Recovery Planning
Exposure Draft

Applicable to:
1. Financial holding companies
2. Licensed banks
3. Licensed Islamic banks
4. Licensed investment banks

Issued on: 17 January 2020

BNM/RH/ED 029-16
This exposure draft sets out the Bank’s expectations and policy requirements on the development and maintenance of recovery plans.

Submission of feedback –

a. The Bank invites written feedback on the proposed policy framework, including suggestions on areas to be clarified and alternative proposals that the Bank should consider. The written feedback should be constructive and supported with clear rationale, including accompanying evidence, empirical analysis or illustrations where appropriate; and

b. In addition to providing general feedback, financial institutions are requested to respond to specific questions set out throughout this exposure draft.

Responses to the exposure draft must be submitted by 31 March 2020 to –

Pengarah
Jabatan Pemantauan dan Pengawasan Kewangan
Bank Negara Malaysia
Jalan Dato’ Onn
50480 Kuala Lumpur
Email: rrp@bnm.gov.my

Electronic submission is encouraged. Feedback received may be made public unless confidentiality is specifically requested for the whole or part of the submission.

In the course of providing your feedback, financial institutions may direct any queries through email to rrp@bnm.gov.my
# TABLE OF CONTENTS

**GLOSSARY** ........................................................................................................................................................................... 2

**PART A  OVERVIEW** ................................................................................................................................................................. 4

1. Introduction ............................................................................................................................................................................... 4

2. Applicability ............................................................................................................................................................................. 5

3. Legal provisions ....................................................................................................................................................................... 5

4. Effective date ........................................................................................................................................................................... 5

5. Interpretation ........................................................................................................................................................................... 6

6. Related legal instruments and policy documents ......................................................................................................................... 8

**PART B  POLICY REQUIREMENTS** ........................................................................................................................................ 9

7. Level of application ................................................................................................................................................................. 9

8. General requirements .............................................................................................................................................................. 9

9. Reporting requirements ......................................................................................................................................................... 11

10. Executive summary ............................................................................................................................................................ 12

11. Strategic analysis ............................................................................................................................................................... 12

12. Governance structure and oversight ........................................................................................................................................ 21

13. Recovery indicators ............................................................................................................................................................ 23

14. Recovery options ............................................................................................................................................................... 26

15. Scenario analysis ............................................................................................................................................................... 31

16. Communication and disclosure plan ................................................................................................................................... 35

17. Preparatory measures .......................................................................................................................................................... 36

**APPENDICES** ........................................................................................................................................................................ 37

APPENDIX 1 List of reporting templates .................................................................................................................................. 37

APPENDIX 2 Information on business models and core business lines ...................................................................................... 38

APPENDIX 3 List of potential critical functions ......................................................................................................................... 39

APPENDIX 4 List of potential operational services ..................................................................................................................... 40

APPENDIX 5 Information on critical functions and critical shared services .................................................................................. 41

APPENDIX 6 Information on governance .................................................................................................................................. 42

APPENDIX 7 List of potential recovery indicators ........................................................................................................................ 43

APPENDIX 8 List of potential recovery options .......................................................................................................................... 43

APPENDIX 9 Information on each recovery option ...................................................................................................................... 45

APPENDIX 10 Information on scenario design and scenario analysis ........................................................................................... 46

Issued on: 17 January 2020
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAU</td>
<td>Business-as-usual</td>
</tr>
<tr>
<td>FHC</td>
<td>Financial holding company</td>
</tr>
<tr>
<td>FMI</td>
<td>Financial market infrastructure</td>
</tr>
<tr>
<td>FSA</td>
<td>Financial Services Act 2013</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>IFSA</td>
<td>Islamic Financial Services Act 2013</td>
</tr>
<tr>
<td>IPO</td>
<td>Initial public offering</td>
</tr>
<tr>
<td>Key Attributes</td>
<td>Financial Stability Board’s Key Attributes of Effective Resolution Regime for Financial Institutions</td>
</tr>
<tr>
<td>PIDM</td>
<td>Perbadanan Insurans Deposit Malaysia</td>
</tr>
<tr>
<td>RRP</td>
<td>Recovery and resolution planning</td>
</tr>
<tr>
<td>SE</td>
<td>Significant entities</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium enterprises</td>
</tr>
</tbody>
</table>
PART A OVERVIEW

1 Introduction

1.1 The Bank, in collaboration with PIDM, has established a policy framework to implement RRP for financial institutions in Malaysia, in line with Key Attributes. The RRP framework seeks to put in place an effective and efficient process to enhance supervisability, recoverability and resolvability of financial institutions, by incorporating essential elements of Key Attribute 11 of the Key Attributes into the domestic regulatory, supervisory and resolution regimes.

1.2 The RRP framework aims to –
   (a) facilitate the preparation and maintenance of robust recovery plans by financial institutions which serve as a strategic planning tool that –
      (i) integrates with the risk appetite framework† and reinforces risk management functions; and
      (ii) strengthens incentives to establish private-sector arrangements to recover from a wide range of stress events;
   (b) enhance capacity and preparedness of supervisory authorities to –
      (i) facilitate ex ante changes to financial institutions’ business structure and operations to improve group-wide supervisability and recoverability;
      (ii) support the smooth execution of recovery plans;
      (iii) inform calibration of timely intervention and resolution actions should recovery options be inadequate to address viability threats; and
      (iv) support effective supervisory cooperation and crisis management arrangements with host and home authorities;
   (c) strengthen capacity and preparedness of resolution authorities‡ to improve resolvability of financial institutions and operationalise feasible and credible resolution plans that –
      (i) preserve continuity of critical functions to support the financial intermediation process, orderly market conditions and maintain public confidence in the financial system;
      (ii) promote resolution strategies that minimise risks of loss to public funds and costs to the financial system, destruction of franchise value and moral hazard; and
      (iii) provide for procedural/legal clarity to ensure orderly resolution in home and host jurisdictions.

1.3 This policy document sets out key principles, requirements and supervisory expectations on the development and maintenance of recovery plans. Financial institutions are to identify and plan for the execution of a suite of

† This refers to the risk appetite framework as described in the Bank’s policy document on Risk Governance and the Financial Stability Board’s Principles for an Effective Risk Appetite Framework.
‡ In respect of banking institutions, PIDM is the resolution authority of licensed banks and licensed Islamic banks. The Bank is the resolution authority for licensed investment banks.

Issued on: 17 January 2020
recovery options to restore long-term viability under a range of idiosyncratic and system-wide stress events. It should not take into account the possibility of policy intervention by authorities, or access to any exceptional financial support from public funds.

1.4 The Bank expects recovery planning to be an iterative and evolving process, with financial institutions reviewing their recovery plan on an ongoing basis. To this end, the Bank will continuously engage with financial institutions to clarify the Bank’s expectations on recovery planning as part of ongoing supervision.

1.5 In the extreme event that a financial institution has no reasonable prospect for recovery (i.e. the institution is likely to become non-viable and implementation of recovery options is not feasible or has proven to be ineffective), a resolution plan would be deployed to ensure that the financial institution is resolved in an orderly manner, i.e. a manner that mitigates the impact on financial stability and minimises losses to public funds. Resolution planning seeks to facilitate the effective use of available resolution powers by enabling resolution authorities to identify in advance a feasible and credible resolution strategy for each financial institution and an operational plan for its implementation.

1.6 To achieve this, the information and assessment contained in the recovery plans will serve as an important starting point for resolution authorities\(^3\) to-

(a) determine a preferred resolution strategy that is tailored to the specificities of each financial institution; and

(b) conduct a resolvability assessment.

2 Applicability

2.1 This policy document is applicable to financial institutions as set out in paragraphs 7.1 to 7.2.

3 Legal provisions

3.1 This policy document is issued pursuant to –

(a) sections 47(1), 143(1) and 266 of the FSA; and

(b) sections 57(1), 155(1) and 277 of the IFSA.

4 Effective date

4.1 This policy document comes into effect on [to be advised].

\(^3\) Further guidance on this will be issued by PIDM.
5 **Interpretation**

5.1 The terms and expressions used in this policy document shall have the same meanings assigned to them in the FSA and IFSA, as the case may be, unless otherwise defined in this policy document.

5.2 For the purpose of this policy document –

- “S” denotes a standard, an obligation, a requirement, specification, direction, condition and any interpretative, supplemental and transitional provisions that must be complied with. Non-compliance may result in enforcement action;

- “G” denotes guidance which may consist of statements or information intended to promote common understanding and advice or recommendations that are encouraged to be adopted;

- “banking institution” refers to a licensed bank, a licensed Islamic bank, and/or a licensed investment bank;

- “board” refers to the board of directors of a financial institution;

- “core business lines” refer to business lines that are significant to a financial institution as described in paragraphs 11.7 and 11.8;

- “covered entities” refer to a financial institution and its financial and non-financial subsidiaries, including insurance and/or takaful subsidiaries as set out in paragraph 7.1;

- “early warning phase” refers to a phase when one or more early warning thresholds have been breached and a conscious decision has been made by the financial institution to intensify monitoring and/or prepare to implement appropriate recovery options;

- “early warning threshold” refers to the threshold set for a recovery indicator that would alert/prompt a financial institution of its deteriorating financial position. A breach of this threshold may form the basis for intensified monitoring and/or preparation to implement appropriate recovery options;

- “financial group” refers to a group of related corporations under a financial holding company or banking institution;

- “FHC” refers to a financial holding company approved by the Bank under section 112(3) of the FSA or section 124(3) of the IFSA;

- “financial institution” refers to a banking institution and financial holding company, as the case may be;

- “financial subsidiary” refers to any entity, whether incorporated in or outside Malaysia, engaged predominantly in, or acquiring holdings in other entities engaged predominantly in, any of the following activities: banking,
insurance, takaful, provision of credit, securities broking, fund management, asset management, leasing, and factoring and similar activities that are in connection with or for the purposes of the conduct of these activities;

“Islamic entity” refers to a licensed Islamic bank, a licensed takaful operator, and a licensed bank and licensed investment bank approved under section 15(1)(a) of the FSA to carry on Islamic banking business;

“operational service” refers to a service, activity or operation which does not generate direct revenue for a financial institution, but supports other revenue-generating business activities of that financial institution;

“preferred recovery strategy” outlines a combination or sequence of feasible recovery options that a financial institution deems to be the most credible and effective to address a specific stress scenario developed for its recovery plan;

“recovery capacity” refers to the ability of a financial institution to restore its financial viability following a significant financial deterioration using appropriate recovery options without the need for intervention by supervisory and/or resolution authorities;

“recovery indicators” refer to a range of quantitative and qualitative indicators used to denote the degree of financial deterioration of a financial institution based on appropriate early warning and recovery thresholds as set out in paragraphs 13.2 and 13.3;

“recovery options” refer to a range of actions and measures to maintain or restore viability and the financial position of a financial institution;

“recovery phase” refers to a phase when one or more recovery thresholds have been breached and a conscious decision has been made by the financial institution to activate the recovery plan;

“recovery plan” refers to the plan prepared and maintained by a financial institution based on the requirements set out in this policy document;

“recovery planning process” refers to the entire lifecycle of the recovery plan, which comprises the development, approval, maintenance, monitoring, escalation, activation and implementation of the recovery plan;

“recovery threshold” refers to the threshold set for a recovery indicator to indicate the point at which a financial institution’s financial position has deteriorated to such an extent that appropriate recovery options may be necessary to restore the financial soundness and viability of a financial institution. A breach of this threshold may form the basis for the activation of the recovery plan;

“senior management” refers to the senior officers of a financial institution;
“senior officers” refers to the senior officer definition in Section 2 of the FSA and IFSA, and includes the chief executive officer;

“SE” refers to an entity of a financial group that is a licensed person under the FSA or IFSA, plays a material role in the business or operations of the financial institution and/or is designated or deemed to be systemically important to the jurisdiction it operates in, as set out in paragraph 11.4.

6 Related legal instruments and policy documents

6.1 This policy document must be read together with other relevant legal instruments, policy documents, guidelines, codes, or circulars, in particular –

(a) Approach to Regulating and Supervising Financial Groups;
(b) Business Continuity Management (Revised);
(c) Capital Adequacy Framework for Islamic Banks (CAFIB) – Internal Capital Adequacy Assessment Process (Pillar 2);
(d) Corporate Governance;
(e) Outsourcing;
(f) Restricted Committed Liquidity Facility;
(g) Risk Governance;
(h) Risk-Weighted Capital Adequacy Framework (Basel II) – Internal Capital Adequacy Assessment Process (Pillar 2);
(i) Shariah Governance; and
(j) Stress Testing.
PART B  POLICY REQUIREMENTS

7  Level of application

S 7.1 The requirements set out in this policy document shall apply to financial institutions on a consolidated basis. For the purpose of this policy document, this shall include the global operations of –

(a) the financial institution; and

(b) all its financial and non-financial subsidiaries, including insurance and/or takaful subsidiaries.

S 7.2 For a financial group comprising multiple financial institutions operating in Malaysia, the requirements set out in this policy document shall apply to the FHC or the apex banking institution of the group registered in Malaysia. Such entity shall prepare a consolidated group recovery plan, which shall be submitted to the Bank in the manner stipulated in section 9 of this policy document.

8  General requirements

S 8.1 A financial institution shall prepare a recovery plan that consists of the following components –

(a) executive summary;

(b) strategic analysis;

(c) governance structure and oversight;

(d) recovery indicators;

(e) recovery options;

(f) scenario analysis;

(g) communication and disclosure plan; and

(h) preparatory measures.

S 8.2 A financial institution shall ensure that the level of detail and depth of analysis in the recovery plan is proportionate to –

(a) its size, nature and structure of business;

(b) the complexity and substitutability of its activities (including the scale of cross border operations); and

(c) the degree of intra-group and external dependencies and systemic interconnectedness with the economy and core components of the financial system (e.g. financial markets and FMIs).

The analyses conducted must be supported by robust quantitative metrics, qualitative evidence supplemented by realistic, evidence-based projections.

S 8.3 The recovery planning process must be integrated into the overall risk appetite, strategic planning and risk management frameworks of financial institutions (Figure 1) and forms an integral part of its enterprise-wide risk management activities. Such integration is essential for timely identification of stress events, and the formulation of actionable and credible recovery options to ensure a

---

4 This includes overseas branch operations.

Issued on: 17 January 2020
financial institution is well-positioned to respond to viability threats, regardless of their origin.

S 8.4 In preparing a recovery plan, a financial institution shall take into account recovery plans developed by its foreign branches/subsidiaries (if any) as well as group-wide recovery plans developed by its parent entity (for locally-incorporated foreign financial institutions) to ensure coherence and alignment of recovery plans across jurisdictions.

S 8.5 A financial institution must ensure that the recovery plan involving Islamic entities adheres to Shariah requirements, including matters specific to Islamic financial transactions which may have an impact on the development and implementation of the recovery plan.

Figure 1 – Stylised illustration of interlinkages between recovery planning components with risk appetite and risk management frameworks

ICAAP – Internal Capital Adequacy Assessment Process
ILAAP – Internal Liquidity Adequacy Assessment Process

5 Figure 1 provides conceptual guidance on how recovery planning components should interact and integrate with risk appetite and risk management frameworks. The degree of alignment should be tailored to a financial institution’s own risk profile, risk strategy and business model.

Issued on: 17 January 2020
9 Reporting requirements

S 9.1 A financial institution shall submit its first recovery plan within 12 months from the date it receives a request from the Bank.

Question 1
Is 12 months sufficient for financial institutions to develop their first recovery plan? Alternatively, please suggest an appropriate timeframe and how the extended timeframe would be used to develop the recovery plan.

S 9.2 Notwithstanding the above, a financial institution shall keep its recovery plan updated and notify the Bank as and when there are material changes to its –
(a) corporate, shareholding, or governance structure;
(b) financial position, risk profile, or business strategy and operations; or
any other circumstances that may significantly affect its recovery plan. In this regard, a financial institution shall notify the Bank within 14 days of updating its recovery plan and submit its recovery plan as and when requested by the Bank.

G 9.3 To facilitate a systematic approach for financial institutions to conduct assessments or provide material information within the recovery planning process, this policy document is accompanied by a set of reporting templates listed in Appendix 1 (List of reporting templates). In this regard, a financial institution is encouraged to consider the templates as a starting point in developing its respective recovery plans.

S 9.4 Notwithstanding paragraph 9.3, a financial institution shall also submit the completed reporting templates listed in Appendix 1 concurrently with the submission of its first recovery plan.

S 9.5 For subsequent submissions, a financial institution shall submit a set of simplified reporting requirements on an annual basis. The simplified reporting requirements will be communicated by the Bank at a later date.

S 9.6 The electronic copy of the recovery plan and completed reporting templates must be submitted through the Bank’s secured online website at https://statsmart.bnm.gov.my/statsmart/. Unless otherwise specified by the Bank, submission of a printed copy of the recovery plan and reporting templates is not required.

---

6 For guidance on the Integrated Submission Platform (ISP), refer to the User Manual on ISP for Reporting Entities as attached.
10 Executive summary

S 10.1 The section on executive summary must contain the following –
(a) an assessment of the overall recovery capacity of the financial institution, with sufficient justification for the assessment;
(b) a description of any material changes made, or preparatory measures taken since the previous submission, if any; and
(c) an assessment of the interlinkages between recovery plans prepared by the financial institution and related entities (if any), including how such plans would affect the overall recovery capacity of the financial institution.

S 10.2 In supporting the above, a financial institution shall outline the main findings and interoperability of all recovery plan components, which includes –
(a) a clear and concise mapping of core business lines, critical functions, and critical shared services to, and material intra-group and external dependencies and systemic interconnectedness of, SEs;
(b) an overview of the recovery indicator and governance frameworks that ensures an effective and efficient recovery planning process, highlighting key considerations for the calibration of recovery indicators and thresholds, and the interlinkages with existing governance and risk management framework;
(c) an overview of the suite of actionable and credible recovery options, including a brief assessment of the likely effectiveness of each recovery option (by highlighting the financial impact and key material impediments);
(d) a broad narrative of stress scenarios, including the impact and feasibility of the preferred recovery strategy for each selected scenario;
(e) a description of communication, disclosure and stakeholder engagement strategies to support effective implementation of the recovery plan, taking into account potential reputational risks that may undermine public confidence in the financial institution; and
(f) an assessment of preparatory measures that will improve the likelihood of successful implementation of each preferred recovery strategy.

11 Strategic analysis

11.1 The purpose of the strategic analysis section is to provide in-depth information about a financial institution’s structure, strategy, business model, financial situation, risk profile, intra-group and external dependencies and systemic interconnectedness. This section forms the foundation of the recovery plan by informing the appropriate scope, granularity and context to calibrate all recovery plan components. For instance, the calibration of recovery options,

---

7 These may include, but are not limited to, group-wide recovery plans prepared by parents of locally-incorporated foreign financial institutions, and individual entity-level recovery plans prepared by foreign branches/subsidiaries.

8 For example, speed and type of stress scenarios, time taken for implementation of preferred recovery strategies and realisation of benefits from such strategies.

9 Either by way of reducing implementation timeframe, removing material impediments or improving the impact of the preferred recovery strategy.

Issued on: 17 January 2020
thresholds, and stress scenarios is contingent upon an understanding of where core business lines, critical functions, material operational services or risk drivers reside among covered entities and intra-group dependencies.

S 11.2 The strategic analysis shall comprise the following components –
(a) group structure and SEs;
(b) business model and core business lines;
(c) critical functions and critical shared services; and
(d) intra-group and external dependencies, and systemic interconnectedness.

Group structure and SEs

S 11.3 A financial institution shall describe the overall group structure and provide a comprehensive overview of all covered and related entities (e.g. associates, joint ventures, minority interests, branches in foreign jurisdictions), including the following –
(a) legal structure;
(b) structure of the financial institution’s operations;
(c) shareholding structure, including voting and non-voting shares; and
(d) jurisdiction(s) of incorporation or operations.

S 11.4 A financial institution shall identify SEs of the financial group that meet any of the following criteria –
(a) is a licensed person under the FSA or IFSA;
(b) contributes materially to the financial institution’s profit, assets, capital, liabilities, risk profile, reputation or franchise value;
(c) performs core business lines or critical functions;
(d) has material intra-group dependencies, e.g. performs key operational services\(^\text{10}\) that support core business lines and critical functions;
(e) could threaten the viability of the financial institution in the event of the entity’s failure, liquidation, or the disposal of all or part of its business; or
(f) is designated or deemed to be systemically important to the jurisdiction it operates in.

G 11.5 Financial institutions may also rely on other qualitative or quantitative criteria beyond those listed in paragraph 11.4 to identify SEs. The criteria used should best reflect the financial institution’s group structure, risk profile, business model, intra-group and external dependencies and systemic interconnectedness.

S 11.6 A financial institution shall provide a comprehensive description of each SE in the recovery plan. At minimum, this includes —
(a) factors, criteria and assumptions used to determine the significance of the SE;
(b) nature of business conducted / services provided, key business metrics and relevant income and balance sheet information;

\(^{10}\) Refer to Appendix 4 for list of potential operational services.

Issued on: 17 January 2020
(c) material liability components, identifying types and amount of short-term and long-term liabilities, secured and unsecured liabilities, and subordinated liabilities;
(d) funding, liquidity and capital needs of, and the resources available to the SE, under BAU conditions and in the event of material stress or failure; and
(e) off-balance sheet exposures of the SE that are material to the financial institution, including guarantees and contractual obligations.

Business model and core business lines

S 11.7 A financial institution shall provide an overview of its business model which provides a high-level description of the activities conducted by the financial institution, including business lines which are significant to the financial institution ("core business lines"). The identification of core business lines is essential to inform the development of preferred recovery strategies. In particular, a financial institution needs to ensure that recovery options that affect core business lines will not adversely affect its long-term viability.

S 11.8 The identification of core business lines must consider the following –
(a) contribution of the business line to the financial institution’s profit, assets, capital, liabilities, or risk profile;
(b) strategic significance of the business line in relation to-
   (i) customer base, geographic reach, and branch network;
   (ii) market potential and growth outlook;
   (iii) indicative franchise value under the current operating environment, taking into account the provision of market access or international linkages to the financial institution;
   (iv) operational synergies with other business lines; and
   (v) attractiveness to competitors as a potential acquisition target; and
(c) other factors that contribute to the business line’s significance to the financial institution.

S 11.9 At minimum, a financial institution shall provide in the recovery plan, the information set out in Appendix 2 (Information on business model and core business lines).
Critical functions and critical shared services

11.10 The continuity of critical functions and critical shared services is important to prevent potential systemic disruptions that could adversely impact the functioning of the real economy and financial stability, such as –
(a) disruptions to the financial intermediation process, e.g. by curtailing access of individuals and businesses to financial services critical for production and consumption activities;
(b) disorderly market conditions, e.g. by impairing market access and liquidity for risk management and funding purposes, or impairing the price discovery process;
(c) disorderly functioning of FMIs, e.g. by disrupting access to payment, clearing and settlement systems;
(d) undermining of public confidence in the financial system; or
(e) rise of cross-institution, cross-market or cross border contagion.
When identifying and assessing recovery options, financial institutions should ensure the continuity of such functions and services under a wide range of stress events. Resolution authorities may also engage with financial institutions to ensure that such functions and services can be legally and economically separated from other functions in order to ensure their continuity during resolution.

S 11.11 A financial institution shall identify its critical functions, which refer to underlying operations, activities or services that are performed by a financial institution for third parties\textsuperscript{11} where the failure or discontinuance of such function would likely lead to the disruption of services that are essential for the functioning of the real economy and financial stability.

S 11.12 The identification of critical functions\textsuperscript{12} must consider the impact of sudden discontinuance of the functions on customers, other financial institutions, financial markets, FMIs, and other relevant stakeholders that rely on the function, having regard to the following criteria –
(a) concentration of the function, i.e. critical mass in terms of market share may have implications on substitutability and interconnectedness;
(b) substitutability of the function, i.e. availability and ease of which the provision of the function can be replaced by other substitute providers with similar quality, at comparable cost, and within a reasonable timeframe; and
(c) interconnectedness of the function, i.e. extent to which a function may be highly dependent on, or co-mingled with, other functions such that its disruption would likely cause wider contagion effects.

\textsuperscript{11} For the avoidance of doubt, in this context, third parties refer to entities which are not covered entities nor related to the financial institution.

\textsuperscript{12} Note that functions that are critical to the financial institution but are not significant to the financial system are unlikely to be considered as critical functions; rather, such functions may be more appropriately captured under core business lines, dependencies or interconnectedness.

Issued on: 17 January 2020
At minimum, based on the criteria set out in paragraph 11.12, a financial institution shall, consider the following:

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Detailed analysis required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact of discontinuance</strong></td>
<td>• Impact on customers and relevant stakeholders (e.g. counterparties related to main customers, service providers, suppliers, market utilities, public services, government) affected by the function, taking into account –</td>
</tr>
<tr>
<td></td>
<td>– impact and speed of disruption to financial health, customer business, and short-term liquidity needs of customer base and relevant stakeholders</td>
</tr>
<tr>
<td></td>
<td>– capacity/speed of counterparties, customers and the public to react to the disruption</td>
</tr>
<tr>
<td></td>
<td>• Impact on other financial institutions, financial markets and FMIs, taking into account –</td>
</tr>
<tr>
<td></td>
<td>– impact and speed at which a disruption of the function would materially affect market participants or market functioning (e.g. liquidity, operations, and structure of other financial institutions, financial markets or FMIs concerned)</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td>Financial institution’s market share of the function, taking into consideration –</td>
</tr>
<tr>
<td></td>
<td>• nature and extent of the activity</td>
</tr>
<tr>
<td></td>
<td>– type of products offered, services provided, or role played by the function</td>
</tr>
<tr>
<td></td>
<td>– geographical reach, (global, regional or domestic)</td>
</tr>
<tr>
<td></td>
<td>– value/volume of transactions</td>
</tr>
<tr>
<td></td>
<td>– number of customers, accounts and counterparties</td>
</tr>
<tr>
<td></td>
<td>• nature of customers and stakeholders affected by the function</td>
</tr>
<tr>
<td></td>
<td>– retail, SMEs, corporate, interbank, exchanges, central clearing houses, public entities etc.</td>
</tr>
<tr>
<td><strong>Substitutability</strong></td>
<td>• Availability of substitute providers, taking into account –</td>
</tr>
<tr>
<td></td>
<td>– number of available substitute providers</td>
</tr>
<tr>
<td></td>
<td>– presence of alternative products or markets that conduct activities that are broadly equivalent to the function</td>
</tr>
<tr>
<td></td>
<td>• Number of customers that rely on the financial institution as the only or principal banking partner</td>
</tr>
<tr>
<td></td>
<td>• Ease of customers to move to substitute providers, i.e. time required, process involved, and costs incurred, by customers</td>
</tr>
<tr>
<td></td>
<td>• Necessary requirements to assume the function, taking into account –</td>
</tr>
<tr>
<td></td>
<td>– capacity of, and expected time needed for substitute provider to assume all or a large share of activities or customers</td>
</tr>
<tr>
<td></td>
<td>– organisational arrangements, infrastructure, expertise, regulatory approvals required</td>
</tr>
<tr>
<td></td>
<td>– willingness of substitute providers to take on all or a large share of activities or customers, taking into consideration</td>
</tr>
</tbody>
</table>
attractiveness of the function, e.g. economies of scale, margins, complements overall business
- importance of brand, market positioning or reputation
- costs for substitute provider(s) to assume all or a large share of activities and customers
- interoperability between providers of the function, e.g. presence of common standards, procedures and interfaces
- significance and form of any other barriers to substitutability

| Interconnectedness | • Interactions with other functions of the financial institution or of the market, including –
|                   | – the relevance of the market for this function to the functioning of other markets
|                   | – role of the function in influencing the availability of other functions or products which are typically bundled or tied with the function |

11.14 While the identification of critical functions shall focus primarily on the criticality relative to the Malaysian financial system and economy, a financial institution shall also assess the criticality of such functions as performed by overseas SEs in relation to their respective jurisdiction of operations. The criticality of overseas SEs could affect the feasibility of recovery options. By providing such assessments, the financial institution and the Bank can assess the feasibility of recovery options such as a potential sale of foreign operations.

11.15 For financial institutions with significant Islamic operations, a financial institution may separately assess the criticality of the conventional and Islamic functions performed.

11.16 A financial institution shall at minimum assess the criticality of functions set out in Appendix 3 (List of potential critical functions) if performed by the financial institution. A financial institution may identify any other functions not listed in the Appendix 3, if it considers that its performance of such functions meets the criteria set out in paragraph 11.13.

11.17 Critical shared services refer to the underlying operations, activities or services that are performed for one or more covered entities, where the failure or discontinuance of such services would present a serious impediment or completely impair the performance of one or more critical functions. A financial institution shall identify critical shared services that are performed by an internal unit, a covered/related entity and/or outsourced to external providers.

Note that the performance of any of the functions listed in Appendix 4 by a financial institution does not automatically render such functions critical. The supervisory and resolution authorities will also conduct separate criticality assessments, taking into account the self-assessments conducted by the financial institution.

Issued on: 17 January 2020
S 11.18 The identification of critical shared services shall take into consideration the following criteria –

(a) **impact of discontinuance on critical functions**, i.e. whether the sudden discontinuance of the service is likely to have a material adverse impact on one or more critical functions; and

(b) **substitutability** of the service, i.e. availability and ease of which the provision of the service can be replaced by other substitute providers with similar quality, at comparable cost, and within a reasonable timeframe.

G 11.19 As a starting point, a financial institution may refer to Appendix 4 (List of potential operational services) to identify critical shared services.

S 11.20 At minimum, a financial institution shall provide information for critical functions and critical shared services in the recovery plan as set out in Appendix 5 (Information on critical functions and critical shared services).

**Intra-group and external dependencies and systemic interconnectedness**

S 11.21 Unless provided elsewhere in the recovery plan, a financial institution shall identify material dependencies and assess key risk transmission channels and the extent of potential contagion and systemic impact arising from the disruption or failure of such dependencies which may be financial, operational or legal in nature (Figure 2). Such information is necessary to assess the feasibility of recovery options, particularly in identifying potential financial, operational or legal impediments to implementing recovery options. In particular, a financial institution shall highlight –

(a) **intra-group dependencies**, i.e. material interdependencies among covered entities, and entities related\(^{14}\) to the financial institution that, if disrupted, would significantly affect the funding or operations of the financial institution and/or its performance of critical functions;

(b) **external dependencies**, i.e. material dependencies on third parties\(^{15}\) by the financial institution that, if disrupted, would significantly affect the funding or operations of the financial institution and/or its performance of critical functions; and

(c) **systemic interconnectedness**, i.e. material dependencies on the financial institution by third parties that, if disrupted, would likely lead to the disruption of the functioning of the real economy and financial system. This is intended to capture functions assessed under paragraph 11.13 (or those listed in Appendix 3) but are not deemed critical by the financial institution.

---

\(^{14}\) For example, overseas parent of locally-incorporated foreign financial institutions, sister companies, affiliates.

\(^{15}\) For Islamic entities, this includes services provided by third parties in facilitating transactions, e.g. community trading platform such as Bursa Suq Al Sila'.

---

Issued on: 17 January 2020
11.22 To identify dependencies, a financial institution shall, at minimum, consider the following –

<table>
<thead>
<tr>
<th>Intra-group dependencies</th>
<th>External dependencies</th>
<th>Systemic interconnectedness</th>
</tr>
</thead>
</table>
| Financial                | i.e. extent of financial institution’s reliance on intra-group capital, funding and liquidity arrangements, e.g. –  
- material intra-group on- and off-balance sheet exposures, capital, liquidity, funding, risk transfer, derivatives relationships  
- financial support agreements/ guarantees, including details on the form, and conditions associated with the | i.e. extent of financial institution’s reliance on external counterparties, e.g. –  
- material on- and off-balance sheet exposures, capital, liquidity, and funding with major non-related counterparties  
- financial commitments, guarantees, netting arrangements and risk transfers | i.e. significance of financial institution’s role in providing funding, liquidity or risk transfer to third parties, financial markets, and FMIs |
| Operational              | reliance on internal service providers | reliance on external service providers | role in providing funding, liquidity or risk transfer to 3rd parties |
| Others (e.g. legal, structural) | incl. but not limited to material legally binding agreements (e.g. financial contracts, service level agreements, etc.) | role in performing activities or services essential to real economy and financial stability | |

**Figure 2 – Illustration of intra-group and external dependencies and systemic interconnectedness**

1. **Intragroup dependencies**
   - Holding Company
   - SE 1
   - SE 2
   - Operational SE (e.g. service centres, data/IT centres)

2. **External dependencies**
   - External counterparties/ service providers

3. **Systemic interconnectedness**
   - Other financial institutions, financial markets (FM) and FM infrastructure, households, businesses, etc.
| **Operational** | **i.e. extent of financial institution’s reliance on internal service providers, e.g.** –  
- shared material operational services (including personnel, facilities and systems) among intra-group entities  
- reliance on intra-group entities to access FMIs, e.g. reliance on one entity which is a clearing member of a central counterparty | **i.e. extent of financial institution’s reliance on external service providers including FMIs, e.g.** to operational services that are outsourced to external service providers  
16 | **i.e. extent of financial institution’s role in providing/performing activities, functions or services that are potentially essential for the functioning of the real economy and financial system** |
|---|---|---|---|
| **Others, e.g. legal and structural** | Including –  
- reliance on intra-group entities’ licences to conduct certain regulated activities  
- material legally binding agreements e.g. financial contracts, service level agreements for sharing or usage of personnel, office space, intellectual property, trademarks | Including material legally binding agreements e.g. financial contracts, service level agreements for sharing or usage of personnel, office space, intellectual property, trademarks |  
--- |

16 Refer to policy document on *Outsourcing* for a list of operational services that can be outsourced.
12 Governance structure and oversight

A financial institution shall establish sound governance arrangements to oversee and manage the recovery planning process. A financial institution shall, at minimum, establish –

(a) well-defined roles, responsibilities and accountabilities of the board, senior management, business units and control functions; and

(b) robust policies, procedures and management information systems to support informed decision making across the BAU, early warning and recovery phases,

in order to ensure that a recovery plan is capable of being executed in an effective and efficient manner.

The board of the financial institution shall exercise effective oversight on all aspects of the development, maintenance and implementation of the recovery plan. In doing so, the board shall, at minimum –

(a) assess and approve the recovery plan (i) during its initial development; and (ii) as and when there are material changes to the recovery plan as highlighted in paragraph 9.2;

(b) designate a senior officer and an internal governing body (comprising personnel with the necessary competencies and authority) responsible for driving the overall recovery planning process;

(c) ensure sufficient resources and adequate representation across SEs and core organisational functions are allocated to the development of the recovery plan;

(d) provide constructive challenge to the conclusions, reasoning, analysis, and assumptions underpinning the recovery plan, including risk models and quantitative risk methodologies used in the recovery indicator framework and scenario analysis;

(e) ensure that the recovery plan is integrated with existing risk appetite and risk management frameworks and is complementary and closely linked to the financial institution’s strategic and contingency planning; and

(f) promote understanding of, and involvement in, the recovery planning process, at all relevant levels across the organisation, including internal governing bodies tasked with making decisions during stress events.

The designated senior officer and the designated internal governing body shall be responsible for the development, maintenance, activation and implementation of recovery plan. In this capacity, the senior officer shall –

(a) ensure that the recovery planning process is undertaken with the appropriate level of involvement of key personnel across core organisational functions, particularly to appropriately assess the strategic and structural implications of potential recovery options;

17 The board may leverage upon existing management or board committees.
18 For example, treasury, risk management, finance, legal, compliance, IT and communication functions.
(b) ensure the robust and credible application of expert judgement and critical scrutiny in the development of the risk modelling and quantitative risk methodologies used in the recovery indicator framework and scenario analysis;

(c) ensure that well-defined processes and management information systems are developed to provide good quality and granular data for timely risk communication within the financial institution and risk reporting to the board and senior management, on an ongoing and ad-hoc basis; and

(d) regularly update the board on material developments relating to recovery planning, including the status of recovery indicators, breaches of recovery thresholds, activation of the recovery plan, implementation of recovery options and its progress, and preparatory measures to be undertaken.

S 12.4 For a recovery plan involving Islamic entities, a financial institution shall refer to its Shariah Committee to advise on Shariah requirements consistent with the Bank’s Shariah Governance policy document. In the context of recovery plan, the Shariah Committee must –

(a) advise on the application of Shariah requirements in the recovery options and other relevant components of the recovery plan;

(b) advise and provide clarification on relevant Shariah rulings, decisions or policy documents on Shariah matters issued by the Bank, and if relevant, any other authorities impacting, or which may impact the development and implementation of the recovery plan; and

(c) give opinions on any other Shariah matters in general, where necessary.

Question 2
Do you agree with the roles/responsibilities prescribed for the board, senior officers and SC? Please explain any specific concerns along with constructive suggestions for the Bank to consider other than those identified in paragraphs 12.2 to 12.4.

S 12.5 A financial institution shall involve the senior management of SEs in the development of the recovery plan to ensure specificities of the SEs are appropriately accounted for.

S 12.6 A financial institution must ensure that the recovery plan is reviewed by an independent party, which may either be the internal audit function or an external competent party. The objective of the review is to provide independent assurance on the –

(a) accuracy of data and information provided in the plan; and

(b) robustness of processes and methodology used in developing the plan.

At minimum, such reviews should be carried out after the initial development or following significant updates to the recovery plan, with the results reported to the board and senior management.
A financial institution shall escalate any breaches of recovery thresholds to
senior management to (i) assess the nature and extent of the viability threat;
and (ii) deliberate and decide on the next course of action. A breach in a
recovery threshold will not automatically lead to the activation of the recovery
phase or the implementation of recovery options. Rather, senior management
shall decide on whether to activate the recovery phase or implement recovery
options. Senior management, in consultation with the board, shall also decide
on whether to transition back to the early warning or BAU phase upon the
successful implementation of recovery options.

A financial institution shall formally notify the Bank within 24 hours upon a
breach of a recovery threshold. In notifying the Bank, the financial institution
shall include –
(a) an explanation of events and circumstances leading to the breach of
the recovery threshold;
(b) management actions\(^{19}\) that have been taken, if any; and
(c) management actions that are intended to be taken, including an
activation of recovery phase and implementation of recovery options
drawn from the preferred recovery strategy or any other option deemed
appropriate under these circumstances.

At minimum, a financial institution shall provide information on governance
arrangements underpinning the recovery plan process as set out in Appendix
6 (Information on governance).

### 13 Recovery indicators

A financial institution shall establish a recovery indicator framework that sets
out clearly defined criteria, thresholds, procedures and governance
arrangements to facilitate timely monitoring, escalation, activation and
implementation of the recovery plan. Such framework shall –
(a) enable risk monitoring and management across BAU, early warning,
and recovery phases in a cohesive manner;
(b) facilitate prompt identification and escalation of key vulnerabilities and
stress events which could adversely affect the financial institution;
(c) ensure early discussion and timely activation of potential management
actions by senior management; and
(d) minimise delays in implementation of management actions and/or
recovery options.

#### Selection of recovery indicators

A financial institution shall develop a suite of quantitative and qualitative
recovery indicators that are –
(a) tailored to the size and complexity of its business model/operations,
and its inherent risk drivers and strategy;

\(^{19}\) Management actions refer to board-approved strategies undertaken by a financial institution to
mitigate potential vulnerabilities during stresses.
(b) clearly defined, forward looking and suitable for close monitoring of evolving stress events, taking into consideration the intrinsic characteristics and quality of indicators (e.g. reliability, sensitivity and ease of monitoring);

(c) aligned with existing indicators used for risk monitoring, escalation and decision-making; and

(d) diverse to capture an extensive range of stress scenarios of varying nature and severity.

13.3 At minimum, a financial institution shall include consolidated-level recovery indicators that capture the following—

<table>
<thead>
<tr>
<th>Category</th>
<th>Key consideration for development of recovery indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Capital</td>
<td>Ascertains actual and potential material deterioration in the quantity and quality of capital on a going concern basis, including via increasing leverage and/or risk exposures</td>
</tr>
<tr>
<td>(b) Liquidity</td>
<td>Identify actual or potential funding and liquidity risks, including those stemming from intra-group funding needs and off-balance sheet exposures (e.g. potential drawdowns on commitments and contingencies), that may hamper the ability to meet short- and long-term obligations, and also taking into account currency mismatches</td>
</tr>
<tr>
<td>(c) Profitability</td>
<td>Capture actual and potential deterioration in revenue generating capacity and rapid increase in costs, including operating expenses and losses incurred from legal and operational risk events (e.g. conduct-related, internal and external fraud events)</td>
</tr>
<tr>
<td>(d) Asset quality</td>
<td>Indicate profile of, and potential changes in, credit risk exposures, including movements in the staging of loan and financing exposures under accounting standards and impairments (both in stock and flow terms), and adequacy of provisions made, including for off-balance sheet exposures (e.g. assets sold with recourse)</td>
</tr>
<tr>
<td>(e) Operational risk</td>
<td>Capture disruptions to material operational services that may materially impair the long-term viability of the financial institution, and threaten public confidence in the financial institution or operations of the financial market. This includes indicators that may not immediately affect the financial performance of the financial institution.</td>
</tr>
</tbody>
</table>
| (f) Market | Capture adverse market developments and potential rating downgrades (short- and/or long-term) that may impair access to funding and financial markets\(^\text{20}\), e.g. –  
- equity-based indicators that measure variations in share prices of listed covered entities  
- debt-based indicators that reflect expectations from wholesale funding providers  
- portfolio-related indicators that capture market expectations for specific asset classes (e.g. real estate) |
| (g) Macroeconomic | Signal deterioration in economic conditions and operating environment, and adverse external developments that may influence performance of the financial institution, e.g. –  
- country-specific macroeconomic indicators  
- sectoral macroeconomic indicators, relating to major sectors of economic activity (e.g. commercial and residential real estate, mining, construction, agriculture), that are relevant to financial institution’s operations or to which risk exposures/funding liabilities are concentrated |

**Question 3**

Do the above categories cover the universe of recovery/early-warning indicators that financial institutions typically monitor for risk management purposes? Are there any other relevant categories that should be included above? Are there any categories for which financial institutions presently do not have recovery / early warning indicators? If so, please elaborate on why such categories are not monitored.

**G 13.4** As a starting point, a financial institution may assess the applicability of the recovery indicators listed in Appendix 7 (List of potential recovery indicators). A financial institution may wish to also consider additional categories and/or indicators\(^\text{21}\), taking into account requirements and considerations outlined in paragraphs 13.1 to 13.3.

**G 13.5** A financial institution is encouraged to supplement the recovery indicators developed at the consolidated level with entity-level recovery indicators specific to a SE, where such indicators serve to capture specific key vulnerabilities faced by the SE.

**Calibration of thresholds**

**S 13.6** For each applicable recovery indicator, a financial institution shall establish an early warning and a recovery threshold to facilitate the implementation of recovery options under different stress scenarios. The calibration of these thresholds shall, at minimum, take into consideration –

\(^{20}\) Including money, debt, equity, derivatives, foreign exchange and commodities markets, taking into account primary and secondary markets, where relevant.

\(^{21}\) For example, this may include indicators for investment account (e.g. fund outflow rate, value of underlying asset) for Islamic entities.

Issued on: 17 January 2020
(a) impact and time required for successful implementation of recovery options\(^{22}\);
(b) magnitude and speed of deterioration under various stress scenarios\(^{23}\); and
(c) alignment with financial institutions’ risk appetite and risk management frameworks, including interactions with risk limits/thresholds identified under the existing risk monitoring, escalation and decision-making frameworks during BAU and early warning phases.

**S 13.7** A financial institution shall calibrate –
(a) recovery thresholds at a level (before the point of non-viability) that provides reasonable time based on realistic assumptions to implement, and realise the benefits of, recovery options; and
(b) early warning thresholds at a level (before the recovery thresholds) that allows adequate lead time to intensify monitoring and prepare for the implementation of recovery options.

**S 13.8** For each applicable recovery indicator, a financial institution must include the following information in the recovery plan –
(a) latest position of the recovery indicator as at the effective date of the recovery plan;
(b) early warning and recovery thresholds, including the considerations, processes and assumptions underpinning the threshold calibration;
(c) relevant personnel/committees responsible for monitoring and reviewing the recovery indicators; and
(d) frequency of monitoring and review of the indicator framework.

### 14 Recovery options

**S 14.1** A financial institution shall develop and maintain a set of actionable and credible recovery options to restore financial soundness and preserve long-term viability of the financial institution, in particular SEs that carry out core business lines, critical functions or critical shared services. Such recovery options must be substantially within its direct control\(^{24}\), supported by a clear implementation plan, and capable of being executed within an appropriate timeframe to ensure reasonable prospect of recovery and enhance the survivability of the financial institution across different stress scenarios.

**S 14.2** The set of recovery options shall include measures that may have permanent structural or strategic implications on the financial institution and would likely be contemplated only in extremely stressed circumstances. This includes but is not limited to –

\(^{22}\) For example, calibration of capital thresholds should allow for sufficient lead time to implement capital-related measures as such measures typically require longer implementation periods.

\(^{23}\) For example, calibration for liquidity thresholds should allow for a timely reaction to the typically fast-moving scenarios associated with liquidity-related stress events.

\(^{24}\) Where the implementation of any recovery option is dependent on other entities or stakeholders, those dependencies, processes and conditions to execute such options must be set out in the recovery plan.
(a) sale, transfer or disposal of part or the whole of assets, business lines or legal entities; and
(b) restructuring of liabilities or issuance of capital instruments at short notice.

S 14.3 In developing the set of recovery options, the financial institution must –
(a) consider measures that-
(i) restore or improve capital and liquidity positions;
(ii) de-risk and reduce leverage;
(iii) secure adequate and diverse funding sources (with due consideration to availability of eligible collateral in terms of volume, quality and location and its potential drawing capacity), including possible intra-group financial support; and
(iv) allow for voluntary restructuring of liabilities e.g. via debt-to-equity conversion where relevant;
(b) ensure options are sufficiently diverse to deal with an extensive set of severe stress events that may threaten viability of the financial institution;
(c) disregard the possibility of policy intervention by authorities, or access to any exceptional financial support from public funds;
(d) seek to minimise potential contagion effects associated with recovery options, including those involving intra-group financial support; and
(e) provide for measures necessary to preserve the financial institution’s business continuity capabilities to support the financial institution’s operations and implementation of recovery options (e.g. staff and resources).

S 14.4 A locally-incorporated foreign financial institution may include recovery options involving assistance from parents and/or foreign related entities but only if such assistance is
(a) contractually committed by the relevant entity; or
(b) explicitly provided for in the group’s recovery plan that has been submitted to the home supervisory authority.

S 14.5 A financial institution shall only consider access to central bank liquidity facilities (across all jurisdictions of operations) as a potential recovery option where such facilities are committed. Nonetheless, this shall not be regarded as any form of ex ante application for, or approval of, any facility administered by the Bank.

S 14.6 At a minimum, a financial institution must assess the applicability of recovery options set out in Appendix 8 (List of potential recovery options). For other recovery options which are not listed in Appendix 8, a financial institution shall take into account requirements and considerations outlined in paragraphs 14.1 to 14.5.

S 14.7 For each recovery option identified, a financial institution shall undertake the following –

---

25 This refers to financial support among covered entities and entities related to the financial institution.
26 In line with the business continuity management principles and requirements set out in the policy document on Business Continuity Management (Revised) issued on 3 June 2011.
27 For Malaysia, this refers to the Restricted Committed Liquidity Facilities.

Issued on: 17 January 2020
(a) **impact assessment** to measure the probable success and potential benefits of the recovery option in ensuring the long-term viability of the financial institution without jeopardising the continuity of critical functions and material operational services, including critical shared services; and  
(b) **feasibility assessment** to assess the execution readiness of the financial institution, including the identification of implementation barriers and their corresponding remediation measures.

S 14.8 For purposes of conducting the impact and feasibility assessments of recovery options, a financial institution shall –  
(a) place more emphasis on long-term viability effects rather than its ability to address immediate stress (short-term remedies)\(^{28}\), when ascertaining the benefits of each recovery option;  
(b) assess the anticipated impact on resolvability, particularly the creation of potential barriers for orderly resolution arising from the resultant structural or strategic changes to the financial institution following the implementation of specific recovery options; and  
(c) apply rigorous and conservative assumptions to avoid overestimating the effectiveness and credibility of the recovery options.

S 14.9 To enhance overall preparedness of the financial institution (i.e. its capacity and agility to respond to various stress events), the impact and feasibility assessments must be conducted—  
(a) without reference to a specific stress event to allow for the identification of a set of recovery options, that would enable the financial institution to respond flexibly during crises; and  
(b) under defined stress scenarios, as described in section 15, in order to test for the efficacy of recovery options, the recovery indicator framework, and the overall recovery capacity of the financial institution. This is to recognise that some recovery options may not be practical or deliver expected benefits under specific conditions.

S 14.10 The impact and feasibility assessments undertaken by a financial institution shall consider the following –

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Detailed analysis and description/information required</th>
</tr>
</thead>
</table>
| Impact assessment | • **Financial impact**, i.e. on capital, liquidity, profitability, asset quality and market expectations of financial position, covering at minimum the associated recovery indicators for each category, and taking into consideration potential spillovers on intra-group and external (financial) dependencies following the implementation of recovery options  
• **Strategic impact** on SEs, core business lines, franchise value and reputation |

\(^{28}\) For example, disposal of a particular core business line at a fire sale price may alleviate some immediate concerns but could potentially have significant adverse effects on long-term viability.

Issued on: 17 January 2020
- **Operational impact**, i.e. potential risks or spillovers to its day-to-day business operations following the deployment of specific or a combination of recovery options, including the –
  - continuous functioning of operational services (e.g. human resource operations, IT facilities and systems), including those outsourced to external service providers
  - uninterrupted access to FMIs, including the impact on provision of services to covered entities through membership in relevant FMIs (e.g. payment, clearing and settlement systems), after accounting for safeguards and risk mitigation arrangements for operational continuity as may be provided under the financial institution’s existing business continuity plan

- **Stakeholder impact**, i.e. expected impact on shareholders, creditors, depositories and borrowers

- **Systemic implications**, including the –
  - expected impact on the financial institution’s provision of critical functions and critical shared services
  - potential cross-institution, cross-market or cross-infrastructure contagion effects triggered through the high degree of systemic interconnectedness, including such effects in relevant jurisdictions of operations

### Feasibility assessment

- Assessment of the interactions and interdependencies between recovery options to identify those which are mutually exclusive or highly dependent on other options for smooth execution

- Evaluation of potential risks associated with the recovery option, drawing upon any prior experience in implementing such an option or similar measures

- Material impediments that could potentially reduce the likelihood of successful implementation or render a theoretically possible recovery option infeasible, i.e. –
  - any implementation constraints due to group structure and/or intra-group dependencies (e.g. practical or legal constraints that may complicate or hinder effective intra-group distribution of funds)
  - any hurdles arising from legal and regulatory preconditions, financial, business and operational constraints, reputational considerations and Shariah requirements

---

29 For example, this may include (i) performing operational services via separate entities that are robust in a failure (i.e. bankruptcy remote entities); or (ii) having contractual or service level arrangements that ensure continuation of the services, particularly for those outsourced to external service providers.

30 For example, to raise liquidity, a financial institution may include an option to pledge a particular security in a repurchase agreement or to do an outright sale of the same. Both measures shall be included in the broad list of available recovery options, although they cannot be feasibly implemented at the same time.
– potential obstacles in seeking approval from relevant authorities or third parties\textsuperscript{31} 
• Identification of solutions and necessary preparatory measures to remedy identified material impediments and improve overall efficacy of the recovery option

S 14.11 For recovery options involving Islamic entities, consideration shall be given to the following aspects when conducting the feasibility assessment –

(a) for recovery options involving transfer of assets/portfolios, eligibility and ability of the transferee to continue upholding Shariah requirements;

(b) potential limitations in providing financial assistance to a non-Shariah compliant entity; and

(c) specific requirements of the underlying Shariah contracts involved in the structuring of a particular financial transaction\textsuperscript{32}, including –

(i) protection of rights of the contracting parties\textsuperscript{33};

(ii) potential changes in terms and conditions of the contracts;

(iii) fulfilment of the specified obligations/liabilities by the contracting parties; and

(iv) transferability of assets/portfolios.

In order to enhance the feasibility of the recovery options, a financial institution shall assess (i) the requirement to obtain consent according to the type of Shariah contract and, if required\textsuperscript{34}, provide an execution plan to ensure it can be obtained or managed in advance; and (ii) for recovery options involving transfers, an acceptable transfer mechanism taking into consideration the prospective transferee’s preferred method\textsuperscript{35}.

Question 4
Is the explanation and/or guidance set out for recovery options involving Islamic entities sufficient to determine feasible and viable recovery options for Islamic entities? If further elaboration or guidance is needed, please explain which part specifically should be further elaborated.

\textsuperscript{31} For example, approval from (i) overseas parent of a locally-incorporated foreign financial institution for recovery options that are under the direct control of the parent; or (ii) other local and/or foreign authorities where a recovery option involves entities which are not regulated by the Bank.

\textsuperscript{32} For example, when transferring *ijarah muntahiyah bi tamlik* financial assets, requirements of each underlying Shariah contract involved such as *ijarah*, *wa’d* and *hibah* must be observed.

\textsuperscript{33} Refer to the transferee and any other party who continues to be involved in the contract, such as the customers and their guarantors.

\textsuperscript{34} For example, (i) unless specified otherwise in the terms and conditions, transferability of financing structured using *murabahah*, *tawarruq*, *qard* or *ijarah* will not require consent from customers; (ii) any change in terms and conditions to *musyarakah* or *mudarabah* ventures and investment accounts will require mutual agreement from the partners or relevant parties involved; and (iii) right of first refusal to partners may be considered for transfer of assets/portfolios under *musyarakah* venture, including *musyarakah* *mutanaqisah*.

\textsuperscript{35} For example, a financial institution may apply the *bai’ dayn bi sila’* (sale of debt with commodity) for transfer of *murabahah* financing, unless such method is not preferred by the prospective transferee.
14.12 At minimum, a financial institution must provide information for each recovery option in the recovery plan as set out in Appendix 9 (Information on each recovery option).

14.13 A financial institution shall provide a comparative summary of all relevant recovery options assessed, highlighting the key elements outlined in Appendix 9 (Information on each recovery option).

15 Scenario analysis

15.1 The aim of scenario analysis is to assess under a range of stress scenarios –
(a) the adequacy of the recovery indicator framework to detect impending stress and enable timely activation of the recovery plan; and
(b) the efficacy and feasibility of recovery options to restore viability.

This section provides a structured framework for financial institutions to identify preferred recovery strategies and gauge the overall recovery capacity of the financial institution.

15.2 To conduct the analysis, a financial institution shall develop a set of stress scenarios, incorporating adverse events that are –
(a) relevant to the financial institution’s size, risk profile, complexity of its activities, intra-group and external dependencies, and systemic interconnectedness;
(b) severe enough to threaten the viability of the financial institution unless recovery options are successfully capable of being implemented in a timely manner, i.e. near non-viability; and
(c) exceptional yet plausible in order to ascertain whether available recovery options are realistic, impactful and implementable to address potential viability threats.

15.3 The set of stress scenarios must be sufficiently diverse to ensure the relevance of the recovery plan under a range of adverse conditions. At minimum, a financial institution shall develop three stress scenarios, including –
(a) a system-wide stress scenario, incorporating events that materially affect the functioning of the real economy and financial system;
(b) an idiosyncratic stress scenario, incorporating events that are institution-specific and could directly threaten the business and operations of specific SEs, core business lines or the entire financial institution; and
(c) a combined stress scenario, in which the system-wide and idiosyncratic stress events interact and occur simultaneously.

Notwithstanding this, the Bank will have the discretion to require financial institutions to assess additional scenarios. Examples of stress events include –

<table>
<thead>
<tr>
<th>System-wide stress events</th>
<th>Idiosyncratic stress events</th>
</tr>
</thead>
<tbody>
<tr>
<td>• macroeconomic downturn</td>
<td>• severe credit losses in specific portfolios</td>
</tr>
<tr>
<td>• adverse price movements in market(s) to which the financial institution is heavily exposed</td>
<td>• increased default risk in specific portfolios and rating downgrade</td>
</tr>
<tr>
<td></td>
<td>• significant liquidity outflow, including deposit run</td>
</tr>
<tr>
<td>Event</td>
<td>Event</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>decrease in aggregate liquidity available in domestic or foreign interbank markets</td>
<td>increased costs of, or impaired access to significant funding sources</td>
</tr>
<tr>
<td>heightened sovereign risk and portfolio outflows from a key jurisdiction of operations</td>
<td>failure of related entities, e.g. parent bank, branches or subsidiaries</td>
</tr>
<tr>
<td>failure of significant counterparties impacting the financial system</td>
<td>failure of, or early redemption of liabilities by, significant counterparties</td>
</tr>
<tr>
<td>regional/global catastrophes</td>
<td>severe operational losses (e.g. losses through a rogue trader)</td>
</tr>
<tr>
<td></td>
<td>damage to reputation (e.g. fraud, loss of goodwill)</td>
</tr>
<tr>
<td></td>
<td>Shariah risk event (e.g. court/Shariah ruling on the validity of a particular Shariah contract against the financial institution’s favour)</td>
</tr>
</tbody>
</table>

S 15.4 In relation to the three stress scenarios in paragraph 15.3, a financial institution shall include at least one fast-moving and slow-moving elements in its range of stress scenarios. In general, fast-moving stress events typically materialise within 12 months or less, whereas slow-moving stress events may span up to 3 years.

G 15.5 A financial institution may draw upon existing stress testing programmes\(^{36}\) from the risk management process and regulatory requirements\(^{37}\) as an initial basis to inform the design and calibration of scenarios for recovery planning. Notwithstanding this, stress tests do not necessarily serve the same purpose and stress scenarios from existing stress testing programmes may not be directly suitable for recovery planning purposes. For instance, scenarios used in existing stress testing programmes are typically less severe in nature than those required for recovery planning (Figure 3). As such, a financial institution should evaluate the applicability of such scenarios before recalibrating the stress parameters to meet the intended objectives of scenario analysis.

G 15.6 Given the severity of stress scenarios required for recovery planning, a financial institution may also use reverse stress testing as a starting point to determine possible events that could lead to the financial institution’s non-viability. Reverse stress testing assumes the failure of the financial institution and identifies conditions in which this is likely to occur, rather than testing for outcomes arising from changes in the operating environment. A rigorous vulnerability assessment that identifies the elements leading to non-viability in both quantitative and qualitative terms forms a vital component of reverse stress testing.

---

\(^{36}\) Existing stress testing programmes include but are not limited to the ICAAP, ILAAP, contingency funding plan and business continuity plan.

\(^{37}\) Refer to the policy document on *Stress Testing*.

Issued on: 17 January 2020
Analysis of stress scenarios

S 15.7 For each stress scenario, a financial institution shall assess the financial and operational impact of the scenario to the financial institution. The assessment must be supported by robust quantitative metrics/models and sound qualitative evidence/expert judgement.

S 15.8 Based on the set of feasible recovery options as identified in paragraph 14.7(b), a financial institution shall assess the applicability of such recovery options under each stress scenario. A financial institution shall then conduct the impact and feasibility assessments on each feasible and applicable recovery option to determine the preferred recovery strategy. It is vital for the financial institution to undertake this second iteration of impact and feasibility assessments against identified stress scenarios (Figure 4), given that the impact, feasibility, and applicability of recovery options may vary widely in response to the nature, severity and speed of stress events.\(^{38}\)

---

\(^{38}\) For example, in a system-wide scenario, more than one institution may seek to implement similar recovery options at the same time under stressed market conditions, rendering it difficult to secure additional liquidity or capital.

Issued on: 17 January 2020
S 15.9 At minimum, a financial institution must provide information on scenario design and scenario analysis as set out in Appendix 10 (Information on scenario design and scenario analysis).

G 15.10 A financial institution may describe its assessment of the likely efficacy of each preferred recovery strategy to enable the Bank to assess and conclude on the overall recovery capacity, by highlighting the key elements as outlined in the illustrative template below –
16 Communication and disclosure plan

16.1 Developing clear communication and disclosure strategies ensures that all relevant stakeholders are adequately informed throughout the recovery planning process in a timely manner. Such strategies enable the financial institution to be agile in its response which is vital in maintaining confidence of customers, counterparties and the public at large.

S 16.2 As part of the recovery plan, a financial institution shall develop a communication and disclosure plan that, at a minimum, takes into account the following –
(a) communication needs of different stakeholders;
(b) communication needs specific to individual recovery options and preferred recovery strategies; and
(c) applicable disclosure requirements (e.g. legal provisions, regulations, or listing rules), particularly in relation to unpublished, price-sensitive information.

S 16.3 The communication and disclosure plan shall include, at minimum, the following –
(a) identification of key stakeholders, comprising –
   (i) internal stakeholders, e.g. staff, key (domestic and overseas) branches and subsidiaries; and
   (ii) external stakeholders, e.g. shareholders, depositors, investment account holders, the Bank, other authorities, counterparties, general public;
(b) stakeholder engagement strategies to support implementation of the recovery options, highlighting the –
   (i) medium of communication;
   (ii) level of detail, timing and frequency of information to be provided; and

*Options within the preferred recovery strategy, ranked by sequence and efficacy
(iii) the parties identified to lead such engagements;
(c) plans to mitigate or prevent potential adverse market reactions and maintain public confidence; and
(d) personnel responsible for ensuring the effective coordination and execution of the communication and disclosure plan.

17 Preparatory measures

S 17.1 A financial institution shall identify preparatory measures that the financial institution has taken, will or may take, to improve the overall efficacy of the recovery plan. This includes but is not limited to measures aimed at overcoming the barriers to the efficacy of identified recovery options and preferred recovery strategies, i.e. preparatory measures identified pursuant to the feasibility assessment under paragraph 14.10.

S 17.2 In the recovery plan, a financial institution shall provide an assessment of such preparatory measures, including the implementation timeline, target completion dates, resources required and estimated costs, and personnel responsible for the implementation of these measures.
## APPENDICES

### APPENDIX 1  List of reporting templates

<table>
<thead>
<tr>
<th>Recovery planning component</th>
<th>Reporting template</th>
</tr>
</thead>
</table>
| **Strategic analysis**      | • Template 1(a): Assessment of significant entities (SEs)  
                           | • Template 1(b): Description of SEs  
                           | • Template 1(c): Assessment of core business lines  
                           | • Template 1(d): Description of core business lines  
                           | • Template 1(e): Mapping of core business lines to significant entities and operational services  
                           | • Template 1(f): Assessment of critical functions  
                           | • Template 1(g): Overview of assessment of critical functions  
                           | • Template 1(h): Description of critical functions  
                           | • Template 1(i): Mapping of critical functions to SEs, core business lines and critical shared services  
                           | • Template 1(j): Description of intra-group dependencies  
                           | • Template 1(k): Description of external dependencies  
                           | • Template 1(l): Description of systemic interconnectedness |
| **Recovery indicators**     | • Template 2: Overview of recovery indicators |
| **Recovery options**        | • Template 3(a): Description and assessment of recovery options  
                           | • Template 3(b): Overview of recovery options |
| **Scenario analysis**       | • Template 4(a): Assessment for determination of preferred recovery strategy  
                           | • Template 4(b): Assessment of applicable recovery options under stress scenario  
                           | • Template 4(c): Overview of scenario analysis |
### APPENDIX 2  Information on business models and core business lines

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Detailed analysis and description/information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Business model</td>
<td>Overview of the operating model and business strategy, including how business lines are organised across covered entities</td>
</tr>
<tr>
<td>(b) Core business lines</td>
<td>For each core business line:</td>
</tr>
<tr>
<td></td>
<td>• considerations, processes and metrics supporting identification of core business line</td>
</tr>
<tr>
<td></td>
<td>• relevant profit and loss (including breakdown of revenue, operating expenses, loan loss provisions, and impairments)</td>
</tr>
<tr>
<td></td>
<td>• and balance sheet information, branch network and customer base by jurisdiction(s) of operations</td>
</tr>
<tr>
<td></td>
<td>• interactions and division of responsibilities between parent entity and core business lines</td>
</tr>
<tr>
<td></td>
<td>• components and composition of risk drivers</td>
</tr>
<tr>
<td>(c) Mapping of core business lines to:</td>
<td>• SEs</td>
</tr>
<tr>
<td></td>
<td>• operational services that support the business line</td>
</tr>
</tbody>
</table>
## APPENDIX 3 List of potential critical functions

<table>
<thead>
<tr>
<th>Category</th>
<th>Critical function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deposit-taking and savings</strong></td>
<td>• Demand and savings deposits accepted from individuals</td>
</tr>
<tr>
<td></td>
<td>• Term deposits accepted from individuals (fixed and short-term)</td>
</tr>
<tr>
<td></td>
<td>• Demand and savings deposits accepted from private non-individuals</td>
</tr>
<tr>
<td></td>
<td>• Term deposits accepted from private non-individuals (fixed and short-term)</td>
</tr>
<tr>
<td><strong>Lending and loan servicing</strong></td>
<td>• Secured lending to individuals</td>
</tr>
<tr>
<td></td>
<td>• Unsecured lending to individuals</td>
</tr>
<tr>
<td></td>
<td>• Secured lending to small and medium enterprises (SMEs)</td>
</tr>
<tr>
<td></td>
<td>• Unsecured lending to SMEs</td>
</tr>
<tr>
<td></td>
<td>• Secured lending to private non-individuals (excl. SMEs)</td>
</tr>
<tr>
<td></td>
<td>• Unsecured lending to private non-individuals (excl. SMEs)</td>
</tr>
<tr>
<td></td>
<td>• Secured lending to government</td>
</tr>
<tr>
<td></td>
<td>• Unsecured lending to government</td>
</tr>
<tr>
<td></td>
<td>• Trade finance</td>
</tr>
<tr>
<td></td>
<td>• Leasing</td>
</tr>
<tr>
<td></td>
<td>• Leasing</td>
</tr>
<tr>
<td><strong>Capital markets and investments</strong></td>
<td>• Debt capital market (excl. financial institution’s own issuance)</td>
</tr>
<tr>
<td></td>
<td>• Equity capital market (excl. financial institution’s own issuance)</td>
</tr>
<tr>
<td></td>
<td>• Secondary market (proprietary and non-proprietary)</td>
</tr>
<tr>
<td></td>
<td>• Derivatives (proprietary and non-proprietary)</td>
</tr>
<tr>
<td></td>
<td>• Asset management</td>
</tr>
<tr>
<td></td>
<td>• Prime brokerage</td>
</tr>
<tr>
<td></td>
<td>• Corporate advisory services</td>
</tr>
<tr>
<td></td>
<td>• Investment account</td>
</tr>
<tr>
<td><strong>Wholesale funding markets</strong></td>
<td>• Repurchase and reverse repurchase transaction</td>
</tr>
<tr>
<td></td>
<td>• Securities borrowing and lending (excluding with the Bank)</td>
</tr>
<tr>
<td></td>
<td>• Wholesale borrowing and lending (excluding with the Bank)</td>
</tr>
<tr>
<td><strong>Payment, clearing, custody, and settlements</strong></td>
<td>• Payment services (e.g. cash/wire services)</td>
</tr>
<tr>
<td></td>
<td>• Custodian services</td>
</tr>
<tr>
<td></td>
<td>• Clearing and settlement services (MYR)</td>
</tr>
<tr>
<td></td>
<td>• Clearing and settlement services (USD)</td>
</tr>
<tr>
<td></td>
<td>• Clearing and settlement services (SGD)</td>
</tr>
<tr>
<td></td>
<td>• Clearing and settlement services (Other FCY)</td>
</tr>
<tr>
<td></td>
<td>• Remittances</td>
</tr>
</tbody>
</table>

---

39 For the definition of SME, please refer to the Guideline for New SME Definition issued by SME Corporation Malaysia in October 2013.

40 In line with the Bank’s Guideline on Securities Borrowing and Lending of RENTAS Securities issued in June 2016.

Issued on: 17 January 2020
## APPENDIX 4 List of potential operational services

<table>
<thead>
<tr>
<th>Category</th>
<th>Operational service</th>
</tr>
</thead>
</table>
| Treasury/ALM services           | • Steering function for the treasury activity (management and monitoring risk appetite, operations steering, defining risk monitoring)  
                                 | • Booking arrangements  
                                 | • Collateral management, entity refinancing  
                                 | • Reporting function  
                                 | • Medium and long-term funding programs  
                                 | • Refinancing operations                                      |
| Trading/Asset management        | • Operations processing: trade capture, life cycle management  
                                 | • Confirmation, settlement, payment  
                                 | • Position and counterparty management (data reporting, counterparty relationships)  
                                 | • Position management (risk and reconciliation)               |
| Risk management and valuation   | • Centralised risk management  
                                 | • Risk management units, by business line and risk type  
                                 | • Embedded risk managers  
                                 | • Risk report generation  
                                 | • Risk IT infrastructure and personnel, not covered elsewhere                                      |
| Accounting                      | • Statutory reporting  
                                 | • Regulatory reporting  
                                 | • Valuation activities for market positions  
                                 | • Management reporting                                      |
| Physical operations             | • Cash handling  
                                 | • Access control  
                                 | • Security                                      |
| Human resource support          | • Payroll  
                                 | • Staff administration (contracts)  
                                 | • Communication for human resources                                      |
| Information Technology          | • Data storage and processing  
                                 | • IT infrastructure, workstations, servers, data centres and related services  
                                 | • Software licenses and applications  
                                 | • Access to external providers (e.g. Bloomberg, stock exchanges)  
                                 | • Application maintenance (software application maintenance and related data flows, to be limited to corrective maintenance during the resolution period)  
                                 | • User support  
                                 | • Disaster recovery solutions                                      |
| Legal services/compliance       | • Corporate legal support  
                                 | • Business/transactional legal services  
                                 | • Compliance support                                      |
## APPENDIX 5  Information on critical functions and critical shared services

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Detailed analysis and description/information required</th>
</tr>
</thead>
</table>
| (a) **Description of the function** | • Nature of business  
• Customer base by jurisdiction(s) of operations |
| (b) **Risk management practices and governance structure** | • Overview of risk management policies and procedures and governance structure of the function, highlighting the interactions and division of responsibilities between parent entity and the provider of the function |
| (c) **Assessment of criticality of the function** | • Considerations, processes and metrics supporting the assessment of criticality |
| (d) **Critical shared services** | • Considerations, processes and metrics supporting the assessment of criticality |
| (e) **Mapping of functions to:** | • SEs  
• core business lines  
• critical shared services |
## APPENDIX 6 Information on governance

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Detailed analysis and description/information required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Overview</td>
<td>Description of how the recovery plan is integrated with the existing governance structure and risk management framework of the financial institution, including necessary steps and timeline to address any misalignments</td>
</tr>
</tbody>
</table>
| (b) Development, review, approval and maintenance of recovery plan | Description of –  
  • roles and responsibilities of persons responsible, including the identified members of the board and senior management accountable for recovery planning  
  • governing policies and procedures for development, review, approval and maintenance of recovery plan, including arrangements taken by the financial institution to ensure that recovery options are coordinated and consistent at the consolidated and individual entity-level  
  • statement of confirmation that the recovery plan has been – assessed and approved by the board  
  – reviewed by the internal audit function and/or the external auditors |
| (c) Monitoring, escalation, activation and implementation of recovery plan | Description of the internal escalation and decision-making process that applies upon a breach of the early warning and recovery thresholds, including –  
  • roles and responsibilities of persons and/or committee involved  
  • decision-making framework for activating and implementing the recovery plan including guiding principles, policies, procedures and timeframe to determine the course of action  
  • when and how other relevant authorities will be notified |
## APPENDIX 7  List of potential recovery indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>Recovery indicator</th>
</tr>
</thead>
</table>
| **Capital**       | • Common equity tier 1 capital ratio  
|                   | • Tier 1 capital ratio  
|                   | • Total capital ratio  
|                   | • Leverage ratio                                                                 |
| **Liquidity**     | • Liquidity coverage ratio  
|                   | • Net stable funding ratio  
|                   | • Cost of funds  
|                   | • Cost of wholesale funding  
|                   | • Concentration of funding (e.g. from top 20 counterparties)                        |
| **Profitability** | • Return on assets  
|                   | • Return on equity  
|                   | • Net interest margin  
|                   | • Cost-to-income ratio  
|                   | • Operational risk loss                                                           |
| **Asset quality** | • Gross impaired loans/financing ratio  
|                   | • Growth rate of gross impaired loans/financing  
|                   | • Net impaired loans/financing ratio  
|                   | • Loan/financing loss coverage ratio                                              |
| **Operational risk** | • Unscheduled downtime for mission critical systems  
|                   | • Cyber-attack incidences on mission critical systems  
|                   | • Critical staff turnover rate  
|                   | • Number of compliance breaches                                                    |
| **Market**        | • Price-to-book ratio  
|                   | • Share price volatility  
|                   | • Credit rating  
|                   | • Credit default swap spread                                                      |
| **Macroeconomic** | • GDP growth  
|                   | • Sectoral GDP growth (e.g. construction, manufacturing, exports, etc.)  
|                   | • Sovereign’s credit rating  
|                   | • Sovereign’s credit default swap spread                                           |
# APPENDIX 8  List of potential recovery options

<table>
<thead>
<tr>
<th>Category</th>
<th>Recovery option</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capital raising</strong></td>
<td>• External share capital increase</td>
</tr>
<tr>
<td></td>
<td>• Share capital increase by parent institution</td>
</tr>
<tr>
<td></td>
<td>• Additional Tier 1 capital increase</td>
</tr>
<tr>
<td></td>
<td>• Tier 2 capital increase</td>
</tr>
<tr>
<td><strong>Disposal</strong></td>
<td>• Sale of banking subsidiary</td>
</tr>
<tr>
<td></td>
<td>• IPO of banking subsidiary</td>
</tr>
<tr>
<td></td>
<td>• Sale of banking minority stake</td>
</tr>
<tr>
<td></td>
<td>• Sale of non-banking entity</td>
</tr>
<tr>
<td></td>
<td>• Sale and lease-back transactions</td>
</tr>
<tr>
<td><strong>Asset sales</strong></td>
<td>• Stocks</td>
</tr>
<tr>
<td></td>
<td>• Bonds</td>
</tr>
<tr>
<td></td>
<td>• Real estate</td>
</tr>
<tr>
<td></td>
<td>• Transfer of assets</td>
</tr>
<tr>
<td></td>
<td>• Other illiquid assets</td>
</tr>
<tr>
<td><strong>Liability management</strong></td>
<td>• Rollover issuance of Additional Tier 1 instruments</td>
</tr>
<tr>
<td></td>
<td>• Rollover issuance of Tier 2 instruments</td>
</tr>
<tr>
<td></td>
<td>• Internal liquidity support from parent institution</td>
</tr>
<tr>
<td></td>
<td>• Internal liquidity support from affiliated (non-parent) institution</td>
</tr>
<tr>
<td></td>
<td>• Repurchase of liabilities under book value</td>
</tr>
<tr>
<td></td>
<td>• Liquidation of collateral in case of customer default</td>
</tr>
<tr>
<td></td>
<td>• Adjustment of existing credit lines within the credit business</td>
</tr>
<tr>
<td></td>
<td>• Utilisation of existing lines</td>
</tr>
<tr>
<td></td>
<td>• Cease trading activities</td>
</tr>
<tr>
<td></td>
<td>• Intensify deposit retention efforts i.e. customers incentives</td>
</tr>
<tr>
<td><strong>Cost savings</strong></td>
<td>• Containment / reduction of staff costs (e.g. cancel bonus payments, reduction of working time, cut in voluntary benefits)</td>
</tr>
<tr>
<td></td>
<td>• Stop/delay investments in facilities and equipment</td>
</tr>
<tr>
<td></td>
<td>• Stop/delay investments in IT</td>
</tr>
<tr>
<td></td>
<td>• Major expenditure cutbacks / rationalisation</td>
</tr>
<tr>
<td></td>
<td>• Renegotiation of existing contracts</td>
</tr>
<tr>
<td><strong>Earnings retention</strong></td>
<td>• Non-payment of coupon on Tier 1/Tier 2 issues</td>
</tr>
<tr>
<td></td>
<td>• No distribution of dividends</td>
</tr>
<tr>
<td><strong>Access to wholesale funding</strong></td>
<td>• Repurchase agreement</td>
</tr>
<tr>
<td></td>
<td>• Issuance of covered bonds</td>
</tr>
<tr>
<td></td>
<td>• Issuance of unsecured bonds</td>
</tr>
<tr>
<td><strong>Reduction of riskiness/improvement of risk profile</strong></td>
<td>• Reduction of new business origination</td>
</tr>
<tr>
<td></td>
<td>• Syndication of existing loans</td>
</tr>
<tr>
<td></td>
<td>• Sale of existing loans</td>
</tr>
<tr>
<td></td>
<td>• Securitisation</td>
</tr>
<tr>
<td></td>
<td>• Synthetic securitizations</td>
</tr>
<tr>
<td></td>
<td>• Early termination of derivatives in banking book</td>
</tr>
<tr>
<td><strong>Mergers</strong></td>
<td>• Merger with affiliated institution or non-affiliated institution</td>
</tr>
</tbody>
</table>
## APPENDIX 9  Information on each recovery option

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Detailed analysis and description/information required</th>
</tr>
</thead>
</table>
| (a) General information            | • Description and quantum (e.g. size of issuance, value of subsidiary to be disposed, portfolio volume, magnitude of cost reduction) of the recovery option  
• Assumptions underpinning the recovery option  
• Relevant personnel/committees which are primarily responsible for developing, maintaining, implementing and approving the recovery option, including description of specific governance arrangement (e.g. intra-group coordination) for the implementation of recovery option, if any  
• Estimated time required for implementation and realisation of benefits of the recovery option  
• Estimated implementation cost, including cost arising from, e.g. hiring advisors, restructuring charges, sales commissions |
| (b) Impact assessment              | • Financial, strategic, operational, stakeholder and systemic impact assessments and assumptions underpinning the assessments (e.g. valuation assumptions which incorporates value and marketability of assets/businesses, behaviour of other market participants) |
| (c) Feasibility assessment         | • Assessment of overall feasibility and assumptions underpinning the assessment                                           |
| (d) Applicability to stress scenario | • Assessment of applicability of recovery options under different stress scenarios (i.e. system-wide, idiosyncratic, fast-moving, slow-moving) and justifications/considerations to support assessment |
| (e) Execution process              | • Necessary procedures/steps to implement the recovery option  
• Specific communication plans with internal, external and other stakeholders to support implementation |

Issued on: 17 January 2020
### APPENDIX 10  Information on scenario design and scenario analysis

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Detailed analysis and description/information required</th>
</tr>
</thead>
</table>
| (a) Scenario design      | Narrative of each stress scenario, including –  
- type, speed, severity and time horizon  
- logical sequence and timeline of stress events, including detailed description and quantitative parameters at each time period  
- considerations, processes and assumptions underpinning the selection and design of the scenario |
| (b) Scenario analysis    | For each stress scenario –  
- financial and operational impact of stress scenario on the financial institution, including –  
  - how relevant recovery indicators are affected over time, i.e. the extent and timing of breaches of early warning and recovery thresholds  
  - risk transmission channels of the stress scenario to the financial institution  
- assessment of adequacy of the recovery indicator and governance frameworks, including –  
  - number and type of recovery thresholds that have been breached  
  - extent and timing of the breach to assess the time available for the execution of recovery options  
  - monitoring and escalation processes  
- description of preferred recovery strategy and recovery capacity, including but –  
  - cumulative impact (i.e. financial, strategic, operational, stakeholder and systemic impact), feasibility and time taken to implement and realise the benefits of the preferred recovery strategy  
  - considerations and assumptions underpinning the selection of the strategy |