Recovery Plan

Assessment Criteria

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INTRODUCTION

In 2018, Credit Union Deposit Guarantee Corporation (the Corporation) finalized the Regulatory Directive and Prudential Standard – Provincial Systemically Important Financial Institutions, which came into effect on January 1, 2019. As detailed in the directive/prudential standard, designated institutions are subject to enhanced regulatory requirements. One of these requirements that institutions are expected to have is a recovery plan that is intended to restore stakeholders' confidence in the financial soundness of the institution following an extreme stress event. The Corporation will review the recovery plan as part of the overall supervisory process, assessing its credibility and ability to be effectively executed.

This document outlines recovery plan principles, assessment criteria, and performance benchmarks, and provides a reporting template (refer to Appendix A of this document), all of which are intended to communicate the Corporation's expectations for designated institutions. For additional information on recovery plans, refer to the Corporation's Provincial Systemically Important Financial Institutions Regulatory Directive and Prudential Standard - Appendix 2.

BACKGROUND

The 2007- 2008 financial crisis demonstrated that no one is immune and failures do happen. It also highlighted significant shortcomings in existing regulatory and supervisory tools. One of these was contingency planning. As a result, many changes have been made to strengthen the resilience of financial institutions all over the world, including regulatory reforms both internationally and nationally for systemically important financial institutions. These reforms included the introduction of a capital surcharge, more intense supervision, and new requirements for recovery and resolution planning.

Ultimately, recovery planning is an important governance tool and a component of risk management that improves the ability of a troubled financial institution to continue its operations and recover, as well as reduces the risk of failure given an extreme event. A recovery plan serves as a guide for a distressed financial institution in a situation where it has not yet met the conditions for resolution or entered into the resolution regime. A recovery plan sets out how the institution will monitor negative developments (i.e., early warning indicators and accompanying triggers or thresholds) and how it would manage the impacts of severe stress using predefined recovery strategies (options). A good recovery plan has a number of recovery strategies that, if successfully executed, will avoid the need to implement a resolution plan.

One of the benefits of recovery plan development and maintenance is that it increases the financial institution's understanding of its critical functions and critical shared services. It supports learning about the institution's vulnerabilities and risks, and interdependencies that exist, as well as how a crisis might affect the institution. Recovery planning can result in improved accuracy of information and enhance the ability to generate relevant and timely information for decision-making. It can also result in improved analytical capability. All of which can enhance decision-making processes, strategic focus, risk management, business continuity processes and operational efficiencies.

The objective of recovery plans is to identify institution-specific strategies available to respond to a crisis and to assess whether they are sufficiently robust to address a range of differing shocks. The strategies identified are expected to have the ability to restore financial strength and viability of the institution (or institution's group) during a period of severe distress. Recovery options are intended to reduce the institution's risk profile and conserve capital. They may include divestiture of business lines or subsidiaries.

Applying both system-wide and institution-specific (idiosyncratic) stress testing, the financial institution is able to demonstrate that it is able to take early action to manage a progressively deteriorating capital and/or liquidity position and, by doing so, can return to business as usual with acceptable levels of both capital and liquidity.

Pursuant to section 444(m) of *The Credit Union Act, 1998* and section 16-15(2) of the *Credit Union Central of Saskatchewan Act, 2016*, the Corporation is the resolution authority for provincially regulated credit unions and SaskCentral. As the resolution authority, the Corporation is responsible for developing, maintaining and executing a resolution plan for institutions. The responsibility for development, implementation and execution of recovery plans resides with designated institutions.

RECOVERY PLAN PRINCIPLES

Accountability

While creating a credible recovery plan is an iterative process with significant interaction expected between the institution and the Corporation, the institution owns the recovery plan and is ultimately responsible for its development and implementation with clear accountabilities for the institution's board and senior management.

Relevance

The recovery plan reflects the nature, size and complexity of an institution. It appropriately considers both the legal and business line structures of the institution as well as external stakeholder relationships.

Comprehensiveness

The recovery plan is expected to be complete and reflect key strategic, business and operational activities with those activities that are considered crucial to the institution's success being a critical component. Expected elements are described in enough detail that the recovery plan can serve as an effective playbook for stakeholders in a time of crisis.

Flexibility

The recovery plan should be able to respond to a range of stress events, including institution-specific and market-wide events. Scenarios should be severe enough to threaten the institution's ongoing viability and should include liquidity pressures, capital shortfalls and financial losses.

Focus

The recovery plan should synthesize information, develop critical assessments and drive meaningful conclusions. It contains scenarios that are considered plausible, sufficiently severe and designed with the institution's vulnerabilities in mind. Recovery options are expected to address the needs of the institution in a crisis scenario, with due consideration for the impact to the overall financial system. They should cover a variety of contingent funding and capital recovery actions that will enable a timely return to business as usual, including divestiture of non-core businesses. There should be a reasonable prospect of recovery if appropriate recovery measures are taken.

Readiness

The recovery plan and supporting processes and practices should be operational and effective in order to meet the use test. This means that the recovery plan is in an executable form after having been tested to ensure it works as intended. It reflects the actual capabilities of the institution. Gaps in capabilities and impediments to recovery have been identified and reasonable action plans to address these gaps and impediments are underway.

Informative

The recovery plan should validate an institution’s capability to deliver accurate and relevant information promptly and effectively. The institution should have a defined process for timely data collection during a severe stress event. The plan should describe how its data needs and reporting requirements would be impacted as it moves into a recovery mode of operations. Considerations should include additional data and reporting requirements, both internal and external, during a stress event.

Evergreen

The recovery plan is a living document that should reflect the current state of an institution. The plan should be reviewed and updated at regular intervals, and upon the occurrence of events that materially change the institution’s structure or operations, its strategy or aggregated risk exposure. The institution is expected to regularly review and assess the assumptions of the recovery plan.

ASSESSMENT CRITERIA

These assessment criteria should be read in conjunction with the Corporation's Provincial Systemically Important Financial Institutions Regulatory Directive and Prudential Standard. They should also be interpreted within the context of the institution (i.e., credit union versus SaskCentral).

RECOVERY PLAN ASSESSMENT CRITERIA
1. Governance and Integration a) extent to which recovery planning is integrated with the institution's strategic management, risk management and stress testing b) extent to which recovery planning, including both preparation and execution, is discussed and challenged at board and senior management levels c) extent to which the recovery plan and results of testing are incorporated in board reporting and require regular review and approval by the board d) degree of clarity in the institution's crisis management and decision-making process, including the role of the board of directors e) extent to which data and reporting required in a severe stress event have been identified and addressed, including consultation with external stakeholders f) adequacy of "playbooks" or operational plans to execute recovery strategies/options g) adequacy of recovery plan review by internal audit or an external third-party **2. Scenarios, Indicators and Recovery Strategies/Options** a) extent to which scenarios are complete and cover a full range of stresses (i.e., institution-specific, market-wide and a combination of these), modelling capital and liquidity simultaneously b) appropriateness of early warning indicators and triggers to cover a full range of stress scenarios with clear linkages to escalation processes c) extent to which early warning indicators and triggers provide sufficient time for the institution to react d) degree to which the institution's indicators and triggers are linked to its risk aggregation and reporting e) timeliness of data aggregation and reporting f) degree to which identified recovery strategies/options cover all triggers and stress scenarios **3. Credibility** a) extent to which recovery strategies/options are timely, practical, plausible, and provide sufficient recovery capacity b) extent to which recovery plans respond to institution-specific, market-wide and a combination of these stresses c) extent to which the institution has incorporated lessons learned from testing in its recovery plan d) degree of institution preparedness to execute its recovery strategies/options, including establishment of a crisis management team comprised of key management personnel with roles and responsibilities clearly articulated e) extent to which assumptions used to evaluate recovery strategies/options have been documented f) extent to which the recovery plan includes a comprehensive crisis communication plan with appropriate key messages about the institution's resilience and the execution of specific recovery strategies/options

RECOVERY PLAN ASSESSMENT CRITERIA
g) degree to which change initiatives are tracked and their impact on the recovery plan assessed **4. Coverage** a) extent to which core business lines, critical functions and critical shared services have been identified and mapped to legal entities b) extent to which the implementation of each recovery option supports or endangers these critical functions and critical shared services c) extent to which the recovery plan covers all material subsidiaries and/or substantial investments d) appropriateness of the assessment of critical functions and the determination of critical shared services

PERFORMANCE BENCHMARKS

The quality of the recovery plan is demonstrated by its comprehensiveness, credibility, coverage, and integration with strategic management, risk management and other significant corporate decision-making processes. The quality of the recovery planning process is demonstrated by the appropriateness of governance structures and processes in place to maintain and test the plan, and provide relevant reporting to the institution's board and senior management.

The Corporation will look to indicators to guide its judgment in the course of its supervisory activities. These activities may include:
- discussions with directors, senior management and heads of oversight functions
- review of information provided to the board
- assessment of the board's oversight practices
- review of the institution's recovery plan

Examples of indicators that could be used to guide supervisory judgment include the extent to which:
- recovery plan development and maintenance:
  - has a single owner who is accountable for development and maintenance of the plan
  - involves multiple key operational and oversight functions
  - includes regular testing, both tabletop exercises and crisis simulations, intended to determine its effectiveness and identify impediments to effective execution as well as provide a forum for experiential learning
  - is integrated with the institution's enterprise risk management framework
  - results in appropriately focused board reporting and board approval
  - includes a review of the recovery plan at regular intervals or more frequently when substantive changes occur
- the recovery plan:
  - clearly articulates decision-making authority for crisis situations, including approvals related to execution of recovery strategies/options
  - identifies a crisis management team that includes appropriately skilled and experienced management personnel who are well equipped to manage the institution through a stress event. Where gaps exist in expertise and/or experience, a strategy to address this is outlined in the plan
  - allows for streamlined decision-making and oversight in the event the plan needs to be executed

- provides adequate direction for returning to business as usual, including measures that are indicative of recovery
- appropriately identifies and analyzes core business activities, critical functions and critical shared services, and accurately maps these activities, functions and services to its legal entity structure
- includes qualitative and quantitative early warning indicators and triggers which consider the institution's viability along a continuum of increasingly severe stress events
- includes prioritization and categorization of recovery strategies/options by feasibility, scenario, timeliness and other parameters that would streamline the institution's ability to operationalize the recovery plan under both institution-specific and market-wide stress scenarios
- identifies, describes and quantifies institution-specific vulnerabilities
- incorporates adequate monitoring and escalation processes
- contains current contact information for and clearly describes specific responsibilities of all individuals essential to successful execution of the recovery plan or the provision of critical services, including those who will fill in if they are unable to execute their responsibilities
- identifies dependencies on third-party service providers, including existence of clauses that may result in unilateral decisions to terminate those services

APPENDIX A – RECOVERY PLAN TEMPLATE

TEMPLATE COMPLETION

The Recovery Plan Template is intended to provide guidance for the development and maintenance of recovery plans. **The institution is expected to include the information outlined in the blue boxes in Appendix A in its recovery plan submission.** Additional information is also provided to guide development for recovery plan template completion.

The recovery plan should contain sufficient information about the institution to provide a basis for analyzing recovery options and the institution's ability to maintain critical operations during a severe stress event. Where appropriate, the institution may copy the contents of other corporate documents in the template (e.g., crisis communication plan).

The Corporation expects the institution's board and senior management to assess and approve the recovery plan before submitting each iteration of it. Each submission is expected to include an executive or high-level substantive summary of the institution's key recovery strategies and identify material changes since the last submission was provided to the Corporation.

1. Profile

The profile provides an overview of the institution and should include: the institution's legal entity structure, business model, strategic priorities, risk appetite and risk profile. The assessment provided will highlight the activities, functions and services of the institution that should be preserved in the event of a crisis as liquidity and capital will be constrained. The profile identifies the institution's critical functions and shared services that support those functions. It also maps these functions and services to the legal entities and/or business lines that perform them. The goal of recovery or resolution for these activities, functions and services is to minimize their disruption and preserve value.

- Describe the business and risk management framework including risk appetite and related metrics.
- Provide an overview of the business model and geographical locations, including legal entities, branches, and core and non-core products and services along with their strategies and objectives.
- For both business lines and legal entities:
  - discuss business line components of the balance sheet
  - identify any off-balance sheet obligations
  - discuss profitability drivers by business line for the income statement
- Identify, describe and quantify the institution's key vulnerabilities, under both normal and stress circumstances.

a) Business Overview

Vulnerabilities arise due to the institution's specific circumstances and characteristics, and should form the basis for the institution's scenario development. Identified vulnerabilities can contribute to the onset of stressed conditions or can exacerbate existing difficulties during stressed situations. Higher rated risks along with the corresponding risk appetites as noted in the institution's enterprise risk management framework should be included in the Profile section. For example, credit risk has the potential to negatively impact a credit union's profitability, capital and liquidity. This risk would be included in the Profile section of the recovery plan and would also be considered in scenario development.

b) Legal and Financial Structures

Identifying core businesses, particularly those that are critical to the institution executing its mandate, is a critical component of the recovery plan. This exercise allows the institution to not only identify those core businesses that are critical, but also supports the understanding of individuals necessary for the successful execution of the plan by isolating those elements that need to remain intact to ensure the institution is a stable and functioning organization.

The strategic analysis for critical functions, critical shared services, and core business lines provides the foundation for the Strategic Separability Analysis of Operations.

- Identify, describe and provide a strategic analysis of:
  - **Critical functions** which are any structured set of activities, services or operations of the institution that are provided to third-parties and that are essential to the provincial economy and/or for preserving financial stability. Refer to Appendix B – Section 2.
  - **Critical shared services** are the underlying operations, activities and services performed for one or more business units or legal entities (shared services) within the institution or institution's group (group) which are required to provide one or more critical functions. Refer to Appendix B – Section 3, and
  - **Core business lines** are business lines and associated services that represent material sources of revenue, profit or franchise value for the institution or group. Although the principal criteria is materiality based on quantitative indicators (e.g., revenues, profits, assets, market share), institutions should guard against relying solely on quantitative indicators. Consideration should be given to the institution in its entirety, including new and emerging businesses with significant growth potential or unprofitable businesses that contribute substantially to the institution's franchise value.
- Map critical functions and shared services to legal entities and business lines with relevant summary information as applicable (e.g., key financials - assets, liabilities, income and expenses - capital and liabilities structure/capital flows, inter-group exposures or funding relationships, if applicable), and
- Include an organization chart of the institution's legal entity structure with a clear depiction of critical functions, critical shared services and core business lines so that it is clear how they are interconnected. Refer to Appendix B – Section 4.

c) Strategic Separability Analysis of Operations

The institution’s strategic assessment of the separability of critical functions, legal entities, core business lines and/or shared services should be included. Separability is the process of identifying and having the ability to tactically execute the disposition of assets, business, or entities to a third party. The purpose of this analysis is to support the institution in understanding what portions of the business could be disposed of, either to create liquidity or to preserve the core business and critical functions of the institution in recovery or resolution.

- Provide the institution’s strategic assessment of separability of critical functions, legal entities, core business lines and/or shared services.

In this assessment, the institution should consider:

- Ability to sell, rationalize or exit non-core segments of the institution
- Analysis of the options including timeframe, estimated value/ cost recouped and likelihood of completion.

Assessments of separability should be completed regularly and can be completed through existing strategic planning processes. Options should provide flexibility across a variety of economic conditions and, if available, offer multiple disposition approaches.

d) Recovery Plan Indicators and Triggers

The recovery plan identifies criteria, both qualitative and quantitative, which would trigger implementation of the recovery plan or individual measures by management. These triggers should be designed to prevent undue delays in the implementation of recovery measures. Qualitative and quantitative indicators included should be the ones that are most relevant to the institution’s legal structure, risk profile, size and complexity. They should also reflect the institution’s key vulnerabilities.

A framework for recovery plan indicators should include the following categories:
- capital
- liquidity
- profitability
- asset quality
- qualitative, which are detailed in Appendix C - Section 4

It should also include market-based and macroeconomic indicators unless the information is not available and/or the institution is able to provide rationale for why these indicators are not relevant to its legal structure, risk profile, size and/or complexity.

Triggers should be measurable, reasonable, well-defined and tailored to the specific risks faced by the institution. Further, they should appropriately identify the points at which the escalation process would be activated. It is at these points that the institution would be expected to assess the situation and determine the actions to be taken based on the recovery plan.

In addition to triggers, early warning indicators may already be used by the institution to signal negative trends that are monitored regularly on a business as usual basis. These indicators are similar to triggers, but are distinguished by their position on the recovery timeline. An early warning indicator is to be calibrated so that it alerts the institution of adverse circumstances earlier than a recovery plan trigger which better prepares the institution for a potential triggering event. For additional information on indicators and triggers, refer to Appendix C.

- Provide an explanation of how recovery plan triggers have been calibrated and demonstrate that thresholds would be breached early enough to be effective. In this context, the magnitude and speed of the threshold breach should be taken into account.
- Describe in detail both recovery plan indicators and triggers, including possible vulnerabilities, weaknesses or threats to the institution's capital position, liquidity situation, profitability and risk profile.

2. Recovery Options/Strategies

The recovery plan identifies a range of credible recovery options/strategies and provides an assessment of their impact and feasibility which demonstrates not only the potential overall recoverability, but also the institution's preparedness to address a variety of issues. The recovery plan should list and provide an assessment of the critical measures necessary to successfully implement its recovery measures.

Institutions are expected to consider not only the quantitative impact, but also operational, systemic and business model impacts, as well as the effects on members, customers and the wider market.

The interplay between recovery options and the calibration of the indicators is an important factor in ensuring early identification and timely action. If the institution has only limited options available and options take an extended time to generate desired results, indicators need to be set considering the timing effects of options.

Institutions should consider potential impediments to timely and successful execution of recovery measures as well as actions required to and the time by which these impediments need to be removed. In situations where rapid execution of a recovery measure is needed, it is important to address, to the extent possible, any related impediments beforehand (i.e., preparatory measures).

To the extent possible, the institution should prioritize its recovery options. This exercise should be based on factors such as the option's overall impact on the institution's financial condition, ease of execution and potential confidence or reputation risk. Options should also be categorized by feasibility, scenario, time to execute or other parameters that would streamline the selection of options under differing scenarios. The institution should demonstrate its understanding of what it will need to operationalize its high-priority recovery options in the Operational Continuity section of the recovery plan.

Recovery options should be reliable, timely and have a sound legal basis to ensure compliance with regulatory and other requirements. There should be a high degree of confidence that the institution would be able to implement the outlined recovery options during extreme stress events. The recovery options should also be transparent in terms of how they would be executed, allowing any potentially impacted market participants to measure, manage and control their exposure.

The institution should be able to demonstrate the availability of sufficient financial resources from its recovery options to meet its obligations as they come due throughout the recovery event. There should be clarity about how the potential proceeds from the recovery options are to be allocated. Consideration needs to be given to how these proceeds will impact the institution's balance sheet, capital ratios and liquidity.

The recovery plan should also describe, based on the highest priority options as indicated by the priority assessment noted above, how the institution would look following recovery, assuming the successful execution of the recovery option (e.g., fewer business lines, different legal or organizational structure, and adjusted footprint).

a. Identification of Recovery Options

The identification of recovery options exercise is intended to provide a means to enhance general crisis-preparedness and assist the institution in reacting flexibly to a crisis.

The identification of recovery options should provide a range of options designed to respond to a variety of financial stress scenarios and which could reasonably be expected to contribute to maintaining or restoring the viability and financial position of the institution. They should reflect varying time horizons and the specific scenarios considered as well as the stress testing outputs. Each recovery option should be described in a way that enables the Corporation to assess its impact and feasibility.

Recovery options should include measures which are extraordinary in nature as well as measures that could be taken in the course of normal business.

Recovery options can include, but are not limited to:

- actions to strengthen the capital situation (e.g., recapitalizations after extraordinary losses, capital conservation measures - suspension of patronage or dividends, payments of variable compensation or other discretionary expenditures)
- possible sale of subsidiaries, joint ventures and spin-off of business units
- increase in or renegotiation/voluntary restructuring of liabilities and
- measures to secure adequate funding while ensuring sufficient diversification of funding sources and adequate availability of collateral in terms of volume, location and quality. Consideration should also be given to possible transfers of liquidity and assets within the institution, if applicable

The recovery plan should also identify recovery options that include:

- a range of capital and liquidity actions required to maintain or restore the viability and financial position of the institution with a focus on ensuring the continuity of critical functions and core business lines
- arrangements and measures that are focused on conserving or restoring the institution's own funds through external recapitalization and internal measures to improve the institution's capital position

- arrangements and measures to ensure that the institution has adequate access to contingency funding sources that support continuity of operations and meet obligations as they fall due. Where appropriate, this should include access to available liquidity from SaskCentral. Contingency funding sources should include all potential liquidity sources, an assessment of available collateral and an assessment of the possibility to transfer liquidity across business lines (as available)
- arrangements and measures to reduce risk and leverage or to restructure business lines including, where appropriate, an analysis of possible material divesture of assets, legal entities, or business lines and
- arrangements and measures to achieve a voluntary restructuring of liabilities without triggering an event of default or termination

- Identify the recovery options available, including descriptions without reference to specific scenarios of financial stress.

b. Impact Assessment of Recovery Options

The institution is to include an impact assessment for each recovery option that is comprised of a detailed description of the processes used for determining the value and marketability of the core business lines (if appropriate), operations and assets of the

For the impact assessment of recovery options, provide commentary on the following:

- a financial impact assessment which sets out the expected impact on solvency, liquidity, funding positions and profitability of the institution, where relevant
- valuation assumptions and all other assumptions relied on to complete the impact assessment of recovery options, including assumptions about asset marketability and the behaviour of other financial institutions
- an operational continuity impact assessment which evaluates internal operations (e.g., information technology systems, suppliers and human resources operations) and the institution's access to the financial market infrastructure (e.g., clearing and settlement facilities, and payment systems). In particular, the assessment of operational continuity should take into account:
  - any arrangements and measures necessary to maintain continuous access to the relevant financial market infrastructure, and
  - any arrangements and measures necessary to maintain the continuous functioning of the operational processes of the institution, including infrastructure and information technology services
- an assessment of the external impact and systemic consequences to identify expected impact on critical functions performed by the institution and the impact on members, customers and shareholders with specific focus on depositors, retail investors and counterparties, as applicable
- an assessment of actions necessary to successfully implement each recovery option, and
- the expected time for the implementation and success of the recovery option

institution which are applicable to the specific recovery option. While this assessment includes operational continuity considerations, additional detail on these considerations is to be provided in the Operational Continuity section.

c. Feasibility Assessment of Recovery Options

For the purpose of the feasibility assessment, a material impediment includes any factor that could potentially negatively affect the timely execution of the recovery option, such as legal, operational, business, financial and reputational risk. Barriers may relate to interconnectedness or legal, regulatory, operational or business impediments. The institution should indicate the options where board or regulatory approvals are required and the anticipated timelines for such approvals. It should also consider both the short-term market confidence in the institution and the long-term viability of its business model.

Provide a feasibility assessment for each recovery option, which includes:

- an assessment of the risk associated with the recovery option, drawing on any experience of executing the recovery option or an equivalent measure
- a detailed analysis and description of any material impediments to timely and successful execution of the recovery option as well as a description of whether and how these impediments can be effectively addressed
- where applicable, an analysis of potential impediments to the effective implementation of a recovery option which result from the structure of the institution or arrangements with SaskCentral, including whether there are substantial practical or legal impediments to the prompt transfer of own funds or the repayment of liabilities or assets within the institution
- how potential impediments could impact timelines in both idiosyncratic and system-wide stressed events
- corrective action required to address potential impediments identified as part of the feasibility assessment of recovery options (i.e., preparatory measures), and
- the main phases of implementation and the steps necessary to effect the recovery option. All steps should be documented in detail, including critical factors which might affect the timeframe for each phase. This then becomes the “playbook” that the institution will rely on during a crisis.

d. Scenario Stress Testing

Scenarios should appropriately reflect the vulnerabilities or key risks that management has identified through risk management processes and be sufficiently severe to threaten the institution’s viability through liquidity pressures, capital shortfalls and financial losses.

The 2007-2008 financial crisis provides a real-life example of a scenario that had far-reaching impacts on the financial sector, which resulted in economic downturns internationally, nationally and provincially. While Canadian financial institutions did not experience the same negative impacts seen in the U.S. and other countries, what happened in those countries provides a good outline for an extreme but plausible scenario.

Each scenario is based on a set of assumptions that provide additional details for the strategic analysis. For example, assumptions may include, but are not limited to:

- size and timing of outflows
- appropriate allocation of losses to different legal entities and balance sheet lines
- size and timing of maturing off-balance sheet obligations
- ability to rollover maturing liabilities
- reasonable expectations of inflows from operations
- potential credit rating downgrades (if applicable) and related impact on funding costs
- potential proceeds from execution of recovery options
- potential costs from the execution of recovery options

The institution should provide strategic analysis that describes the process of testing recovery options using specific scenarios for financial stress to determine which options are the most efficient in each scenario. The intent of this analysis is to provide a practical test of recovery option efficiency and the adequacy of indicators established. At least one scenario should be included for each of the following types of events:

- **system-wide event**: an event with risks having serious negative consequences for the financial system or the real economy
- **idiosyncratic event**: an event where risks have serious negative consequences for a single institution, or a group of institutions and
- **a combination of system-wide and idiosyncratic events** which occur simultaneously and interactively

The institution should give consideration to the risk associated with the failure of a third party to perform a critical function in support of the institution's core businesses. While these events in isolation may not require the institution to execute the recovery plan, they may intensify a crisis and potentially impact the viability of recovery options.

Linkages to liquidity and capital contingency plans should be clearly defined within the recovery plan. Scenario testing may provide additional insight into the feasibility of these plans when considered as a whole. Recovery planning necessitates a comprehensive analysis of the correlation between capital and liquidity. Consideration needs to be given to the impacts of recovery options from both capital and liquidity perspectives.

Capital analysis should include an assessment of current and potential allocations of capital needs and losses associated with each of the scenarios and outline some immediate steps to conserve capital and limit outlays. Liquidity analysis should include an assessment of inflows and outflows in different time buckets. The time buckets should be highly granular during the initial phase of the recovery and become more concentrated as the options are exercised – similar to the Net Cumulative Cash Flow liquidity monitoring tool. The analysis should also identify situations where there are multiple approaches to obtaining liquidity from the same assets and ensure that recovery options do not rely on conflicting approaches. Refer to Appendix D for additional information on stress testing.

For each type of event listed:

- provide a brief description of the scenario(s) using a recovery timeline with milestones for key events from the inception of the stress event to full recovery with specific reference to key indicators, triggers and impact on capital and liquidity positions. Please state all assumptions made
- identify recovery options which would be appropriate for the scenario
- explain the interdependencies between recovery options and clearly identify where recovery options are mutually exclusive
- discuss the potential impact of each recovery option, its feasibility, including the potential impediments to its implementation, and the time required for its implementation with respect to the applicable scenario
- provide an assessment of the impact of the events and the effectiveness of the recovery options on the following aspects of the institution:
    - available capital
    - available liquidity
    - risk profile
    - profitability
    - operations, including payment, clearing and settlement operations, and
    - reputation
- describe the overall recovery capacity of or the extent to which recovery options allow the institution to recover from severe macroeconomic and financial stress

3. Operational Continuity

Operational continuity is defined as the ability to continue critical shared services necessary to maintain the provision or facilitate the orderly wind-down of an institution's critical functions in recovery or resolution. To ensure continuity of an institution's critical functions, it is necessary to maintain parallel continuity of the services and contracts that underpin them.

Without the continuity of critical shared services, the continued provision of critical functions in recovery or resolution is unlikely to be possible. Critical shared services can be finance-related (e.g., treasury-related services, asset management, cash handling, risk management, valuation) or operational (e.g., IT infrastructure, software-related services, personnel and human resources support, facilities management, transaction processing).

This section is to provide an assessment of the institution's ability to continue operations if recovery options were implemented while the institution is experiencing capital and liquidity shortfalls. It draws on the legal, financial and operational structure of the institution and the interconnectedness of these elements as indicated in the Profile section of the recovery plan. Some of the information for this section can be found in the Profile – Legal and Financial Structures and Recovery Options/Strategies – Impact of Recovery Options sections.

According to the Financial Stability Board, there are a number of arrangements that can support operational continuity in resolution. These include, but are not limited to:

- **contractual provisions** – Institutions are expected to have clearly and comprehensively documented contractual arrangements and service level agreements

for both intra-group and third party critical shared services, which remain valid and enforceable in resolution provided payment obligations are not in default.
- **management information systems** – All arrangements should be supported by a clear catalogue of shared services and up-to-date mapping of services to companies, businesses and critical functions. These systems should allow for timely reporting on the provision or receipt of critical shared services on a legal entity and line of business basis, including information about ownership of assets and infrastructure, pricing, contractual rights and agreements, and outsourcing arrangements.
- **financial resources** – Intra-group providers of critical shared services, including where the services are provided within the regulated institution, should have sufficient financial resources to facilitate operational continuity of critical functions in resolution. Where an institution relies on third-party critical shared services, the service recipient should have sufficient financial resources to ensure that the third-party provider continues to be paid. Communication with a third-party service provider about continued payment can help manage the risks of early termination.
- **robust pricing structures** – Cost and pricing structures for services should be predictable, transparent and set on an arm's length basis with clear links, where relevant, between the original direct cost of the service and the allocated cost. The cost structure for services should not alter solely as a result of the entry into resolution of the service recipient.
- **operational resilience and resourcing –** Critical shared services should be operationally resilient and have sufficient capacity to support the restructuring phase following the failure of an institution(s) in the group. Institutions and the Corporation need to plan for the retention of critical employees necessary for the provision of critical shared services in resolution. Critical shared services should not be excessively affected by the failure or resolution of other group entities.
- **governance –** Critical shared services should have their own governance structure and clearly defined reporting lines. Where services are provided by a division of a regulated institution, this would entail some element of independent management and oversight at the board level. Critical shared services providers should have sufficient governance oversight or planning and contingency arrangements to ensure that services continue to be provided in resolution without relying on senior staff from certain business lines that may be wound down or that may no longer form part of the same group.
- **rights of use and access** – Access to operational assets by the critical shared services provider, the serviced institutions, business units and the Corporation should not be disrupted by the failure or resolution of any particular group entity. Continued access to IT, intellectual property and operational services during the restructuring period needs to be considered as part of resolution planning.

These types of arrangements can provide continuity to stabilize the institution or support wind-down and/or restructuring efforts in resolution.

The continuity of critical shared services is a crucial part of the process of identifying and removing impediments to recovery and resolution. Some of these impediments may include:
- complex technology
- ability to retain key employees, including those deemed essential to ensure operational continuity
- termination provisions in premises leases or third-party contracts
- contractual relationships within the institution's group or with third parties, including poorly designed or inadequate service level agreements
- lack of substitutability

All these impediments have the potential to cause significant disruption to the continuity of services in recovery and resolution. As a result, the impact of recovery options should be assessed by analyzing internal operations (e.g., information technology systems, suppliers, human resources) and access of the institution to payment, clearing and settlement systems. The assessment of operational continuity should take into account any arrangements and measures necessary to maintain the continuous functioning of the operational processes of the institution, including infrastructure and information technology systems.

- Identify and describe any external stakeholder relationships that may be impacted by implementing the institution's high-priority recovery options, including:
  - any arrangements necessary to maintain continuous functioning of operational or finance-related processes of the institution that are considered to be critical shared services
  - third party IT providers or other vendors that provide critical shared services
  - any contractual relationship considered to be a critical shared service where provisions of the contract give the provider a unilateral option to terminate the contract. Reasons for termination should also be provided.
- Explain special arrangements that would need to be made to these contracts to ensure that the underlying products or services remain available through recovery and resolution.
- Describe any other measures considered necessary to maintain continuous functioning of the operational and finance-related processes of the institution that are considered important to the delivery of critical functions throughout recovery and resolution.

As this section also serves as the foundation for the operational continuity section of the Corporation's resolution plan, it should clearly identify any external stakeholder relationships that may be impacted by the divestiture of non-core functions or other recovery actions. This includes any dependencies the institution has on third-party information technology providers or other vendors that have contractual clauses giving them a unilateral option to cancel in the event of the institution's deteriorating financial condition or other germane circumstances. It should also explain what special arrangements the institution would need to make to these contracts to ensure that the underlying products and services remain available throughout the crisis event or resolution phase. Any additional cost and how payments would be authorized, triggered and funded due to these special arrangements should also be discussed.

Where services are provided by an intra-group company or joint venture, analysis of the actual and stressed financial condition of this company with a view to assessing the ability to continue providing services through resolution, along with supplemental information including, but not limited to:

- balance sheet, income statement and statement of cash flows
- projected liquidity, capital and cash flows of the service company through stressed conditions, and
- description of liquidity reserves including instruments, amounts, currencies, account information and custody arrangements

Certain information related to human resources is also useful to ensure operational continuity of critical functions through the continued provision of critical shared services. This includes identifying important personnel or functions for each to ensure the delivery of the critical services, and the institution's processes for not only identifying, but also retaining these personnel.

- Identify staff, contract employees or functions required for each critical shared service or critical function, distinguishing between service and function.
- Describe the institution's processes for identifying and retaining critical personnel.
- Identify the company that employs the staff who provide critical shared services.
- Describe the institution's contingency options in the event that these critical personnel are not available.

4. Governance

To ensure that a recovery plan can effectively be implemented, it is essential to develop it on a sound governance structure and to integrate it in the overall corporate governance, strategic management, risk management framework, and Internal Capital Adequacy Assessment Process and stress testing regime of the institution. Regular measurement, monitoring and reporting processes captured in the risk management framework should include the indicators and triggers associated with the recovery plan.

a. Governance Arrangements and Frameworks

The institution should include information on how the recovery plan was developed.

- Describe the role and function of individuals responsible for preparing, implementing and updating each section of the plan.
- Provide schedules that indicate who was responsible for development and approval of the plan, including:
  - a schedule which provides: name, job title, team/department/business area, role in recovery plan (i.e., development, improvement, validation and approval)
  - a schedule which provides official governance bodies that reviewed the plan and approved it. Dates and names of accountable members should be noted
- Identify the person who has overall responsibility for keeping the recovery plan up-to-date, including testing processes, and a description of the maintenance process used to update the plan in response to any material changes affecting the institution or lessons learned from testing the plan.
- Describe how the plan is integrated with the institution's and/or group's corporate governance and overall risk management framework.

b. Escalation Procedure/Processes

Recovery plans are crucial for assessing the feasibility of recovery options. Therefore, a recovery plan should contain information on the decision-making process with regard to its activation as an essential element of the governance structure, based on an escalation process using recovery plan indicators.

Since each crisis is different, the materialization of an indicator does not automatically activate a specific recovery option in accordance with its predetermined procedural requirements. Rather, indicators (and the trigger of a predetermined threshold for that indicator) should be used to indicate that an escalation process should be set in motion and result in an analysis to determine the best way to address a crisis situation. The institution's crisis management team should have the authority and resources necessary to support decisive responses during a crisis event.
Before indicators materialize, data and benchmarks used in regular risk management should be used to inform the institution of the risk of deterioration of its financial situation and of the indicators being triggered. While such early warning signals do not indicate entry into the recovery phase or require escalation outside business as usual processes, they help to ensure consistency between the institution's regular risk management processes and monitoring of these indicators.

The recovery plan should therefore contain a description of how suitable elements of the institution's risk management are connected with the indicators.

- Describe the internal escalation and decision-making process that applies when the indicators have been met or triggered to consider and determine which recovery option may need to be applied in reaction to the situation of financial stress that has materialized, including:
  - the role and function of individuals involved in this process along with a description of their responsibilities or the role, responsibilities and function of committee members where a committee is involved
  - the procedures to be followed
  - time limit for the decision on taking recovery options and when and how the Corporation will be informed that the indicators have been met
- Explain how the recovery plan aligns with the institution’s risk management framework, including a description of the relevant benchmarks (i.e., early warning signals/risk dashboards) used as part of the institution's or group's regular internal risk management process and risk appetite framework, and integration with the strategic management process, and
- Provide a list of management information systems along with a description of arrangements in place to ensure that the information necessary to implement the recovery option is available for decision-making in stressed conditions in a reliable and timely way.

5. Communication Plan

A comprehensive crisis communication plan specifically tailored to crisis situations is an important component of a recovery plan. A well-planned communication strategy is essential to:

- instill confidence
- avoid actions that could hamper the recovery process
- ensure stakeholders have the information needed to continue to do business with the institution
- avoid contagion
- maintain financial stability

A crisis communication plan should provide an actionable playbook for management that allows for timely notification of all relevant stakeholders. Key elements of a communication plan include generic messages intended to reassure both internal and external stakeholders of the institution’s resilience and specific messages related to execution of individual recovery options or groups of options. It is anticipated that institutions already have communication plans in place as part of existing risk or crisis management processes. These plans and key messages can be leveraged in recovery plans.

It is important that the institution engages with external stakeholders, including the Corporation, to ascertain the degree of communication and reporting that will be required based on the severity of the crisis and the recovery option(s) chosen. The nature, scope and granularity of communication with the Corporation should be comprehensively documented. As part of the crisis communication plan development, any competing priorities between stakeholders should be identified and strategies documented to effectively manage these situations.

- Provide details of the process for internal communication with the institution’s staff and board of directors in the event of a crisis.
- Provide details of processes for communication with external stakeholders, including SaskCentral (where appropriate), members, customers, the Corporation and the public.
- Provide an analysis of how the communication would be implemented when one or more of the recovery options contained in the recovery plan are implemented, including an list of key messages.

6. Information Requirements

Information requirements in times of crisis will differ from those of business as usual. The institution should have a defined process for the timely collection of data during a severe stress event.

The institution should describe how its data needs and reporting requirements would be impacted as it moves from business as usual to recovery mode. This may include the requirement for data on a more frequent basis, additional data and reporting and what would be required to accomplish this. Based on its current data aggregation and reporting procedures, the institution should assess the gaps in data availability that would exist during a recovery event. The institution should outline a strategy to overcome such gaps in a timely manner.

- Clearly articulate the institution’s capabilities, challenges and remedial actions related to:
  - the frequency with which reliable, relevant data can be accessed
  - reporting requirements internally and how they may increase at various stages of a severe stress event
  - reporting to external stakeholders, including the Corporation
  - dependencies on external data providers or manual data input

The individuals responsible for making key decisions based on the data reported should be specified. The decisions they are expected to make with this information should also be provided.

7. Preparatory Measures and Impediments

This section includes any identified impediments that could jeopardize a successful recovery. One of the goals of preparatory measures is to reduce the implementation time for execution of recovery options. While some of these potential impediments will be identified in scenario analyses, others will become apparent through tabletop and simulation exercises. Consideration should be given to whether selling some of the institution's assets would pose an unacceptably high reputation risk, which could potentially reduce the number of available recovery options.

When potential impediments are identified, including those indicated in the Recovery Options – Feasibility Assessment of Recovery Options section of the recovery plan, the institution should endeavour to address them in a timely manner. Action plans to be undertaken to address impediments and enhance the feasibility of future iterations of the recovery plan should be included in this section.

- List and describe impediments identified in the feasibility assessment and actions planned or taken to address them.
- List and describe impediments identified impediments identified through scenario analyses and actions planned or taken to address them.
- List and describe impediments identified through simulation or table top exercises and actions planned or taken to address them.

Some examples of preparatory measures might include:

- measures necessary to facilitate the sale of assets or business lines
- structural changes to the group that are necessary to increase the credibility and effectiveness of the recovery plan
- revision of contractual arrangements with intra-group entities or third-party providers for the provision of critical shared services

APPENDIX B - CRITICAL FUNCTIONS AND CRITICAL SHARED SERVICES

1. Examples of Critical Functions

Examples of activities, services or operations of an institution that may be considered critical functions include:

- Deposit taking
  - consumer
  - agricultural
  - commercial
  - transaction accounts
  - saving accounts
- lending and loan servicing
  - consumer
  - agricultural
  - commercial
  - committed credit facilities
  - trade finance
  - project finance
  - credit card lending
- payments, clearing, custody and settlement
  - retail payment services
    - cash services
    - wire transfers
    - merchant/credit card services
    - cheques
    - single currency, foreign exchange
  - clearing and settlement services
    - cash
    - foreign exchange
    - debt
  - custody
    - primary custody
    - other related services
      - safekeeping
      - treasury and cash management services (i.e., short-term investing)
      - Financial Market Infrastructure access for financial third parties
      - collateral management for third parties
- wholesale lending/borrowing
  - central bank/treasury lending
  - commercial paper
  - statutory liquidity deposits
  - money market funds
  - line of credit

2. Assessment of Critical Functions

a. Impact Assessment

The criticality of a function is determined by meeting two criteria: systemic importance and substitutability.

To determine whether the first criterion (i.e., systemic importance) is met, an assessment of the potential impact on third parties of a function's sudden discontinuance, focusing on systemic importance, should take into consideration:

- the nature and reach of the activity in terms of the type of function (product/service), the size (volume/number of transactions) and geographic scope of the activity, the number of market participants involved (members and customers/counterparties) and the number of members and customers for which the institution is the only, or principal, financial partner
- the significance of the institution's market share, interconnectedness and complexity for the relevant market at a regional level
- the number and type of members and customers (corporate/retail/other financial institutions) and other stakeholders (e.g., central counterparties, public entities) affected by the function and
- the potential impact of the disruption of the function on markets, infrastructure, members, customers, and public services, focusing on market liquidity with respect to:
  - disruption of the members' and customers' business and short-term liquidity needs
  - the perceptibility to counterparties, members, customers and the public
  - the structure of other markets
  - the effect on other counterparties related to the main customers and
  - the interrelation of that function to other services

The Corporation will evaluate the institution's assessment (going concern), taking into consideration the specific characteristics of the organization, the market for that function and the overall characteristics of the relevant economy and financial market. Based on the mapping and aggregation of critical functions, the Corporation should be in a position to prioritize these functions in order of criticality and design and optimize resolution strategies accordingly (gone concern).

b. Supply-Side Analysis

To determine whether the second criterion (i.e., substitutability) is met, an assessment of the supply-side is used to evaluate the market for the provision and substitutability of the function. This assessment focuses on:

- the structure of the market for that function (e.g., in terms of number and relevant size of market participants, market shares and overall market capacity) and the availability of substitute providers
- the ability of other providers in terms of capacity, the requirements for performing the function, and potential barriers to entry or expansion (e.g., legal and regulatory hurdles for potential new entrants or switching costs for members and customers)

- the incentive of other providers to take on these activities (i.e., the attractiveness of the business to other market participants or potential new entrants) and
- the time required by users to migrate to a new provider, the costs of that move, the time required for other market participants to take over the function, and whether that time is sufficient to prevent significant disruption

3. Determination of Critical Shared Services

Critical service examples may include, but are not limited to: the provision of information technology, facility management and administrative services. Determination of critical shared services includes:

- an analysis of the impact of the failure of a particular service on one or more critical functions (impact assessment). A service is deemed to be critical only when its failure or malfunction would lead to the collapse of, or create a service impediment to, the performance of one or more critical functions by the user of that service and
- an assessment of the substitutability of that service (supply-side analysis) considering, in particular, whether or how critical functions would be adversely affected, whether or how the service would be replaced and, if so, on what terms and within what time frame

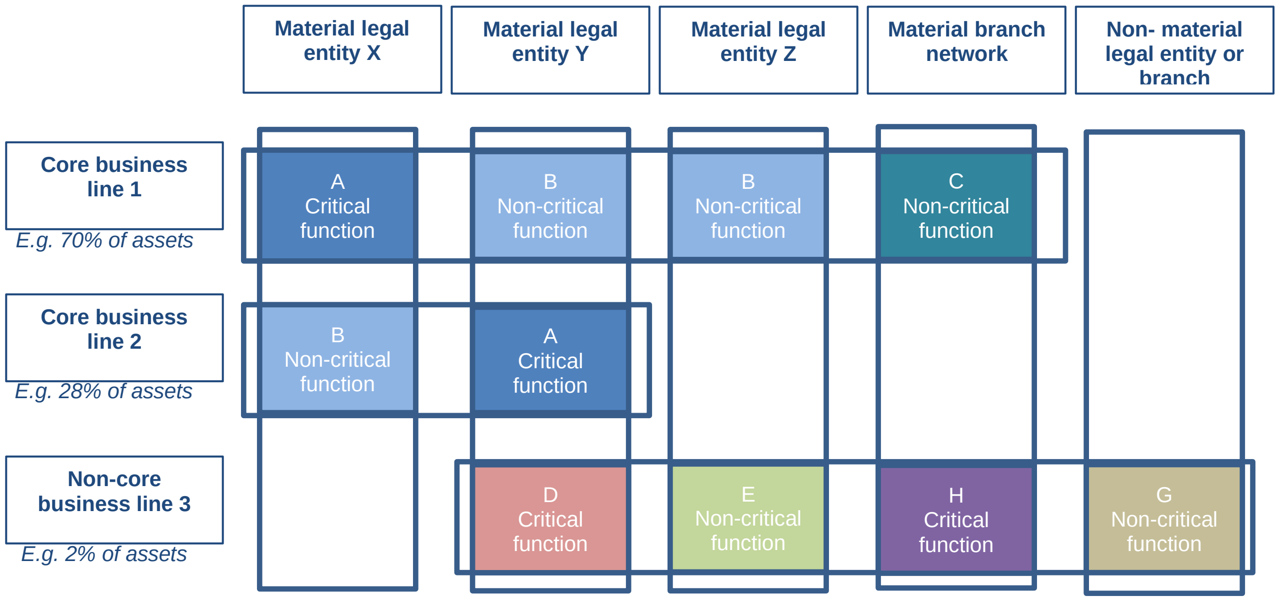
The designation as a critical service is based on the identification and mapping of critical functions to the units that provide that service.

4. Mapping of Legal Entities and the Branch Network

For purpose of the mapping of legal entities and the branch network in the Profile - Legal and Financial Structures section of the recovery plan, legal entities and the branch network are understood to be entities that:

- substantially contribute to the profit of the institution or to its funding, or hold an important share of its assets, liabilities or capital
- perform key commercial activities
- centrally perform key operational, risk or administrative functions
- bear substantial risks that could, in a worst-case scenario, jeopardize the viability of the institution
- cannot be disposed of or liquidated without likely triggering a major risk for the institution
- are important for financial stability

This diagram provides an example of mapping for legal entities and the branch structure.



a. Internal/Inter-Group Connectedness

i. Legal and Financial Interconnectedness

The description of the institution's legal and financial structures should include an explanation of internal/inter-group interconnectedness as it pertains to any legal entities or its branch network. The description should provide:

- relevant qualitative and quantitative information for legal entities and the branch network:
  - financial (i.e., assets, liabilities, income and expenses)
  - capital and liabilities structure, including capital flows within or between entities
  - internal/inter-group exposures or funding relationship
  - internal/inter-group guarantees or other financial support mechanisms
- legal interconnectedness where legally binding agreements between internal entities other than guarantees exist.

ii. Operational Interconnectedness

The description of internal operational interconnectedness should include centralized functions within a legal entity or in one legal entity that are important for the functioning of other legal entities within the group (e.g., centralized information technology, treasury, risk and administrative functions).

b. External Connectedness

i. Legal and Financial Interconnectedness

The description of any external interconnectedness should include key quantitative information including:

- significant exposures and liabilities to main counterparties
- products or services provided to other financial market participants and
- significant services which third parties provide to the institution

It should also include legal interconnectedness where legally binding agreements between the institution and external entities or third parties exist with specific reference to the financial market infrastructure (for SaskCentral) and SaskCentral (for credit unions) as a separate sub-section.

ii. Operational Interconnectedness

The description of external operational interconnectedness should include functions that are important for the functioning of the institution (e.g., information technology, treasury, risk and administrative functions).

The description of external operational interconnectedness related to financial market infrastructure and SaskCentral (for credit unions) should be provided in separate sub-sections.

APPENDIX C - RECOVERY PLAN INDICATORS AND TRIGGERS

1. Calibration of Triggers

An institution's triggers should be calibrated so that they provide sufficient notice to allow the institution to take corrective action and for the Corporation to begin appropriate contingency planning and assess the need to take early intervention measures. Regardless of how the triggers are calibrated, they should not be linked to inherently lagging metrics.

When setting quantitative recovery plan indicators and triggers, the institution should consider using progressive metrics, similar to a traffic light approach, to inform management. Early warning thresholds would then be set at green to amber, but the trigger points would be calibrated at amber to red, closer to the end of the severity spectrum.

2. Integration into Existing Risk Management Framework

Triggers for recovery planning should be incorporated into an institution's overall risk management framework[1]. Recovery triggers are to be aligned with, but not be limited to, existing triggers for liquidity or capital contingency plans, early warning indicators and the institution's risk appetite.

Indicators generally are not linked to specific compulsory recovery actions. As indicated in the Governance section, the breach of a trigger does not automatically activate a specific recovery option, but will typically require attention by senior management or the board so that an appropriate response can be made on a case-by-case basis. It may also require the institution to discuss with the Corporation whether a particular recovery action set out in the recovery plan should be implemented. When the Corporation assesses the recovery plan, it reviews the suitability of indicators and thresholds set to trigger the escalation process.

3. Monitoring Indicators and Triggers

The institution should put in place processes for regularly monitoring recovery plan indicators. It is expected that these indicators are integrated with the institution's risk aggregation and reporting. Indicators should be included in management information systems to ensure the institution can readily identify early warning signals and take appropriate measures in a timely manner to restore its financial position following a significant deterioration. This also allows for timely submission of the indicators to the Corporation. It is recognized that the risks faced by institutions vary significantly depending on business and funding models, activities and structures, size and interconnectedness to other institutions or to the financial system.

4. Quantitative Indicators

If a recovery plan trigger is not relevant for the institution, it can be substituted with another trigger which is more relevant. The institution may choose to include additional triggers such as the ones listed on the next page. *Additional triggers are optional.*

[1] Triggers should be incorporated in the appropriate policies and risk management practices and consider their relationship to risk appetite/tolerance/capacity statements

a. Capital Indicators

- Capital indicators should identify any significant actual and likely future deterioration in the quantity and quality of capital as a going concern.
- The capital indicators should also be integrated into the institution’s Internal Capital Adequacy Assessment Process (ICAAP), and its existing risk management framework.
- The thresholds should:
  - be calibrated based on the institution’s risk profile and on the time needed to activate the recovery measures
  - consider the recovery capacity resulting from those measures and
  - take into account how quickly the capital situation may change, given the institution's individual circumstances
- The thresholds for indicators based on regulatory capital requirements should be calibrated to ensure a sufficient cushion from a breach of the capital requirements (including minimum requirements without taking into consideration buffer requirements).
- Capital indicators include:
  - Eligible Capital ratio
  - Borrowing Multiple
  - Leverage ratio
  - Additional indicators such as:
    - Tier 1 Capital/Eligible Capital
    - Adverse information on the financial position of significant counterparties

b. Liquidity Indicators

- Liquidity indicators should be able to inform an institution of the potential for, or actual deterioration of the capacity to meet its current and foreseen liquidity and funding needs.
- The institution's liquidity indicators should refer to both the short-term, long-term liquidity and funding needs of the institution. It should also capture the institution’s dependence on wholesale market/brokered deposits (if applicable) and retail deposits, distinguishing among foreign currencies, where material.
- The liquidity indicators should be integrated with the strategies, policies, processes and systems developed by the institution and its existing risk management framework.
- The liquidity indicators should also cover other potential liquidity and funding needs, such as those stemming from off-balance structures.
- The thresholds identified by the institution should be calibrated on the basis of its risk profile and should take into account how quickly the liquidity situation may change, given the institution's individual circumstances.
- The thresholds should also be calibrated based on the time needed to activate the recovery measures and consider the recovery capacity resulting from those measures. Indicators should be calibrated at adequate levels to inform the institution of potential and/or actual risks of not complying with minimum regulatory requirements.
- Liquidity indicators:
  - Liquidity Coverage Ratio (LCR)
  - Net Cumulative Cash Flow metric
  - Cost of wholesale/brokered deposits
  - Additional indicators such as:
    - Loans to Deposits ratio
    - Concentration of liquidity and funding sources
    - Cost of total funding

- Average tenure of retail and wholesale/brokered deposit funding
- Contractual maturity mismatch
- Available unencumbered assets

c. Profitability Indicators

- Profitability indicators should capture any source of income that could lead to a rapid deterioration in the institution's financial position through lowered retained earnings (or losses) impacting the institution's funds.
- This category should include recovery plan indicators pertaining to operational risk-related losses which may have a significant impact on the income statement, including, but not limited to, conduct-related issues, external and internal fraud and other relevant events.
- Profitability indicators:
  - Return on Assets
  - Net Interest Margin
  - Significant operational losses
  - Additional indicators such as:
    - Operating Costs to Operating Income ratio
    - Efficiency ratio

d. Asset Quality Indicators

- Asset quality indicators should measure and monitor the asset quality evolution of the institution. More specifically, they should indicate when asset quality deterioration could lead to the point at which the institution should consider taking an action described in the recovery plan.
- Asset quality indicators may include both a stock and a flow ratio of non-performing exposures in order to capture their level and dynamics.
- Asset quality indicators should consider off-balance sheet exposures and the impact of non-performing loans on the asset quality.
- Asset quality indicators:
  - Growth rate of non-performing loans
  - Coverage ratio (Provisions/Total non-performing loans)
  - Additional indicators such as:
    - Net Non-Performing Loans/Tier 1 Capital
    - Gross Non-Performing Loans/Total Loans
    - Growth rate of impairments on financial assets
    - Non-performing loans by significant sector concentration

e. Market-Based Indicators

- Market-based indicators aim to capture the expectations of market participants of a rapidly deteriorating financial condition of the institution that could potentially lead to disruptions in access to funding and capital. In accordance with this objective, the framework of qualitative and quantitative indicators should refer to the following types of indicators:
  - Equity-based indicators which capture variations in the share price of listed companies, or ratios that measure the relationship between the book and market value of equity
  - Debt/liability-based indicators, capturing expectations from wholesale funding/brokered deposit providers such as credit default swaps or debt spreads
  - Portfolio-related indicators, capturing expectations in relation to specific asset classes relevant to each institution (e.g. real estate, commercial, agriculture)

- Rating downgrades (long term and/or short term) as they reflect expectations of rating agencies that can lead to rapid changes in expectations of market participants of the institution’s financial position.
- Qualitative indicators:
  - Difficulty attracting deposits at current market rates
  - An unexpected loss of senior management
  - Adverse court rulings
  - Negative market press
  - Significant reputational damage

f. Macro-Economic Indicators

- Macroeconomic indicators should capture signals of deterioration in economic conditions in regions where the institution operates or has concentrations of exposures or funding.
- Macroeconomic indicators should be based on metrics that influence the performance of the institution in specific business sectors that are materially relevant.
- Macroeconomic indicators should include the following:
  - Geographical macroeconomic indicators relating to the regions to which the institution is exposed and also giving consideration to risks stemming from potential legal barriers
  - Sectoral macroeconomic indicators relating to major specific sectors of economic activity to which the institution is exposed (e.g. real estate, commercial, agriculture)

Market-based and ***macro-economic indicators*** are optional if information is not readily available and/or they are not relevant to the institution.

APPENDIX D – DESIGNING STRESS SCENARIOS

The objective of a recovery plan is not to forecast the factors that could prompt a crisis, but to identify the recovery options that might be available to counter those factors, and to assess whether options are robust enough and their nature is sufficiently varied to cope with a wide range of differing shocks.

Scenarios of severe macroeconomic and financial distress should be designed in a way that would threaten the failure of the institution if recovery measures were not implemented in a timely manner. However, given that the goal of a recovery plan is to prove the institution's capacity to restore its viability, these scenarios should be designed as near-default events. That is, they should bring the institution close to failure, but no further.

Each scenario should be designed with the following in mind:

- It is based on events most relevant to the institution, taking into account, among other relevant factors, its business and funding model, its activities and structure, its size and/or its interconnectedness to other institutions (financial or otherwise) or to the financial system in general, and any identified vulnerabilities or weaknesses of the institution
- The events foreseen in the scenario would threaten to cause the failure of the institution, unless recovery measures are implemented in a timely manner and
- It is based on events that are extraordinary, but plausible

The number of scenarios should be commensurate with the nature of the business of the institution or its group, its size, its interconnectedness with other institutions (financial or otherwise), the financial system and funding models.

The range of scenarios should include both **slow-moving** and **fast-moving** adverse events.

The institution should consider reverse stress testing as a starting point when developing scenarios that are near-default.

1. System-wide events

When designing scenarios for system-wide events, the institution should consider the relevance of:

- the failure of significant counterparties affecting financial stability
- a decrease in liquidity available from SaskCentral or other market sources
- adverse movements in the price of assets in one or several markets and
- a macroeconomic downturn

2. Idiosyncratic events

When designing scenarios for idiosyncratic events, the institution should consider the relevance of:

- the failure of significant counterparties
- damage to the institution’s reputation
- a severe outflow of liquidity
- adverse movements in the prices of assets to which the institution is predominantly exposed
- severe credit losses and
- a severe operational risk loss