws (referred to as the "counterfactual"). To

[17] For the purposes of calculating compensation, resolution begins at the point in time when non-viability is declared and ends on the date and time specified in the notice to end resolution that is published in the Canada Gazette (PCSA, section 11.24).

support this outcome, the legislation requires compensation to be paid to stakeholders in certain situations where they have been made worse off as a result of the Bank's actions as resolution authority (see PCSA sections 11.25 through 11.3). The Regulations detail who might be eligible for compensation, how the Bank will calculate compensation, the process for independent review of the Bank's compensation offer, the compensation process and timing.[18] This information establishes stakeholders' entitlement, providing transparency and legal certainty on their rights to compensation.

In this section, the main features of this compensation framework are described.

Eligible Entities

Only entities within classes prescribed in the Regulations are entitled to compensation. The following entities are prescribed:

- A creditor of the FMI at the time of a declaration of non-viability that was not paid the amount owing to it during resolution in accordance with the terms of its contract.
- Those FMI participants that were participants at the time of a declaration of non-viability and were subject to an order under subsection 11.11(1) of the Act.
- Owners of the operator of the FMI that was subject to a vesting or receivership order under paragraph 11.09(1)(b) of the Act, that were owners immediately prior to the declaration of non-viability.

Certain aspects of the compensation provisions of the PCSA apply differently to Payments Canada. Neither Payments Canada nor its members are entitled to compensation following receivership of the association (PCSA, section 11.25). However, Payments Canada members could be eligible for compensation in their capacity as creditors, participants, or owners of other FMIs.

As well, there are specific compensation provisions for limited clearing members of FMIs. They are only eligible for compensation as creditors or direct owners of an FMI; as participants, they are not required to bear losses arising from the default of another participant, except in limited circumstances – hence they would not suffer compensable losses. As participants, limited clearing members are not subject to the Governor's additional powers provided for in PCSA, subsection 11.11(4).

No other entities are eligible to receive compensation, including participants in a scenario where subsection 11.11(1) of the Act is not used. The outcomes of rules, processes, and discretion that participants, creditors, and shareholders agreed to with the FMI *ex ante* are not compensable.

Successors of prescribed entities remain eligible for compensation, but assignees or transferees are not eligible (Regulations, subsection 6(3)).

Determining Compensation Payable

The Bank will determine whether a person or entity is owed compensation based on sections 7 to 10 of the Regulations. The Regulations set out how compensation would be calculated in relation to classes of eligible persons and entities, which are described below.

Prescribed creditors are entitled to be compensated for any amounts owed by the FMI at the start of

[18] See Regulations sections 6-18. These compensation provisions are closely aligned with those for federally regulated financial institutions. See *Compensation Regulations, Canada Deposit Insurance Corporation Act* (SOR/2018-59).

resolution, or incurred during resolution (Regulations, section 7). They may be made better off through the compensation they receive than they would have been had the FMI been liquidated. This is to ensure that those entities that provide services to an FMI will continue to do so after resolution, and that the existence of the resolution regime will not affect market pricing available to FMIs.

The counterfactual for assessing the compensation of participants, shareholders and owners, must take into account measures to address financial loss that are specified in the FMI's rules and similar documents (Regulations, paragraphs 8(2)(a) and 9(4)(b)). This is to ensure that the Bank is not required to pay compensation in resolution scenarios where those measures to address financial loss are exhausted after the date a declaration of non-viability is made. The Bank can follow the FMI's rulebook in resolution, and the results of these measures are not compensable.

Prescribed participants are entitled to be compensated for any net losses incurred as a result of an order made under subsection 11.11(1) of the Act (Regulations, section 8). This type of order allows the Bank to depart from the FMI's rules and use any available measures to execute a resolution, including those specifically identified in the subsection.

Prescribed shareholders or owners are entitled to be compensated for any losses over and above those that would have occurred under the counterfactual. The Bank will determine the amount of compensation through a comparison of its estimated value of a shareholder's shares in liquidation with their estimated value in resolution (Regulations, sections 9 and 10). If the liquidation value is greater than the resolution value, the shareholder would be entitled to compensation.

The liquidation value is the estimated value that a prescribed shareholder would have received for its shares had the FMI become bankrupt and been liquidated at the time non-viability was declared, in circumstances where all measures available to the FMI to prevent financial losses have been exhausted.

The resolution value is the estimated value of a prescribed shareholder's shares on the day the Bank has declared that resolution has ended, plus any dividends or other distributions paid to those shares during resolution, plus any other payments or value of the rights granted to those shares due to a vesting or receivership order being made.

The Compensation Process

Once the Bank, or a valuation expert engaged by the Bank, has calculated any compensation payable to eligible entities, the Bank is required to follow the process set out in sections 11 through 18 of the Regulations. A summary of the main points is below.

The Bank must provide each person or entity that is prescribed with a written notice containing its offer of compensation. The Bank must issue the notice within a reasonable time after resolution has ended and must have a summary of the notice published in the Canada Gazette. Following this publication, the prescribed person or entity has 45 days to accept or reject the offer, or to object to the absence of an offer. If the prescribed person or entity accepts the offer, or fails to object to the absence of an offer, the process is complete for that prescribed person or entity. The Bank will pay the stated amount of compensation within at most 135 days of the notice.

If a prescribed person or entity contests the Bank's compensation offer, the Governor in Council is required to appoint a judge of a superior court to assess the Bank's offer. The Assessor will consider whether the Bank's offer is just and reasonable; in determining the amount of compensation to be paid, the Assessor must consider the relevant sections (7-10) of the Regulations, as would the Bank. However, the Assessor would make his or her determination independently of the Bank. The scope of the assessment is limited to whether a person or entity has been compensated in accordance with the PCSA and its accompanying Regulations. It is possible that the Assessor could determine an amount that is higher or lower than the original offer. The Bank and a claiming person or entity are bound by the Assessor's determination.

Once appointed, the Assessor is expected to complete its assessment in a reasonable time. The Assessor must communicate its assessment by issuing a notice to the prescribed person or entity and to the Bank, as outlined in the Regulations. If the Bank has been found to owe compensation, it must be paid within 90 days following the issuance of the notice. If the assessor determines it is just and reasonable, the assessor may award costs in the proceeding to a claiming person or entity or to the Bank (PCSA, subsections 11.29(5) and (6)).

The Bank's offer is final once it has been accepted or, alternatively, if it has not been challenged. This finality also applies in the case of an Assessor-decided compensation.

Cost Recovery

Context

The object of minimizing the exposure of public moneys to loss not only relates to the choice of actions the Bank would take during resolution, but also leads to the authorization of the Bank to recover certain costs. The legislation provides broad authority for the Bank to recover resolution costs (PCSA, section 11.28 and Regulations, section 5). The cost recovery provisions identify who the Bank may recover from, what types of costs can be recovered, and in what order certain costs would be recovered. It is left to the Bank's discretion to establish the terms and conditions for repayment of resolution costs, including the length of time for repayment. This will allow the Bank to consider the implications for financial stability. The resolution exit plan must include the Bank's estimate of the total costs of resolution and a plan for their repayment (PCSA, subsection 11.2(3)).

Regulatory charges reflect the cost of providing a service that is delivered in the public interest. They would be used to recover the Bank's costs of providing the FMI's services and providing resources during resolution to maintain financial stability and market confidence.

Cost recovery and compensation are separate, as they are associated with different events. If a participant owes the Bank money through cost recovery, the participant would be required to pay the full amount regardless of whether it is also owed compensation by the Bank; netting will not be permitted. Amounts paid as compensation are not considered costs of resolution, and are not recoverable by the Bank (Regulations, subsection 5(4)).

The Bank will be guided by a number of principles that it will consider and apply when recovering resolution costs. The Bank will always attempt to follow the rules developed and agreed to by the FMI and its participants *ex ante.* In circumstances where the rules are unclear or insufficient, the Bank would consider whose actions or inaction led or contributed to the financial stress to assign primary liability. For any residual liability, the Bank would look to entities that benefited from the services provided by the FMI before the financial stress. Only certain costs would be recoverable from limited clearing members: costs incurred by the Bank to operate the FMI, administer compensation, and meet the member's financial obligations (Regulations, subsection 5(3)).

Costs to be Recovered and Responsibility for Repayment

Recoverable costs are the costs incurred and the amounts paid by the Bank to take certain resolution actions. The categories of costs and parties responsible for repayment are discussed below (Regulations, subsection 5(2)).

Address uncovered financial losses and liquidity or capital adequacy shortfalls

Uncovered losses are possible if one or more participants of an FMI default, or if the FMI incurs any other type of loss. To address these, the Bank would look to the tools established in the FMI's rules, by-laws, related arrangements and recovery plan, as these were agreed to *ex-ante* by participants. These tools include generating resources via the FMI's default waterfall, using any additional recovery tools, and conducting auctions.

The defaulting participant(s) would be ultimately responsible for the financial losses they impose (Regulations, subsection 5(5)). The Bank may have to temporarily cover the resulting liabilities of surviving participants. After resolution, the Bank would recover these costs from the defaulter(s). If the defaulter(s) no longer exist after resolution has ended, the Bank would recover from the FMI itself and the surviving participants.

For non-default losses arising from the operation of the FMI, the Regulations prioritize cost recovery from the FMI before the Bank attempts recovery from participants (Regulations, subsection 5(6)). If financial losses (default or non-default) exceed the resources of the FMI and surviving participants, the Bank could recover losses from all participants (including future participants) through regulatory charges.

Maintain the pre-funded financial resources of the FMI

Once an FMI has entered resolution, the Bank may need to quickly replenish depleted financial resources owed either by the FMI or participants to restore confidence. Following resolution, the Bank would seek recovery of any public moneys used to replenish pre-funded financial resources by referring to the FMI's rules and by-laws. Direct participants would be responsible for deficiencies in their contributions to the default fund, and the FMI would be responsible for topping up its equity contribution to the default waterfall.

Operate the FMI

The Bank may incur costs associated with operating and maintaining the FMI's critical functions that exceed the FMI's revenues. If the Bank successfully restores confidence in the FMI, the gap between the FMI's operating costs and its revenues is not likely to be material. The responsibility to repay the Bank's operating costs would first fall on the FMI. If the FMI does not have enough resources, the Bank would attempt to recover these costs from the entities that benefited from the FMI's services during resolution. The Bank would recover these costs from all participants (including future participants) through regulatory charges.

Meet a participant's financial obligations to the FMI

If an FMI enters resolution, at a time of extreme financial stress, participants might have difficulty meeting their financial obligations to support the failed FMI if those obligations have not been pre-funded. The Bank and other financial authorities might be concerned about knock-on effects if the participants are required to meet these obligations during resolution. The Bank may decide to temporarily cover these obligations on behalf of the participants, and seek repayment after resolution has ended. The Bank must attempt to recover the amount from an assisted participant before attempting to recover the costs from an FMI or other participants.

Administer the compensation process

The Bank may incur costs related to the calculation of compensation claims, including the cost of hiring a valuation expert to determine the amount of compensation payable to participants and other stakeholders who are eligible to make a claim. The Bank will recover these costs from the FMI's revenues after resolution has ended.

Execute a resolution

The Bank may incur other costs related to its execution of the resolution. These could include hiring management to oversee the FMI's daily operations, obtaining valuation expertise to estimate a potential sale price of the FMI, and obtaining legal advice related to the use of resolution powers and tools. The Bank is obligated to attempt first to recover these costs from the FMI. If the FMI does not have sufficient resources, the Bank would then attempt to recover them from participants.

Methods of Cost Recovery

The Bank can use its discretion to determine the method, terms and conditions for recovering resolution costs. The two main cost recovery methods are discussed in this section.

Assessed Installments

Similar to a conventional loan repayment process, assessed installments are a series of payments to be made over a pre-determined period. An agreement between the Bank and the debtor (e.g. participant or FMI) would establish the total amount assessed, the repayment period, the number and frequency of payments, and the interest rate. Debtors would have the ability to accelerate repayment without penalty.

Regulatory Charges

These charges would likely be tied to participants' future transactions conducted through the FMI after it emerges from resolution. The Bank could determine the duration and amount of the charges, in proportion to the risks a participant brings to the FMI, or on a pro rata basis. The Bank would form an agreement with the resolved FMI and the terms of repayment prior to the FMI exiting resolution.