Deposit Insurers' Role in Contingency Planning and System-wide Crisis Preparedness and Management

Guidance Paper

(Consultation version)

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Acronyms

ATM	Automated teller machine
BCBS	Basel Committee on Banking Supervision
BCP	Business continuity plan
CMG	Crisis management group
CPs	IADI Core Principles for Effective Deposit Insurance Systems (also Core Principles)
D-SIB	Domestic systemically important bank
D-SIFI	Domestic systemically important financial institution
DFA	Dodd–Frank Wall Street Reform and Consumer Protection Act
DGS	Deposit guarantee scheme
DI	Deposit insurer
DIS	Deposit insurance system
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
EU	European Union
EFDI	European Forum of Deposit Insurers
EWS	Early warning system
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSC	Financial Stability Committee
FSN	Financial safety-net
FSOC	Financial Stability Oversight Council
G-SIB	Global systemically important bank
G-SIFI	Global systemically important financial institution
G-SII	Global systemically important institution
IADI	International Association of Deposit Insurers
IMF	International Monetary Fund
KAs	Key Attributes of Effective Resolution Regimes (also Key Attributes)
LoLR	Lender of last resort
MPE	Multiple point of entry
MoU	Memorandum of understanding
O-SII	Other systemically important institution
RRP	Recovery and resolution plan
SCV	Single customer view
SPE	Single point of entry
SRM	Single Resolution Mechanism
SRR	Special resolution regime
SSM	Single Supervisory Mechanism
TC	Technical committee
UK	United Kingdom
US	United States

List of terms[1]

Backup funding: Additional funding arrangements to supplement the deposit insurance funds in situations where the cumulated funds are insufficient to meet the needs of intervention and failure resolution, including depositor reimbursement.

Bank: Any entity, which accepts deposits or repayable funds from the public and is classified under the jurisdiction's legal framework as a deposit-taking institution.

Blanket guarantee: A declaration by authorities that, in addition to the protection provided by limited coverage deposit insurance or other arrangements, certain deposits and perhaps other financial instruments will be protected.

Contingency planning: Contingency planning is done by the deposit insurer and other financial safety-net participants, individually as well as jointly, to outline policies, procedures and actions that they might follow in the event of unexpected developments and significant shocks; it helps identify measures for preserving the operational and financial situation of the safety-net agency.

Crisis management[2]: The set of policies and procedures that financial safety-net authorities employ to respond promptly, decisively and effectively when a financial crisis having system-wide implications materialises. This builds on advance preparation and requires comprehensive tools and powers, sufficient funds, and communication policies for both domestic and foreign entities.

Crisis preparedness: The set of tools and procedures that all financial safety-net participants have in place for handling any idiosyncratic failures and financial crises that can have system-wide implications. Contingency planning is part of crisis preparedness.

Financial safety-net: A framework that includes the functions of prudential regulation, supervision, resolution, lender of last resort and deposit insurance. In many jurisdictions, a department of government (generally Finance Ministry or Treasury responsible for financial sector policy) is included in the financial safety-net.

Funding: Financing mechanisms necessary to cover the operating expenses and obligations of a deposit insurer.

Loss minimiser: A mandate in which the deposit insurer actively engages in a selection from a range of least-cost resolution strategies.

Mandate: A set of official instructions describing the deposit insurer's roles and responsibilities. Mandates can range from narrow "pay box" systems to those with extensive responsibilities, such as preventive action and loss or risk minimisation/management, with a variety of combinations in between. These can be broadly classified into four categories: pay box, pay box plus, loss minimiser and risk minimiser.

Operational readiness: The need for a deposit insurer to have in place the necessary tools and procedures (operational capabilities) to perform its normal operations in accordance with the mandate.

Pay box: A mandate in which the deposit insurer is only responsible for the reimbursement of insured deposits.

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[1] As far as possible, definitions are sourced from the IADI Core Principles and Glossary.

[2] Adapted from International Monetary Fund, Technical Note on Contingency Planning and Crisis Management, Finland, January 2017.

Pay box plus: A mandate in which the deposit insurer has additional responsibilities, such as certain resolution functions (e.g. financial support).

Resolution authority: A public authority that, either alone or together with other authorities, is responsible for the resolution of financial institutions established in its jurisdiction (including resolution planning functions).

Risk minimiser: A mandate in which a deposit insurer has comprehensive risk minimisation functions, including risk assessment/management, a full suite of early intervention and resolution powers, and in some cases, prudential oversight responsibilities.

Stress testing: A range of simulation techniques used to assess the vulnerability of an institution under different scenarios, such as major changes to the macroeconomic environment, or exceptional but plausible events.

Systemic risk: A risk of disruption to financial services that is caused by an impairment of all or parts of the financial system and has the potential to have serious negative consequences for the real economy.

Executive Summary

The Core Principles for Effective Deposit Insurance Systems issued by the International Association of Deposit Insurers (IADI) outline the roles and responsibilities of the deposit insurer in contingency planning and crisis preparedness and management (Core Principle 6). Depending upon the design of the institutional and regulatory framework in a jurisdiction, the mandates of deposit insurers may differ. Irrespective of the mandate, however, there are elements of contingency planning and crisis preparedness and management that are applicable to all deposit insurers.

In 2017, a technical committee (TC) was established to prepare a research paper on Deposit Insurers' Role in Contingency Planning and System-wide Crisis Preparedness and Management. The TC conducted a survey of IADI members to gather information about practices among members relating to: (i) characteristics of the financial safety-net (FSN); (ii) contingency planning; (iii) information sharing; and (iv) system-wide crisis preparedness and management. Sixty-one (out of eighty-two members) responded to the survey. Eleven IADI members also provided case studies.

FSN structures differ significantly among IADI members. The deposit insurance function either rests within the central bank, or is exercised jointly with the resolution authority, or is performed by an agency separate from the central bank or the resolution authority. The diverse FSN structures impose varied requirements for coordination and information sharing, and have implications for the scope of contingency planning exercises conducted by the deposit insurer as well as the deposit insurer's role in contingency planning and crisis management.

The information sharing and coordination arrangements between FSN participants need to be established in stable times and serve as a basis for enhanced sharing of information and coordination during crisis situations. For a deposit insurer, the information it receives is critical for contingency planning purposes or for developing resolution strategies when resolution function forms part of its mandate. Information sharing arrangements among FSN participants need to be formalised through legislation, regulations, Memorandum of Understanding (MoU) or other legal provisions.

Contingency planning is a process through which an institution outlines policies, procedures and actions that it might follow in the event of unexpected developments and significant shocks. Contingency planning is critical for authorities forming part of the FSN, whereby each authority prepares and plans for the actions required to handle an unexpected situation. The testing of contingency plan helps identify weaknesses in the plan and improve it by addressing the weaknesses observed in the testing phase.

A prerequisite for a contingency planning framework is that deposit insurers have in place the necessary tools and procedures (operational capabilities) to perform its normal operations in accordance with the mandate. For a deposit insurer, contingency planning involves steps to identify and manage any event or shock that could adversely affect its normal functioning, requiring action or intervention on its part according to its mandate as well as jointly with other FSN participants. The deposit insurers need to run a variety of different tests to assess the strength of systems, controls and the decision-making process for dealing with a crisis. Based on the tests conducted, weaknesses in the processes and procedures may be identified and corrected.

Given different mandates of deposit insurers, the scope of plans and testing differ among deposit insurers. The contingency planning practices among deposit insurers vary a great deal and such frameworks are evolving.

Preparations for a system-wide crisis require that the ministry of finance, central bank, the supervisor, the resolution authority and the deposit insurer work closely and in a coordinated

manner. Crisis management planning requires clarity about the role of each participant in a crisis situation, the decision-making process, the process of implementing actions in a coordinated manner, and the communication strategy. This coordination is typically conducted by an inter-agency coordination committee. Deposit insurers play a key role in minimising the risk of runs and contributing to financial stability during a crisis; they should participate in the system-wide entity or group responsible for crisis management.

Authorities can conduct crisis simulations to plan response to a crisis, where the roles and actions of all relevant FSNs are tested; table top exercises where policy makers test their ability to develop a consistent policy approach to a hypothetical crisis situation; and “top-down” stress tests for evaluating potential weaknesses in the financial system.

The task of communication is especially important in a crisis. As the crisis unfolds, depositors need more information about the safety of their deposits, cause/s of the crisis and policies being implemented to contain the crisis. As part of contingency planning for a systemic crisis, communication protocols are important and should be developed in stable times. Safety-net agencies need to be able to help prepare mechanisms to develop a common public communication approach.

Guidance points

Based on the analysis done in the paper and discussions among TC members, the following guidance points are recommended by the IADI. While implementing the guidance, differences in mandate and powers of deposit insurers across jurisdictions should be taken into consideration.

Contingency planning prerequisites

1. A robust operational framework is a prerequisite for effective contingency planning and preparedness for dealing with a crisis. All deposit insurers should ensure that they have in place the necessary tools and procedures (operational capabilities) to perform its normal operations in accordance with the mandate. (reference section III.2)

2. Deposit insurers should establish effective information sharing arrangements with other FSN members to prepare for handling extraordinary situations. The information sharing and coordination arrangements between FSN participants, typically established in stable times, serve as a basis for enhanced sharing of information and coordination during crises. Ongoing information sharing and the coordination of actions should be explicit and formalised through legislation, regulations, memoranda of understanding, or other legal provisions. (reference section II.2)

Contingency planning and testing

3. All deposit insurers should develop contingency plans to prepare an appropriate and effective response to the extraordinary situation in the event that it occurs. The scope and areas covered by contingency plans are likely to vary depending on the mandate of deposit insurers. The deposit insurers should lay down options for dealing with unexpected situations, to maintain business continuity and for performing their role in areas such as payouts, funding, recovery and resolution, and communication. (reference section III.2)

4. The deposit insurers should document the contingency planning framework in easy-to-use “handbooks” or “playbooks” or other such documents, which provide guidance and other necessary information for design and implementation of contingency planning framework. (reference section III.2.e)

5. For an effective implementation of contingency plan, deposit insurers need to allocate adequate resources, such as staff (in-house or outsourced), technical expertise and funds. (reference section III.2.a)

6. Contingency plans should be regularly tested by deposit insurers. Not all areas of the plan are to be tested every year but the deposit insurer should ensure that critical areas are tested regularly. The frequency of testing should be decided in light of the nature and importance of each critical area. The deposit insurer should maintain a schedule of tests to be conducted over a chosen planning period. (reference section III.2.b)

7. Deposit insurers should conduct tests that can take a variety of forms. The stress scenarios may be built around different assumptions regarding severity of crisis, ranging from idiosyncratic to system-wide failures. The weaknesses observed during tests should be corrected and the lessons learned from each exercise should be documented as part of the plan. (reference section III.2.d)

8. All deposit insurers should develop a communication strategy as part of contingency planning, which should be tested on a periodic basis and revised as needed. Communication strategy for contingency and crisis situations should aim at and involve all stakeholders, FSN participants, media, etc. (reference Section III.2.b)

9. Contingency plans for cross-border information sharing and cooperation should be prepared and tested in jurisdictions where there is a material presence of cross-border firms. These are aimed at ensuring that cross-border information sharing and cooperation arrangements are adequate and effective. (reference section IV.4)

Crisis preparedness and management

10. The deposit insurer should be part of an institutional framework for ongoing communication and coordination involving safety-net participants related to system-wide crisis preparedness and management. The specific role of the deposit insurer will be determined by its mandate but all deposit insures need to ensure that they can participate in crisis management arrangements. (reference section IV.3.a and b)

11. The deposit insurer should participate in crisis simulation exercises aimed at preparing for a system-wide crisis. Such exercises should be planned and carried out regularly. (reference section IV.2)

12. Deposit insurers provide financing in accordance with their roles and responsibilities in a crisis situation. Deposit insurers should have a role in decision-making for using the deposit insurance fund (for payout or resolution) and have a responsibility to ensure the deposit insurance funds are appropriately used. (reference section IV.3.b)

13. A system-wide communication and cooperation strategy for dealing with crisis situations should cover all relevant FSN participants. In situations of a system-wide crisis, communication and cooperation among FSN participants should be well coordinated and the deposit insurer should participate in the development of crisis communication plans. (reference section IV.3.c)

I. Introduction

A significant lesson learned from the global financial crisis of 2008/09 is that deposit insurance plays an important role in the FSN framework. Depositor protection is a critical element necessary for maintaining and restoring financial stability. As the financial crisis emerges, depositor flight can undermine confidence in the financial system, posing a threat to system-wide financial stability. By instilling confidence among depositors, deposit insurance helps limit contagion of distress to otherwise sound banks and contain the impact of the crisis.

For deposit insurers to play an effective role during a crisis, they need to perform the roles and responsibilities stipulated in their mandates. To achieve this objective, deposit insurers need to engage in a variety of preparatory activities aimed at identifying and preparing for events that may affect normal functioning. Contingency planning or crisis preparedness exercises enable the testing of the effectiveness of plans to handle extraordinary situations. Such activities seek to ensure that the deposit insurer can perform the role according to its mandate in the event of a system-wide crisis.

IADI's Core Principles for Effective Deposit Insurance Systems outline the roles and responsibilities of the deposit insurer in contingency planning and system-wide crisis preparedness and management under Core Principle 6. This Principle was incorporated into the revised Core Principles issued in November 2014, following (i) experience gained in using the Core Principles for jurisdictional self-assessments and in Financial Sector Assessment Programs (FSAPs); (ii) significant developments in the regulatory landscape such as the development of the Financial Stability Board's (FSB) Key Attributes of Effective Resolution Regimes (Key Attributes); and (iii) enhanced guidance developed by IADI to address recommendations arising from the FSB Thematic Review on Deposit Insurance Systems.

Core Principle 6 states that:

> "*The deposit insurer should have in place effective contingency planning and crisis management policies and procedures, to ensure that it is able to effectively respond to the risk of, and actual, bank failures and other events. The development of system-wide crisis preparedness strategies and management policies should be the joint responsibility of all safety-net participants. The deposit insurer should be a member of any institutional framework for ongoing communication and coordination involving financial safety-net participants related to system-wide crisis preparedness and management.*"

The Essential Criteria (EC) further state that:

> *1. The deposit insurer has its own effective contingency planning and crisis management policies and procedures in place, to ensure that it is able to effectively respond to the risk of, and actual, bank failures and other events.*
>
> *2. The deposit insurer develops and regularly tests its own contingency planning and crisis management plans.*
>
> *3. The deposit insurer is a member of any institutional framework for ongoing communication and coordination involving safety-net participants related to system-wide crisis preparedness and management.*
>
> *4. The deposit insurer participates in regular contingency planning and simulation exercises related to system-wide crisis preparedness and management involving all safety-net participants.*

5. The deposit insurer participates in the development of pre- and post-crisis management communication plans involving all safety-net participants, to ensure comprehensive and consistent public awareness and communications.

The Core Principle on contingency planning and crisis management goes hand in hand with, and is complementary to, several other Core Principles. The Core Principles require a "formal and comprehensive framework in place for the close coordination of activities and information sharing, on an ongoing basis, between the deposit insurer and other FSN participants" (Core Principle 4). The deposit insurer's role in preparing for the crisis and some of the contingency planning exercises is contingent on the quality of and the speed with which it receives information, in stable as well as crisis times. Cross-border issues also come into play, especially during a crisis, where there is a material presence of cross-border banks in a jurisdiction, requiring coordination and information sharing with DISs in other jurisdictions. Core Principle 5 and its Essential Criteria make clear that "where there is a material presence of foreign banks in a jurisdiction, formal information sharing and coordination arrangements should be in place among deposit insurers in relevant jurisdictions".

A TC led by the Research Unit in IADI was established in May 2017 to analyse the objectives of contingency planning and system-wide crisis preparedness and management by IADI members. The TC is composed of IADI member representatives, a member of the IADI Advisory Panel, representatives from the International Monetary Fund (IMF) and the World Bank[3] (the composition of the TC is provided in Annex I). While reviewing current practices among IADI members, the paper aims to provide a direction for implementation and strengthening of deposit insurers' contingency planning and crisis preparedness and management frameworks. It is recognised, however, that such direction cannot be uniform for all deposit insurers, but will need to be tailored according to their mandate and the legal framework in each jurisdiction.

This paper is divided into five sections. Section I of the paper contains the introduction and methodology. Section II discusses the organisation and structure of the FSN, which has implications for the role of deposit insurers in contingency planning and system-wide crisis preparedness and management. Section III covers the contingency planning and testing framework and practices among deposit insurers. Section IV discusses the system-wide crisis preparedness and management framework and the role of deposit insurers in this framework. Section V provides concluding observations and suggested areas for enhancements in current practices.

Methodology

In 2017, the TC conducted a survey by distributing a questionnaire to IADI members. The objective of the survey was to gather information about practices among members relating to: (i) characteristics of the FSN; (ii) contingency planning; (iii) information sharing; and (iv) system-wide crisis preparedness and management. Sixty-one (out of 82) members responded to the survey and eleven members provided case studies.

Table 1 lists IADI members who responded to the survey and provided case studies. Unless otherwise mentioned, the empirical results and examples presented in this paper are based on the survey responses and case studies received from IADI members.

[3] The views expressed in the paper do not necessarily reflect the official policy or stance of the IMF or the World Bank.

Table 1: Respondents of the TC survey and case study

Jurisdiction	Organisation	Survey	Case study
Albania	Albanian Deposit Insurance Agency	✓	
Australia	Australian Prudential Regulation Authority	✓	
Azerbaijan	Azerbaijan Deposit Insurance Fund	✓	
Bangladesh	Bangladesh Bank	✓	
Barbados	Barbados Deposit Insurance Corporation	✓	
Bosnia and Herzegovina	Deposit Insurance Agency of Bosnia and Herzegovina	✓	
Brazil	Fundo Garantidor de Créditos	✓	
Bulgaria	Bulgarian Deposit Insurance Fund	✓	
Canada	Canada Deposit Insurance Corporation	✓	✓
Chinese Taipei	Central Deposit Insurance Corporation	✓	
Colombia	Fondo de Garantías de Instituciones Financieras (FOGAFIN)	✓	
Croatia	State Agency for Deposit Insurance and Bank Resolution	✓	
Czech Republic	Financial Market Guarantee System	✓	
Ecuador	Corporación del Seguro de Depósitos (COSEDE)	✓	
Germany	Compensation Scheme of German Private Banks	✓	
Greece	Hellenic Deposit and Investment Guarantee Fund (TEKE)	✓	
Guatemala	Banco de Guatemala, as administrator of the Fund for Savings Protection	✓	
Honduras	Fondo de Seguro de Depósitos (FOSEDE)	✓	
Hong Kong	Hong Kong Deposit Protection Board	✓	
Hungary	National Deposit Insurance Fund of Hungary	✓	
India	Deposit Insurance and Credit Guarantee Corporation	✓	
Indonesia	Indonesia Deposit Insurance Corporation	✓	
Italy	Fondo Interbancario di Tutela dei Depositi	✓	✓
Jamaica	Jamaica Deposit Insurance Corporation	✓	
Japan	Deposit Insurance Corporation of Japan	✓	✓
Jordan	Jordan Deposit Insurance Corporation	✓	
Kazakhstan	Kazakhstan Deposit Insurance Fund JSC	✓	
Kenya	Kenya Deposit Insurance Corporation	✓	
Korea	Korea Deposit Insurance Corporation	✓	✓
Kosovo	Deposit Insurance Fund of Kosovo	✓	
Kyrgyz Republic	Deposit Protection Agency of the Kyrgyz Republic	✓	
Libya	Depositor's Insurance Fund	✓	
Liechtenstein	Deposit Guarantee and Investor Compensation Foundation PCC	✓	
Malaysia	Malaysia Deposit Insurance Corporation	✓	
Mongolia	Deposit Insurance Corporation of Mongolia	✓	
Montenegro	Deposit Protection Fund	✓	
Morocco	Société Marocaine de Gestion des Fonds de Garantie des Dépôts Bancaires (SGFG)	✓	
Netherlands	De Nederlandsche Bank	✓	
Nigeria	Nigeria Deposit Insurance Corporation	✓	
Norway	Norwegian Banks' Guarantee Fund	✓	
Palestine	Palestine Deposit Insurance Corporation	✓	
Peru	Fondo de Seguro de Depósitos	✓	
Philippines	Philippine Deposit Insurance Corporation	✓	
Poland	Bank Guarantee Fund	✓	✓
Québec (Canada)	Autorité des marchés financiers	✓	✓
Romania	Bank Deposit Guarantee Fund	✓	
Russian Federation	Deposit Insurance Agency	✓	✓
Serbia	Deposit Insurance Agency of Serbia	✓	
Singapore	Singapore Deposit Insurance Corporation Ltd	✓	
Slovenia	Bank of Slovenia	✓	
Sweden	Swedish National Debt Office	✓	
Switzerland	Esisuisse	✓	
Thailand	Deposit Protection Agency	✓	
Trinidad and Tobago	Deposit Insurance Corporation	✓	

Jurisdiction	Organisation	Survey	Case study
Turkey	Savings Deposit Insurance Fund	✓	
Uganda	Bank of Uganda	✓	✓
Ukraine	Deposit Guarantee Fund	✓	
United Kingdom	Financial Services Compensation Scheme	✓	✓
United States	Federal Deposit Insurance Corporation	✓	✓
Uruguay	Corporación de Protección del Ahorro Bancario (COPAB)	✓	
Zimbabwe	Deposit Protection Corporation	✓	✓

Note: Additionally, West African Monetary Union Deposit Insurance Fund (West African Monetary Union) responded to the survey but is excluded from the results.

II. Financial safety-net

The FSN framework for the financial sector includes institutions that perform the functions of prudential regulation, supervision, resolution, lender of last resort (LoLR) and deposit insurance. These functions are designed to ensure that (i) the financial system operates in a safe and sound manner, and (ii) if a financial institution becomes non-viable, it is resolved without causing serious disruptions in the financial system. The institutional framework for the FSN is diverse, with no single model or institutional setting prevailing globally.

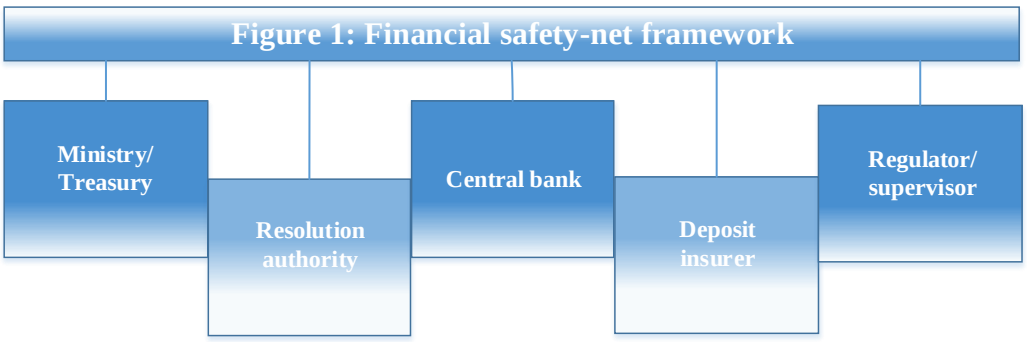
II.1. Financial safety-net structure

The FSN functions can be performed by several agencies, or combined in a single agency. The agencies commonly involved in the FSN are[4] (Figure 1):

- *The central bank* – Central banks are responsible for monetary policy, oversight of the payment system and the LoLR function. In many jurisdictions, they are also responsible for some other FSN functions, including prudential regulation, bank supervision, resolution of banks and deposit insurance.
- *Supervisory authority* – Supervisory bodies monitor risks undertaken by financial institutions and intervene when such risks become excessive or jeopardise the viability of the institution. Supervision and prudential regulation of banks may be performed by the central bank, or by another specialised agency, referred to as the financial services authority in some jurisdictions.
- *Resolution authority* – A resolution authority is responsible for resolving distressed or problem banks using resolution powers and tools. Some jurisdictions have a separate resolution authority, which may also provide deposit insurance. In a number of jurisdictions, the resolution function is entrusted to the regulator/supervisor for banks or the central bank.
- *Deposit insurer* – Insurance of deposits is provided either by a public or private agency or under a joint arrangement. Some deposit insurers are also resolution authorities and may even perform supervisory functions.
- *Finance Ministry/Treasury* – A department of government (typically the Finance Ministry or Treasury responsible for financial sector policymaking) also generally forms part of the FSN. The government is especially involved in crisis situations when public money may be used to provide a fiscal backstop.

In order to maintain the stability of the financial system, each FSN institution must ensure that it can (i) perform its own duties efficiently and effectively, and (ii) function in a coordinated way with the other participants of the FSN. The contingency planning exercises and crisis management arrangements are important tools in achieving this objective. Their design and complexity would, however, depend on the institutional set-up of each jurisdiction.

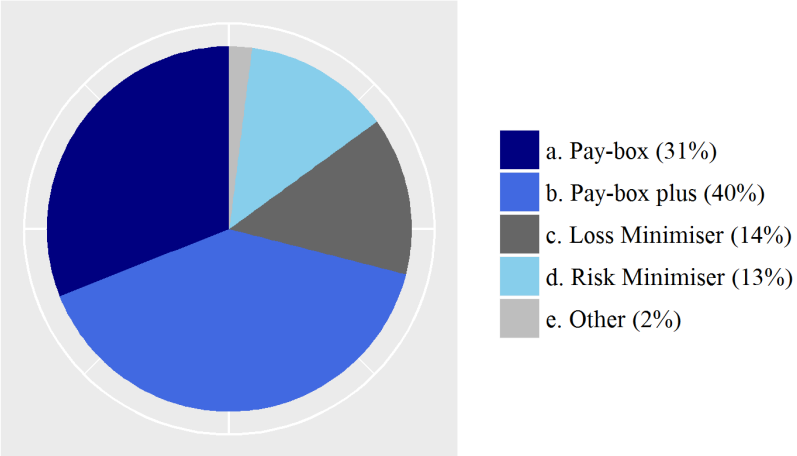
[4] Additionally, there are regulators for non-banks, including insurance firms and capital market-related institutions, which may be participants of the FSN.



Role of deposit insurance systems

The specific mandate of the deposit insurer determines its role in the FSN. Mandates[5] can range from narrow "pay box" systems to those with extensive responsibilities, such as preventive action and loss or risk minimisation/management, with a variety of combinations in between. Within the universe of deposit insurers, there is a predominance of members with pay box or pay box plus systems. According to the IADI 2018 Annual Survey, 31% of deposit insurers worldwide were pay boxes, 40% were pay box plus, 14% were loss minimisers and 13% were risk minimisers (Figure 2).[6]

Figure 2:
Mandates of deposit insurers



Number of respondents: 135
Source: IADI 2018 Annual Survey

[5] The mandates can be broadly classified into four categories:

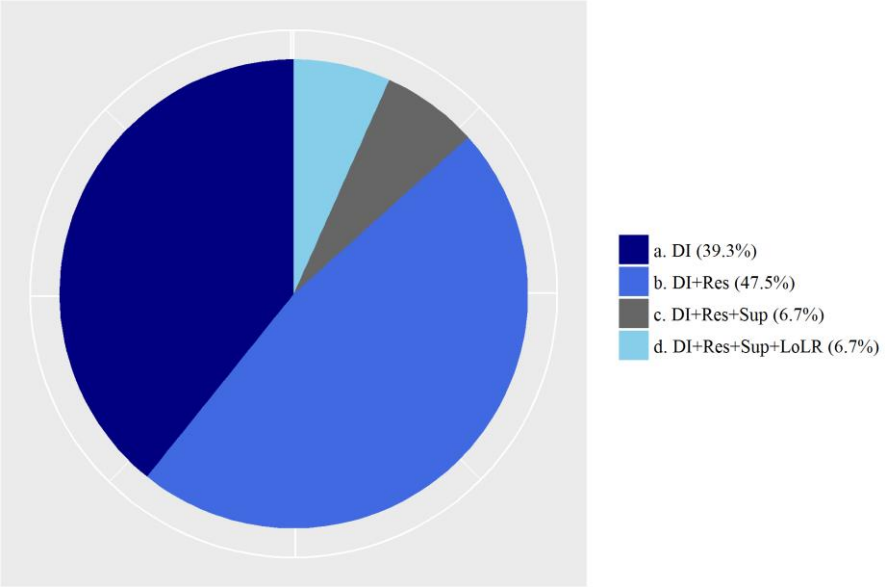
a. "Pay box", where the deposit insurer is only responsible for the reimbursement of insured deposits;
b. "Pay box plus", where the deposit insurer has additional responsibilities, such as certain resolution functions (e.g. financial support);
c. "Loss minimiser", where the insurer actively engages in a selection from a range of least-cost resolution strategies; and
d. "Risk minimiser", where the insurer has comprehensive risk minimisation functions that include risk assessment/management, a full suite of early intervention and resolution powers, and in some cases prudential oversight responsibilities (source: IADI Handbook).

[6] One deposit insurer is classified as "other" in the IADI Annual Survey as it performs some but not all the roles belonging to another mandate.

Across the IADI membership, FSN structures vary a great deal. On the one hand, there are jurisdictions in which the central bank houses multiple FSN functions, with regulation/supervision, resolution and deposit insurance assigned to different departments within the central bank. On the other hand, there are jurisdictions with as many as five different agencies, each of which is assigned a different role. The roles and mandate of deposit insurers also vary in accordance with the FSN structure:

- 39% of the survey respondents (24 out of 61) have supervision, resolution and LoLR functions housed in the central bank and deposit insurance as a standalone institution (Figure 3 and Table 2).
- 48% of respondents (29 out of 61) have resolution and deposit insurance combined in one agency and supervision entrusted to another authority, either the central bank or an independent agency.
- Around 7% (four jurisdictions) have supervision, resolution and deposit insurance combined in a single agency (which is not the central bank), with the DI being a risk minimiser.
- Around 7% (four jurisdictions) have all FSN roles housed within the central bank, with the respective roles assigned to different departments.

Figure 3: Institutional structure among IADI members



Number of respondents: 60
Source: TC survey

Table 2: Deposit insurance systems – Institutional Structure

Institutional Structure	Mandate	Jurisdiction
DI (within central bank) (4)	Pay box (3)	Bangladesh, Guatemala, Slovenia
	Pay box plus (1)	Netherlands
DI (24)	Pay box (11)	Bosnia & Herzegovina, Germany[1], Honduras, Hong Kong, India, Kosovo, Kyrgyz Republic, Libya, Liechtenstein, Montenegro, Switzerland[1]
	Pay box plus[2] (12)	Albania, Barbados, Brazil[1], Czech Republic, Greece, Hungary, Jordan, Mongolia, Morocco, Romania, Singapore, United Kingdom
	Loss minimiser (1)	Italy
DI and resolution (29)	Pay box plus[3] (13)	Azerbaijan, Bulgaria, Ecuador, Kazakhstan, Palestine, Peru, Philippines, Serbia, Sweden, Thailand, Trinidad & Tobago, Uganda, Zimbabwe
	Loss minimiser (11)	Canada, Colombia, Croatia, Indonesia, Jamaica, Japan, Poland, Russia, Turkey, Ukraine, Uruguay
	Risk minimiser (5)	Chinese Taipei, Kenya, Korea, Malaysia, Norway
DI, resolution and supervision (4)	Risk minimiser (4)	Australia, Nigeria, Québec (Canada), United States

1. Private DI. 2. DIs providing funding role for bank resolution.
3. DIs with specific/limited role in bank resolution and/or liquidation.
Note: Figures in brackets are the number of deposit insurers.
Source: TC survey and IADI Annual Survey.

The diversity of institutional structures implies varied responsibilities for deposit insurers for coordinating not only data flow but policy development and implementation. Among IADI members who responded to the survey, most have multiple agencies as FSN participants. Around half of the deposit insurers having a narrow mandate operate separately; about one-third operate as resolution authorities. However, the resolution function is typically located within the central bank, either with the supervisors or in a separate department of the central bank (according to the TC survey, at 38 out of 61 survey respondents, bank resolution is either decided or performed by the central bank).

II.2. Information sharing among FSN participants

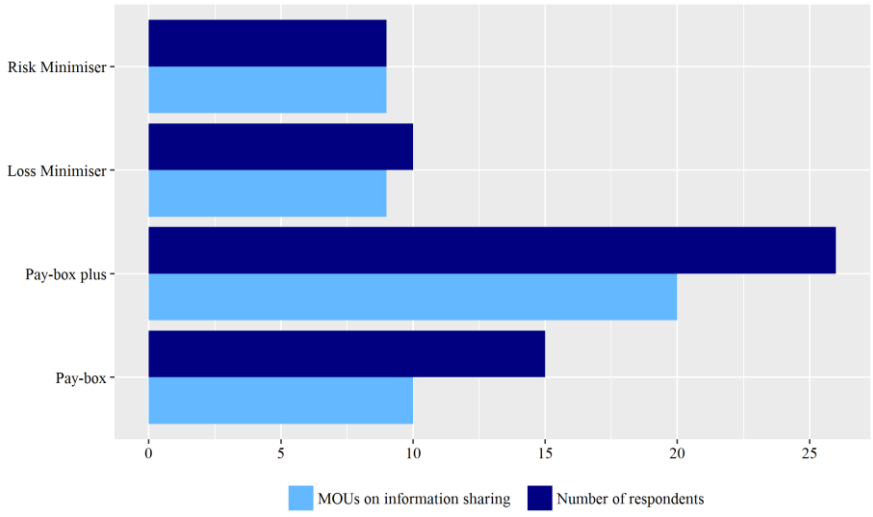
The complexity of FSN structures requires strong and effective coordination and information sharing practices. When all the functions of the FSN are performed by a single institution, coordination and planning issues, as well as any limitations on the use of information, may be easier to resolve. On the other hand, when deposit insurance and resolution are separate from supervision, close cooperation and coordination is essential. Not only must information be shared but the assessment of risks also needs to be compared and possible differences in views reconciled. Data analysis will help to spot emerging problems and assist in identifying data gaps or inconsistencies. However, data sharing requires strong protection as regards the confidentiality of the information obtained by a particular agency for supervisory or resolution purposes.

Irrespective of the mandate, all deposit insurers need accurate deposit data on a timely basis. Moreover, even a pay box or pay box plus needs advance warning of an impending bank failure, such as early warnings of insolvency or any supervisory action that affects a bank's capital or viability. This allows the deposit insurer to prepare in advance for a payout, ensuring that it has

the required funding and appropriate systems in place. Loss and risk minimising deposit insurers need more extensive information for preparing resolution options and strategies.

Coordination and information sharing among FSN participants can be specified in domestic law, regulation, Memoranda of Understanding (MoU) or other legal provisions, noting however that MoUs will typically be limited to information sharing permitted under the legal frameworks of the parties to the MoU. The MoU details the scope of information exchange and the frequency of such exchange, and provides safeguards for confidentiality. These MoUs are best negotiated during stable times and are a common feature for deposit insurers. Among survey respondents, two-third of pay boxes (10 out of 15 jurisdictions) have established MoUs (Figure 4). Around 80% of the pay box plus deposit insurers (20 out of 26) have such arrangements, and nearly all loss and risk minimisers rely on MoUs. The loss/risk minimising deposit insurers conduct their own internal analysis based on information received directly from banks and information shared among FSN players. Pay box/pay box plus systems need to receive information from other FSN participants, as they may not generally receive information directly from banks.

Figure 4:
MOUs on information sharing



Source: TC Survey

MoUs governing cross-border information sharing are important where domestic banks have subsidiaries or branches in other countries or foreign financial institutions have a material presence in the domestic financial system. Taking into consideration the complexity of institutions and the complicated nature of cross-border resolution, MoUs are likely to be more useful during a crisis the more specific they are concerning the types of information shared.

A number of initiatives have been taken to increase cooperation and coordination among different parties. At a global level, the FSB Key Attributes introduced the Crisis Management Groups (CMG), which bring together home and key host authorities of global systemically important institutions (G-SIFIs). At the European level, Cross-Border Stability Groups (CBSGs) have been created to foster cooperation among financial supervisory authorities, central banks and finance ministries of the European Union, which have common financial stability concerns related to financial cross-border groups. Also, at the European level, resolution colleges have been established, in accordance with the BRRD. They perform a similar function to CMGs and are in place for all European Union (EU) banks that have material operations in at least one host jurisdiction.

Cross-border MoUs have been established by about a quarter of respondents. Most deposit insurers that are actively involved with resolution (loss minimisers and risk minimisers) have cross-border MoUs. Even a pay box (Kosovo) reports a cross-border MoU, reflecting the financial structure and the importance of cross-border banking in that jurisdiction.

In sum, FSN structures differ significantly among IADI members. These diverse structures impose varied requirements for coordination and information sharing, and have implications for the scope of contingency planning exercises and the deposit insurer's role in contingency planning and management. The information sharing and coordination arrangements between FSN participants, typically established in stable times, serve as a basis for enhanced sharing of information and coordination during crisis situations.

III. Contingency planning for deposit insurers[7]

Contingency planning is a process through which an institution outlines policies, procedures and actions that it might follow in the event of unexpected developments and significant shocks that could have a severe impact on the organisation. Contingency planning is part of overall risk management. Risk management involves the identification, assessment and management of relevant risks that an institution is exposed to. A contingency plan may be referred to as "Plan B", as it identifies issues outside the normal operations of an institution and describes alternatives for handling unexpected risk events which, though unlikely to occur, can have very significant consequences for an institution. It provides for a diversified set of viable and readily available measures for preserving the operational and financial situation of an institution.[8] The testing of contingency plans at regular intervals helps identify weaknesses that need to be addressed.

III.1. Overall scope of contingency planning

Contingency planning is critical for banks as well as institutions forming part of the FSN, whereby each authority prepares and plans for the actions required to handle any unexpected situation. Such situations may be triggered by one or more shocks, including economic/financial crises, operational disruption, IT failure or cyber-attack, or natural disaster. Sudden and unexpected shocks that threaten to spread throughout the system require a coordinated response from all authorities. The complex and inter-related roles of the central bank, the supervisor, the resolution authority and the deposit insurer and complex institutional structures (please refer to section II) require planning in advance for a coordinated response.

Contingency planning in the financial system involves a wide-range of activities:

- Banks are responsible for identifying potential weaknesses in their portfolios, and conduct forward-looking, medium-term evaluations of emerging risks. Banks develop recovery plans[9] that set out options to restore financial strength and viability when the firm comes under severe stress. Banks also develop contingency plans to maintain uninterrupted

[7] Other than a brief description of the overall scope of contingency planning at the system-wide level, this section focuses on contingency planning by deposit insurers. Planning for a crisis situation that requires coordination between the FSN participants is discussed in Section IV.

[8] According to the *Technical Note on Contingency Planning and Crisis Management, Finland* (January 2017) "*Contingency planning* aims to help authorities respond well to future events occurring within their mandate. Effective contingency planning requires tools to monitor pertinent developments, awareness of policy and operational choices, and of the advance decisions on the use of the authorities' powers, procedures to coordinate with other—domestic and foreign—agencies, and financial crisis-simulation exercises to test contingency plans. *Crisis management* requires tools and procedures that allow authorities to respond promptly, decisively, and effectively when a crisis materialises. This builds on advance preparation and requires comprehensive tools and powers, sufficient funds, and efficient procedures for both domestic and foreign agencies."

[9] According the FSB Key Attributes, recovery plans are required to be prepared for all G-SIFIs and for any other firm assessed by its home authority as potentially having an impact on financial stability in the event of its failure. (Financial Stability Board, Guidance on Recovery Triggers and Stress Scenarios, July 2013, http://www.fsb.org/2013/07/r_130716c/).

access to critical financial market infrastructure services[10] and contingency funding plans (CFP) in order to address liquidity and solvency shortfalls in emergency situations[11].

- Supervisory authorities take a risk-based and forward-looking approach to monitor and assess the banks' financial situation. They evaluate the recovery plans of those banks that are required to prepare such plans. Stress tests are a fundamental component of supervision.
- The resolution authorities prepare resolution plans in order to resolve a bank whose failure would have a systemic impact. In some jurisdictions, however, resolution plans are prepared by the bank, in consultation with the resolution authorities. In some jurisdictions including the EU framework, RRPs are required of all deposit-taking institutions, albeit proportional to their size and level of complexity. The resolution authorities also undertake resolvability assessments of such banks, to evaluate whether the resolution plan for a bank is credible and feasible.
- Deposit insurers prepare contingency plans and test them under different stress scenarios. Given the different mandates of deposit insurers, the range of plans and scope of testing differ among deposit insurers.
- Finally, at the system-wide level, contingency planning is typically conducted by either a formal or ad hoc inter-agency group, which plans for and identifies appropriate policy stances in the event of a system-wide crisis. Scenarios are designed and crisis simulation exercises done to assess how FSN participants coordinate their response to a given situation (refer to section IV).

III.2. Contingency planning framework for deposit insurers

Core Principle 6 requires DIs to develop and regularly test contingency and crisis management plans. For a deposit insurer, contingency planning involves steps to identify and manage any event or shock that could adversely affect its normal functioning, requiring action or intervention on its part according to its mandate. It helps the deposit insurer to be prepared for an extraordinary situation, and respond appropriately and effectively to the situation in the event that it occurs.

A prerequisite for a contingency planning framework is that deposit insurers have in place the necessary tools and procedures (operational capabilities) to perform its normal functions in accordance with the mandate. There are some functions that are common for all deposit insurers, for example reimbursements to depositors. All deposit insurers need to have capabilities to address situations that may require them to make a payout to depositors, and need to ensure that

[10] *Financial Stability Board*, Guidance on Continuity of Access to Financial Market Infrastructures ("FMIs") for a Firm in Resolution, July 2017, pg. 14.

[11] According to the Principles for Sound Liquidity Risk Management and Supervision issued by the Basel Committee on Banking Supervision (BCBS), a CFP should outline the readily available measures to preserve liquidity and "be regularly tested and updated to ensure that it is operationally robust". (BCBS, Principles for Sound Liquidity Risk Management and Supervision, September 2008, Principle 11.)

Also, according to European regulation (ICCAP - Internal Capital Adequacy Assessment Processes) a bank is expected to maintain a robust up-to-date capital plan that is compatible with its strategies, risk appetite and capital resources. The capital plan is expected to comprise baseline and adverse scenarios and to cover a forward-looking horizon of a certain period. The institution is expected also to take into account the impact of upcoming changes. Some changes may seem highly unlikely, but would have such a huge impact on the institution that it is expected to prepare contingency measures.

they have sufficient funds, noting however that deposit insurance schemes are not typically funded to manage system wide failures[12]. Additionally, the deposit insurer may also have a funding role in resolving deposit-taking institutions and be involved in the resolution of banks. Deposit insurers need to ensure that their normal operations run effectively, and they can prepare themselves for contingencies.

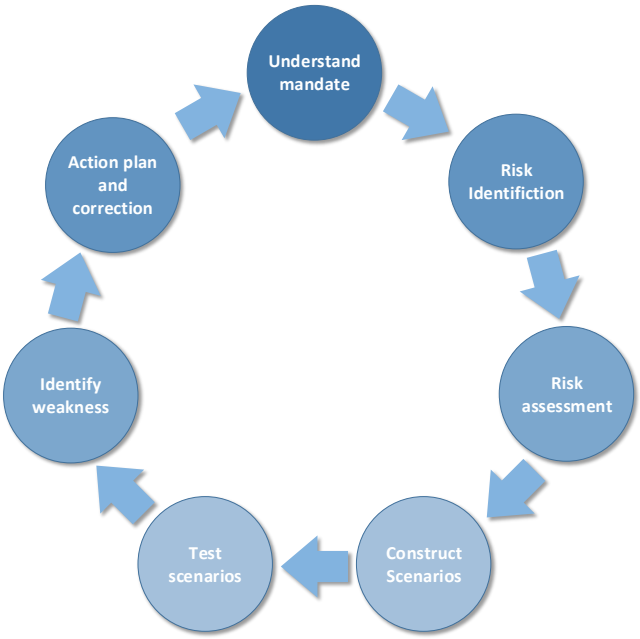
It is important to recognise that there is no contingency planning framework that would apply uniformly to all deposit insurers. The scope and areas covered by the contingency plans may vary depending on the mandates of deposit insurers. All deposit insurers should have a business continuity plan. Depending upon the mandate of the deposit insurer, there would be additional areas to be covered by the contingency planning framework.

III.2.a. Contingency planning steps

The contingency planning framework has a number of specific steps (Figure 5):

- One of the first steps, consists of a risk analysis and procedures map, which is part of the risk management framework. This activity identifies the conditions and risks facing the deposit insurer. Those risks can be both operational risks arising from the specific activities of the deposit insurer and external risks in the financial environment or related to natural events.
- The next step is assessing the likelihood of risky events and their potential impact on its operations, which would help the deposit insurer prioritise different types of situations in order to identify those events that require to be covered by a contingency plan.
- The deposit insurer can then construct different scenarios, which will need to be tested. Based on the tests conducted, the weaknesses in the processes and procedures may be identified, which will need to be corrected.

Figure 5: Contingency planning - Design and implementation



[12] Deposit insurance funds are typically calibrated to cover losses up to a certain defined limit and not to deal with system wide failures.

Ensuring completeness, adequacy, functionality (in terms of efficiency and effectiveness) and reliability of the contingency planning process may fall under the scope of risk management and internal control systems of an institution. The internal control system is a fundamental element of the overall governance system of an institution; it ensures that company activities are in line with its own strategies and policies and are based on sound and prudent management principles.

Deposit insurer's governing bodies should be aware of ordinary and extraordinary risks deposit insurers are exposed to. Governing bodies are responsible for approval and monitoring of the deposit insurer's contingency planning. Internal regulations on contingency planning could be developed in order to indicate responsibilities, tasks, operating methods, information flows and planning of control activities.

Reporting framework is also crucial to provide support to the decisions and actions; the information flow could contain a program of activities identified to design the contingency plan and a report of the activities carried out, which illustrates the results obtained, the weaknesses detected and proposes the actions to be taken to address them. For an effective contingency planning exercise, deposit insurers need to allocate adequate resources, such as staff (in-house or outsourced), technical expertise and funds.

III.2.b. Areas of contingency planning

Deposit insurers are expected to test their operations on a routine basis. In addition, as part of a contingency planning framework they need to ensure their systems can withstand a significant failure or shock by developing a business continuity and other contingency plans. Contingency plans should be regularly tested by deposit insurers. Not all areas of the plan are to be tested every year but the deposit insurer should ensure that critical areas are tested regularly. The frequency of testing should be decided in light of the nature and importance of each critical area. The deposit insurer should maintain a schedule of tests to be conducted over a chosen planning period.

Deposit insurers need to test their capabilities to handle extraordinary events in different areas of their operations by making use of various tools.

Business continuity plans

One of the traditional exercises at the enterprise level is completion of a business continuity plan (BCP), defined as the set of "policies, standards, and procedures for ensuring that specified operations can be maintained or recovered in a timely fashion in the event of a disruption"[13]. This is applicable to all DIs irrespective of mandate. Considering the effects that major disruptions, such as a building fire, flood, active shooter, influenza pandemic, etc. may have, every institution should have in place a BCP. BCPs need to be tested at regular intervals by conducting a simulation of a disruption event. BCP testing exercises can reveal whether backup data stored in an offsite location can be accessed easily, whether operations can be moved quickly to another location, and whether critical operations can continue even in an extreme situation of natural disaster.

[13] Basel Committee on Banking Supervision, High-level principles for business continuity, August 2006, pg. 7.

Specific international standards have been issued to give guidance on how to prepare a BCP. Recommendations of international standards set by the ISO 22301 are an important framework[14]. According to these standards, a "Plan-Do-Check-Act" (PDCA) model needs to be put in place, in order to plan, establish, implement, operate, monitor, review, maintain and continually improve the effectiveness of an organization's BCPs[15].

The implementation of a BCP is typically carried out on a two-phase process and its ultimate responsibility rests with an organisation's governing bodies[16]:

- The first phase consists of a risk analysis and procedures map, an IT infrastructure analysis and business impact analysis, i.e. identifying risk levels of procedures and their impact on business, start-up time and resources needed for start-up and acceptable running; finally, the writing up of the business continuity plan.
- The second phase includes actions on the basis of the results of Phase 1, completion of the BCP, designing a test plan and training. Overall, the BCP should include: all roles and responsibilities having authority during and after an event; procedures for response; instructions for managing the immediate consequences of a serious incident, with due attention to personnel safety; strategic options, procedures and operations for disaster response; further backup measures to prevent further losses and failure of first responses; details of ways and means a DIS has to communicate with personnel and interested parties (designated authorities and/or other guarantee systems); procedures for continuing or restarting first responses within fixed times; and instructions for communicating with the media and post event procedures.

BCPs need to be tested at regular intervals by conducting a simulation of a disruption event. BCP testing exercises can reveal whether backup data stored in an offsite location can be accessed easily, whether operations can be moved quickly to another location, and whether critical operations can continue even in an extreme situation such as a natural disaster.

Funding plans

In order to fulfil its role of reimbursing depositors (applicable for all DIs irrespective of mandate) and providing funds for resolution, the deposit insurer needs to have sufficient funds as well as arrangements for backup funds in extraordinary situations[17]. Some deposit insurers carry out fund adequacy assessments on a regular basis as part of their financial planning. However, contingency plan for funding assessment involves creating a hypothetical risk situation and testing if funds are sufficient and, if insufficient, whether the deposit insurer can obtain funds from other sources available to it, such as backup financing arrangements.

In certain situations, readily available financial resources of DIs may be lower than needed to face an intervention or to deal with operational costs. If permitted by law, DIs can put in place a variety of financing arrangements and, depending on the funding needs of the deposit insurer, the different forms of contributions made by member banks (ordinary and extraordinary) can be used

[14] ISO 22301 (Societal security - Business continuity management systems - Requirements), 2012-05 https://www.iso.org/standard/50038.html.
[15] https://www.iso.org/obp/ui/#iso:std:iso:22301:ed-1:v2:en.

[16] Basel Committee on Banking Supervision, High-level principles for business continuity, August 2006, Principle 1.

17 Basel Committee on Banking Supervision defines Contingency Funding Plans by banks as: "A contingency funding plan (CFP) is the compilation of policies, procedures and action plans for responding to severe disruptions to a bank's ability to fund some or all of its activities in a timely manner and at a reasonable cost".

as a collateral to the repayment of the alternative funding measure. By way of example, a deposit insurer can activate the following alternative funding measures:

i. *financing for liquidity needs*: in order to meet its operational needs and to cope with a liquidity shortfall, the deposit insurer can ask for a short-term loan and can put as collateral the securities held in its portfolio;

ii. *financing on the market*: in order to find additional resources to face an intervention, a deposit insurer can activate a credit line with market operators;

iii. *emergency backup funding*: alternative funding arrangements from the market or from member banks can be difficult in the event of a systemic crisis; thus emergency backup funding can be structured with the central bank, the ministry of finance or other public authorities.

Contingency plans should be developed as to define all the feasible actions that a deposit insurer can put in place in order to structure an alternative funding arrangement when needed. The contingency plan should take into account all the practical issues related to the activation of the alternative credit line as, for example, any legal restrictions, the timing, the purpose and the size of the arrangement.

Payout plans

Payout is one of the key operations for deposit insurers irrespective of the mandate. Deposit insurers should have in place the necessary tools and procedures (operational capabilities) to deal with their normal load of payouts. Additionally, deposit insurers need to develop contingency plans designed to deal with large payouts than can happen in extraordinary situations.

Deposit insurers should be prepared in case the information from traditional sources concerning deposit size, ownership etc. become unavailable especially in times of crisis. The demands of data extraction may be greater during a crisis and possibly for more than one bank at the same time. Some DIs have capabilities for generating SCV data, while some others rely on information gathered from banks or through the supervisor. Whatever the system may be, it needs to be tested at regular intervals for its ability to deal with extraordinary events. Scenario testing of data collection systems will ensure that the deposit insurer is able to extract ‘clean’ depositor records in a short period of time, and understands how to tackle bad records.

All deposit insurers’ technical capacity to pay out quickly in an unexpected crisis situation should be tested. Channels that could be tested include the issuance and distribution of cheques, automated teller machines (ATMs), agency banks, online transfers, or other methods. Such systems need to be tested for events involving failures of multiple banks or a large-sized bank.

Communication plan

Communication strategy is an important aspect of deposit insurers’ operations. Development of communication procedures and even press releases or other draft announcements ahead of time can make the communication process more effective. This is even more critical during periods of extraordinary financial conditions. Contradictory declarations can confuse the public and exacerbate the crisis. The overriding objective is to use communication to reinforce public confidence, by using different channels including mass media, social media, websites and toll-free lines.

The communication contingency plan may be tested for a number of logistical areas, including:

- ability to handle a large numbers of calls;
- ensure a consistent and focused message;

- ensure regular and accurate updates to the public.

Other plans

Contingency plans may also cover other areas of DI's activity resulting from their mandates. As an example, for deposit insurers that are also mandated to act as receiver of a failed banking institution, it is important that a "takeover contingency plan" be put in place. Such contingency plan will be set in motion when the RRP of a failing bank fails to restore the bank's financial strength and viability, making its closure and takeover by the receiver imminent. Similar to pay-out procedures observed during stable times, the takeover procedures implemented for bank closures outside of a crisis event may not be responsive or effective for purposes of handling the failure of a D-SIB. Thus, there is a need to ensure that a takeover contingency plan is prepared and regularly tested.

III.2.c. Recovery and resolution planning

Recovery and resolution plans give important information that can be used as an input in contingency planning by DIs. DIs which also have supervisory and resolution powers are involved in the recovery and resolution planning (RRP) framework, which has been incorporated in the FSB Key Attributes. However, even deposit insurers that are not resolution authorities need to be aware of the resolution planning strategy adopted by the resolution authority, as it can provide information on their involvement (either financial or operational) and would allow the deposit insurer to be prepared.

Recovery plans are prepared by banks and include measures that institutions can take to restore the financial strength and viability when the bank comes under severe stress. Resolution plans, on the other hand, are typically prepared by the resolution authority and identify restructuring strategies that could be used in the event that recovery measures fail[18].

RRPs are typically mandatory under the Key Attributes for banks that could be systemic in the event of failure – both global and domestic. However, in some jurisdictions including the EU framework, RRPs are required of all deposit-taking institutions, albeit proportional to their size and level of complexity. The resolution plans, in such cases, are likely to be relatively simple, focusing primarily on liquidation as a default strategy and on the ability to protect deposits through pay-out or transfer. Deposit insurers with responsibilities for resolving banks (risk/loss minimisers) are directly involved in this process.

Recovery plans incorporate a number of requirements, including the use of detailed stress testing, identification of critical functions, a description of governance arrangements and a communication programme. FSB provides further guidance on stress scenarios for preparations for recovery plans[19]:

- Firms should use an appropriate number of market-wide (systemic) stress scenarios and firm-specific (idiosyncratic) stress scenarios to assess the robustness of their recovery plans and to develop credible recovery options for a range of stress situations.
- Firms should identify, assess and regularly update the scenarios most likely to cause their business model to become non-viable or to fail. Firms should include a range of credible

[18] "Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Recovery Triggers and Stress Scenarios", Financial Stability Board, July 2013 (http://www.fsb.org/wp-content/uploads/r_130716c.pdf).

options to be flexible enough to be effective in a variety of idiosyncratic and market-wide stress circumstances.

- Firms should be encouraged to combine market-wide (systemic) stress scenarios with more specific macroeconomic risk factors tailored to the firm's risk profile, thereby allowing the firms to estimate and model likely impacts.
- Reverse stress testing can be a useful starting point for developing scenarios for recovery plans. Reverse stress testing identifies scenarios that would lead to a firm's business model becoming non-viable.

III.2.d. Tools and techniques for contingency planning

As mentioned above, the contingency planning framework goes further than testing the operational robustness of the deposit insurer. The strength of the contingency planning framework is enhanced by regular testing, and by using different assumptions or developing different scenarios built around realistic alternatives. The deposit insurer needs to be clear about its role in different scenarios. Tests can be conducted using different tools and techniques, such as stress tests, scenario tests, table-top exercises, etc. Specifically:

- *Stress tests/early warning indicators*: Identifying the risks of bank failures is a critical step in preparing a contingency plan. While risk minimising DIs undertake risk assessment as part of their mandate that may include stress tests for identifying potential weaknesses in banks' balance sheets and up-to-date early warning indicators, most other DIs depend on other sources of information to identify risks, including supervisory reports about the health of banks and inputs into differential premium systems. The stress scenarios can be incorporated into contingency plans and tests carried out to develop options under different scenarios.
- *Scenario testing*: The deposit insurer can conduct internal simulations for some of the areas under its operation, as well as tests for coordination with other FSN participants. Examples could include payout simulations, funding scenarios, and methods for identifying resolution strategies (for loss minimisers and risk minimisers). Among the decisive factors in a successful simulation are: (i) including senior management; (ii) identifying the key issue to be addressed; (iii) defining assumptions and preconditions clearly; and (iv) using a balance of quantitative and qualitative data. Scenario tests can result in the development of action plans based on lessons learned.
- *Simulations:* Narrow-mandate deposit insurers may need to conduct multiple payouts. Such deposit insurers need to ensure that they have adequate backup funding in case of excessive demand for payouts. Broader-mandate deposit insurers should test a variety of resolution options. For the largest banks designated as domestic systemically important banks (D-SIBs), the deposit insurer can test the effectiveness of different plans through simulations. Such simulations may also take into consideration cross-border elements (refer to section IV).

III.2.e. Contingency planning handbooks

In order to prepare for contingency planning, basic documentation must be collected and prepared. The planning framework should be written down in easy-to-use "handbooks" or "playbooks" or other such documents, which provide guidance and the necessary information to the deposit insurers for the development of a contingency planning exercise. It is important that

the handbook is not excessively detailed and is easy to follow. The handbook could contain, notably:

- Summaries of past contingency planning exercises;
- Abstracts of relevant laws, regulations and policies;
- Details of the respective responsibilities of key staff;
- Names and contact numbers of critical personnel;
- Framework and procedures for inter-institutional and cross-border cooperation; and
- Communication plans and samples of draft press releases.

The relevant staff must understand the institutional and legal framework of the deposit insurer. This can be described in the handbook by providing organisation charts with clear descriptions of roles and responsibilities. The deposit insurance law and the accompanying regulations can be summarised for different tasks performed by the deposit insurer. Some tasks and situations will require coordination with other FSN participants. The key officials and their roles and responsibilities need to be identified.

In the context of crisis preparedness, the handbooks can also provide the broad operational framework by outlining the key operations like the payout process, who triggers the payout, communication to depositors, how to make payments. This is not a payout manual but a summary of key procedures in the form of a 'checklist'. The deposit insurer may also specify the funding sources, especially those in addition to the ex ante fund in the event of shortfalls in the fund. In addition, for deposit insurers involved in bank resolution, the handbook may contain guidance regarding the procedures for making the decision on a resolution and the role of the deposit insurer in this decision-making. The roles of the different units/departments within the deposit insurer and how they should cooperate, exchange information and coordinate in extraordinary situations may also be provided in the handbook.

III.2.f. Practices among IADI members

IADI members engage in contingency planning, although the range of areas and methods for contingency planning may differ according to the mandate. Based on the survey conducted by the Technical Committee, it can be observed that:

- Out of 61 IADI members who responded to the survey, 37 (around 60%) engage in contingency planning in one form or other. Of these 37 members, 4 are pay boxes, 15 are pay box plus, 10 are loss minimisers and another 8 are risk minimisers.

- Members do contingency planning as an internal exercise and some also do as part of a system-wide crisis management exercise. Deposit insurers with a broad mandate usually prepare both internal and system-wide contingency plans, while narrow-mandate deposit insurers focus exclusively on their internal procedures.

- Members conduct tests of SCV systems where they exist and tests of payout capabilities. Several jurisdictions also undertake test for adequacy of funds (Table 3).

Table 3: Areas of testing done by IADI Members

Sr. No.	Jurisdiction	Mandate	Adequacy of funds	Depositor information	Payout capabilities
1	Germany	Pay box	✓		✓
2	Hong Kong	Pay box	✓	✓	✓
3	Slovenia	Pay box	✓	✓	✓
4	Switzerland	Pay box	✓	✓	✓
5	Albania	Pay box plus	✓	✓	✓
6	Brazil	Pay box plus	✓	✓	
7	Bulgaria	Pay box plus	✓	✓	✓
8	Czech Republic	Pay box plus	✓	✓	✓
9	Greece	Pay box plus	✓	✓	
10	Hungary	Pay box plus	✓	✓	✓
11	Kazakhstan	Pay box plus	✓	✓	✓
12	Netherlands	Pay box plus	✓	✓	✓
13	Philippines	Pay box plus	✓	✓	✓
14	Romania	Pay box plus	✓	✓	✓
15	Singapore	Pay box plus	✓	✓	✓
16	Sweden	Pay box plus			
17	Thailand	Pay box plus	✓	✓	✓
18	United Kingdom	Pay box plus	✓	✓	✓
19	Zimbabwe	Pay box plus	✓	✓	✓
20	Canada	Loss minimiser	✓	✓	✓
21	Colombia	Loss minimiser	✓	✓	✓
22	Croatia	Loss minimiser		✓	✓
23	Indonesia	Loss minimiser	✓	✓	
24	Italy	Loss minimiser	✓	✓	✓
25	Jamaica	Loss minimiser	✓	✓	✓
26	Japan	Loss minimiser	✓	✓	✓
27	Poland	Loss minimiser		✓	✓
28	Russia	Loss minimiser	✓	✓	✓
29	Turkey	Loss minimiser	✓	✓	✓
30	Australia	Risk minimiser		✓	✓
31	Chinese Taipei	Risk minimiser	✓	✓	✓
32	Korea	Risk minimiser			✓
33	Malaysia	Risk minimiser	✓	✓	✓
34	Nigeria	Risk minimiser	✓	✓	✓
35	Norway	Risk minimiser	✓	✓	✓
36	Québec (Canada)	Risk minimiser		✓	
37	United States	Risk minimiser	✓	✓	✓

Source: TC survey.

Contingency planning has been adopted and tailored to meet specific needs in many IADI members. Practices include both testing for operational readiness and contingency planning (see Annex II for details). In Korea, the KDIC develops individual modules for testing specific operations. It divides key operations into modules and provides instructions on how each activity in a module should respond to a crisis situation. The modules also identify relevant laws and regulations, business manuals, and reference cases. As part of its contingency planning exercise, the KDIC reviews the amount of funds needed and their availability in a crisis. Korea also

develops scenario action plans. Such scenarios have included the impact of military conflict, the impact of a long recession and the outbreak of a global financial crisis. Simulation exercises are held about three times a year.

The US has a similar framework. As supervisor, deposit insurer and resolution authority, the FDIC engages in a continuous cycle of testing for a crisis event. Testing of operational activities for resolution has been superseded by the extent of actual closures. From 2007 to 2017, for example, the FDIC resolved 529 failed insured institutions, giving the FDIC the assurance that its operating procedures have been adequately tested. However, it does engage in contingency planning for the resolution of large institutions (with assets in excess of USD 50 billion). For such institutions, the FDIC develops risk scenarios and reviews institution-specific resolution options. Those plans are based on assumptions about possible sources of risk and include a range of responses to mitigate such risks. Broader scenario testing of system-wide planning occurs at the level of the Financial Stability Oversight Council (FSOC), the inter-agency committee composed of federal banking regulators. Heads of US and foreign authorities also discuss approaches regarding issues that would arise in the resolution of a SIFI.

Similarly, Canada conducts both internal tests of its own processes, and participates in broader crisis preparedness efforts with other members of the FSN. CDIC (Canada) regularly tests such operational procedures as payout mechanisms, customer care modules, call centres and communications. CDIC conducts payout simulations internally and with operational level staff of Canadian FSN agencies. Since 2004, CDIC's resolution department has conducted 10 full-scale/broader-scope payout simulations. CDIC's Finance Division also conducts simulations with the Department of Finance and the Bank of Canada, to test its ability to access funds. For example, in November 2016, there was a simulation to test drawdown of liquidity funding. In June 2015, there was a simulation with the Bank of Canada to test drawdown of the repo facility.

In the UK, the Financial Services Compensation Scheme (FSCS) has a business resilience department responsible for both disaster contingency and contingency planning. The FSCS routinely reviews deposit taker's SCV files, providing assurance on their quality and completing the review of data, such as insured deposits. The FSCS routinely reviews the analysis of firms for which payout is the preferred resolution strategy, to ensure that the FSCS is operationally capable of effecting payout.

Russia has drawn lessons from its significant experience in payouts and bank resolution. The Russian DIA is using this experience to develop practical cases for reviewing past responses. The resulting contingency planning process includes the identification of deficiencies and successful practices, and the discussion of alternative options and necessary regulations and actions.

The European Banking Authority (EBA) published guidelines on stress tests for deposit guarantee schemes (DGS) in May 2016 (Annex III). The objective is to assess operational and funding capabilities of deposit insurers. Stress tests cover each stage of DGS activities, from pre-failure planning to preparation for failure, to execution of intervention, including repayment, contribution to resolution, etc.

Under a standardised approach to stress testing, DGSs define a two-to-five-year testing programme covering specific tests to be conducted. The programme tests the DGSs' ability to meet all operational tasks including: (i) compensation to depositors; (ii) financing the resolution options; (iii) financing alternative measures to prevent a failure and, if allowed under national law; (iv) measures to preserve the access of depositors in the context of national insolvency proceedings.

The European Banking Authority (EBA) has identified the following areas for stress testing by DGSs:

- Payout capabilities: DGSs' capacity to manage operational mechanisms, including access to data and payout mechanisms;
- Staff and other operational resources: DGSs should test whether they have the necessary resources to cope with the sudden increase in activity caused by an intervention, in terms of budget, staff, office space, IT equipment, call centres etc., and outsourcing arrangements;
- Communication with depositors and the wider public: DGSs should make an assessment of the communication processes that would be applied on the occurrence of a repayment scenario;
- Repayment and contribution periods: DGSs should measure the time from the determination of unavailability of deposits until the point at which the repayable amount must be available;
- Home-host cooperation: DGSs should test the systems in place for repaying depositors at branches set up by their affiliated credit institutions in other member states;
- Funding capabilities: DGSs should test whether their funding means are adequate to meet their payment obligations.

To summarise, contingency planning by deposit insurers is important for preparing for crisis. These plans need to be reviewed and tested on a regular basis. Contingency planning practices among deposit insurers vary a great deal and such frameworks are evolving. There is no optimal mix of contingency planning areas and tools. Contingency plans are also needed to prepare for system-wide crises.

IV. System-wide crisis preparedness and management

Systemic crises are unpredictable and can occur at any time, arising from the failure of a bank that is systemic at the point of failure or failure of multiple banks that can have system-wide implications[20]. Contingency planning or crisis preparedness help mitigate the effects of crisis but are unlikely to deter it. Moreover, the magnitude and severity of a crisis is not known in advance and will depend on a number of factors, including the state of preparedness, and the size and importance of the institution. The main challenge in dealing with the crisis lies in preparing for a situation that can occur suddenly or build up to crisis proportions over a short period. The crisis preparedness management framework involves, on the one hand, the preparations for and the ability to manage the failure of a large deposit-taking institution that can have system-wide implications and threaten financial stability and, on the other, the ability to prevent the failure of a number of non-systemic institutions from becoming a systemic event (contagion effect).

The FSN participants need to work closely and in a coordinated manner as part of the crisis management framework. Central banks, supervisors, resolution authorities and deposit insurers all have their own mandates, concerns and incentives. The coordination across the FSN provides a mechanism for the identification of emerging risks and allows authorities to undertake appropriate policy responses and interventions. The exchange of views among agencies with different mandates and perspectives leads to better-informed policymaking and more robust stabilisation strategies. These diverse roles are typically coordinated by an inter-agency coordinating body, which is often headed by the Finance Ministry and may also include the regulator for the securities market and the insurance sector.

IV.1. Preparations for handling the crisis

Crisis preparedness aims to ensure that systems are effective in handling any sudden appearance of financial stress that may have system-wide implications. Crisis preparedness is the joint responsibility of all FSN participants. The roles of FSN participants in crisis prevention and crisis management should be clearly defined and agreed upon in advance of any crisis.

Typically, central banks play an important role by providing emergency liquidity support to financial institutions. The job of supervisors is to ensure that institutions are viable, and aim at early detection and timely intervention. Whether dealing with a systemic or a non-systemic institution, the framework for early detection and timely intervention needs to be designed and tested for its robustness. Core Principle 13 emphasises that the framework for early detection of, and timely intervention in, troubled banks should provide for intervention before the bank becomes non-viable. Such actions should protect depositors and contribute to financial stability.

The resolution authorities have the responsibility for ensuring that a failing institution is resolved in an orderly manner as quickly and smoothly as possible, while avoiding costs to the public. A number of IADI members are also resolution authorities. According to Core Principle 14, the resolution authority/ies must have effective resolution tools designed to help preserve critical bank functions and to resolve banks. The Key Attributes provide the framework for resolving banks which are systemic or whose failure could have a systemic effect.

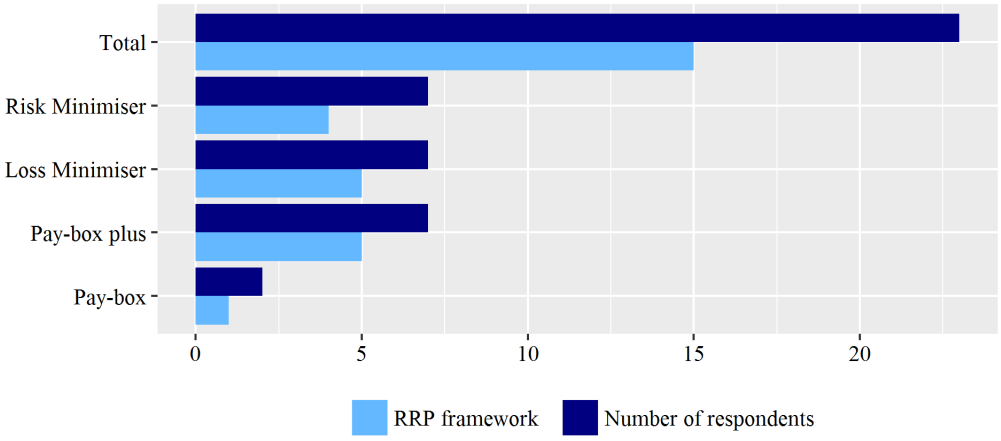
Resolution planning is an important component of crisis preparedness. As part of the recovery and resolution planning (RRP) framework, which has been incorporated in the Key Attributes,

[20] An idiosyncratic failure implies temporary strains mainly in individual banks or a group of similar banks; a systemic failure can lead to disruption in financial services, caused by contagion of financial distress and an impairment of all or parts of the financial system.

resolution plans are typically prepared by the resolution authority and identify restructuring strategies that could be used in the event that recovery measures fail[21]. Deposit insurers with responsibilities for resolving banks (risk/loss minimisers) are involved in preparation of resolution plans. These plans need to be shared with the pay box/pay box plus DIs as the resolution decision may have implications for the deposit insurance fund.

For IADI members for which information on RRPs is available (23 jurisdictions), around two-thirds of respective resolution authorities (65%) have implemented RRP framework (Figure 6). A few risk/loss minimisers (Chinese Taipei, Korea and Malaysia) indicated that the framework is under development in their jurisdictions. According to FSB information, a number of IADI member-jurisdictions that also belong to the G-20 have established RRP frameworks for systemic firms (Table 5).

Figure 6:
RRP framework among IADI members



Sources: TC Survey; Financial Stability Board

[21] There are jurisdictions where banks develop their resolution plans themselves, as is the case for Canada (federal) domestic systemically important banks (D-SIBs). CDIC (Canada) assists the D-SIBs by providing guidance and articulating expectations for the content and implementation of resolution plans.

Table 5: Status of implementation of RRP framework for systemic firms

Jurisdiction	Recovery planning	Resolution planning
Argentina	✓	
Australia	✓	
Brazil	✓	✓
Canada	✓	✓
France	✓	✓
Germany	✓	✓
Hong Kong	✓	✓
India		
Indonesia	✓	
Italy	✓	✓
Japan	✓	✓
Korea		
Mexico	✓	✓
Netherlands	✓	✓
Russia	✓	✓
Singapore	✓	✓
Switzerland	✓	✓
Turkey		
United Kingdom	✓	✓
United States	✓	✓

Note: Data pertain to those IADI member-jurisdictions who are also members of the G20.

Source: Financial Stability Board, July 2017 (http://www.fsb.org/2017/07/ten-years-on-taking-stock-of-post-crisis-resolution-reforms/).

In a crisis, the role of the deposit insurer is determined by its mandate and may include resolving a failing institution, providing funds for resolution and making a payout. Deposit insurers with supervisory responsibilities have a direct role in the crisis framework, identifying weak institutions and taking corrective actions. In this role, a risk minimising deposit insurer is required to have detailed information about the financial and other parameters of banks, and should be able to assess the risks facing an institution. Even deposit insurers with a narrow mandate would benefit from having information about failing banks on a regular basis, so that in an emerging or potential systemic crisis they can realistically assess the risk exposure of the deposit insurance fund. The frequency of information exchange will have to be greater during the crisis, and authorities need to ensure that coordination mechanisms exist.

Deposit insurers need to be well prepared to play the role stipulated in their mandates. To reiterate, the deposit insurers need to undertake contingency planning and testing exercises for their business operations, learn from the weaknesses observed during the testing phase and adopt corrective methods.

In addition to the contingency planning and testing carried out by individual institutions, crisis management planning involves documenting the role of each FSN participant in a crisis, the decision-making process, the process of implementing actions in a coordinated matter, and the

communication strategy. This should be carried out on an inter-agency basis and needs to be complemented by coordinated testing of crisis management policies and procedures among the FSN participants.

IV.2. Testing of crisis preparedness

FSN participants prepare for a crisis by testing both operational and policymaking procedures. There are several tools that can be applied: crisis simulation exercises, table top exercises, and system-wide stress tests.

Crisis simulation

Simulations can test the effectiveness of practices, communications, coordination and policy implementation. Simulations test operational readiness in the event of a crisis. Simulation exercises may be scheduled or unannounced. The results of the simulation exercises should be used as basis to enhance existing contingency plans as well as review, revise or propose policies to address policy gaps identified during the simulation exercise.

Simulations should be run in conjunction with other FSN agencies. The focus of such simulations is primarily on inter-agency coordination. They are aimed at strengthening the ability to cooperate during crisis situations. For such exercises, policymakers gather and work through the resolution of a hypothetical problem. The objective is to test the decision-making process, as well as to ensure that roles and responsibilities in a crisis are understood and that data collection mechanisms are effective.

There are, of course, different types of crisis simulation exercises. Each crisis is different and the authorities can construct several crisis scenarios to fit the jurisdiction's own circumstances. The crisis simulation exercises will aid in the preparation of a crisis plan and a handbook to guide the actions that need to be taken. A crisis simulation exercise among FSN participants could include steps as given below (Table 6).

Table 6: Steps in crisis simulation exercise

A. Construction of scenarios	• internal or external shocks • financial or non-financial risks • idiosyncratic or systemic failure
B. Sharing of information	• identification of parameters for information sharing • elimination of information asymmetry • interpretation of information
C. Coordination	• giving/receiving feedback to/from other authorities • identifying who has decision-making power • conveying the decision • public communication
D. Results of exercise	• identification of weaknesses • action plans to correct weaknesses • implementation of action plan

Table top exercises

Table-top exercises are conducted to test the ability of multiple agencies to come to an agreement about feasible policies to confront any emerging failure with potentially systemic implications. The objective of such exercises is to involve high-level decision-makers, in order to ensure that

all FSN agencies can come to a common diagnosis and a common policy response to the emerging problems.

Table-top exercises include representatives from all agencies involved in resolving the failure. Deposit insurers, together with other FSN participants, can run table-top exercises specific to large bank resolutions. Such a table-top exercise can also focus on a hypothetical resolution of a systemic or medium-sized bank. The participants in table-top exercises should be mid- to senior-level decision-makers who will be responsible for making decisions in the event of a significant failure.

System-wide or "top-down" stress tests[22]

Stress tests can be conducted on a systemic level, where the results for the entire banking sector are derived by aggregating results from the individual bank level. A top-down test is a tool that is designed to assess the system-wide resilience to shocks in the financial sector, which may include second round effects emerging from linkages with the broader financial system or the economy. Top-down stress tests generally take into account interactions among institutions (e.g. via interbank exposures). Top-down tests include scenario analysis, which is the process of applying historical and/or hypothetical circumstances to assess the impact of a possible future event on a financial system, sector, bank, portfolio or product. Such stress tests are not forecasts; they illustrate potentially different paths to the current or expected conditions and their translation into calculating the scenario. Scenario analysis incorporates many economic and financial parameters in a consistent manner.

Based on the survey of IADI members, only a few IADI members test their crisis management frameworks or resolution policies in a comprehensive manner. Only five jurisdictions conduct stress tests and scenario testing, and even fewer jurisdictions conduct specific table-top exercises with the rest of the FSN to review internal communication and decision-making. More information regarding the crisis preparedness and management frameworks in some jurisdictions is available at Annex V, in case studies provided by selected IADI members.

IV.3. Managing the crisis

While effective crisis preparedness focuses on the coordination of analysis and building of policy consensus, effective crisis management involves developing (i) an understanding of the crisis and how it is unfolding, and (ii) a wide range of resolution options that can be used to mitigate emerging pressures. The key responsibility of crisis management is to build a policy consensus among the FSN members, select appropriate tools and implement those tools in a consistent manner.

In the event of a single bank failure (non-crisis event), the supervisor or resolution authority manages the failure and will trigger resolution based on an analysis of pre-identified triggers and forward-looking evaluations of medium-term viability. Crisis management arrangements involving multiple FSN members are needed in the situation of the failure of a systemic institution or the failure of multiple banks with the potential for becoming a system-wide event. The need for coordination arises because crisis management often involves difficult policy trade-offs. An inter-agency coordinating body is needed, to agree on common policies including - should liquidity be provided; will the closure of the institution have systemic implications; what tools should be used, including government intervention, if necessary; how to manage public communications; etc.

[22] Basel Committee on Bank Supervision, "Supervisory and bank stress testing: Range of practices", December 2017.

IV.3.a. Role of inter-agency coordinating body

The coordination efforts during a crisis are led by the inter-agency body, which is often composed of the central bank governor, the minister of finance, and the head of the supervisory agency (if separate from the central bank), the resolution authority, and the deposit insurer[23]. The committee members jointly agree on the policy response to the crisis and ensure that all government agencies work together to resolve the crisis. A good international practice is to formalise this group into a senior policy group, rather than leaving its operations to ad hoc meetings. Such a group would meet during stable times to monitor risk in the system and review contingency plans, as the bodies entrusted with the financial stability mandate monitor macro prudential risks. In a crisis, the group becomes the body that prepares the crisis management strategy and guides the crisis response process. It is important that the group meets regularly and not on an ad hoc basis, understands its tasks and responsibilities, and coordinates with involved agencies.

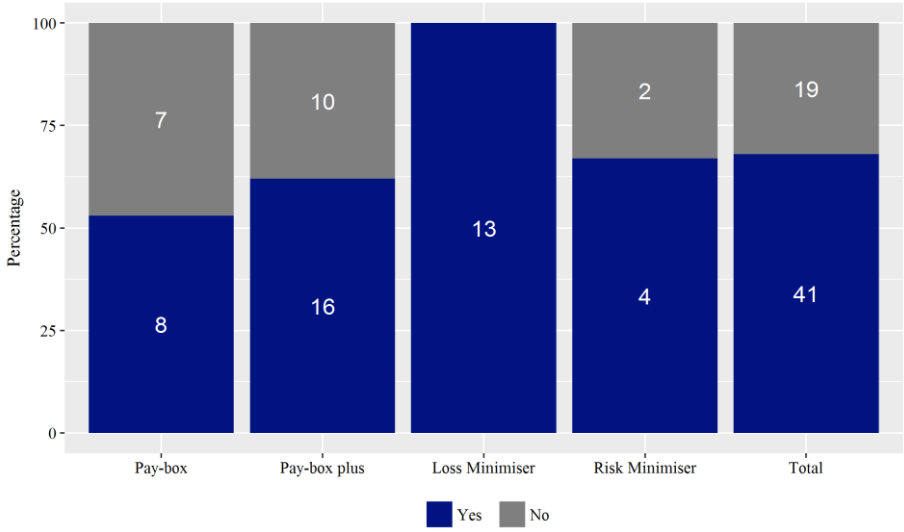
The senior-level group is sometimes supported by a technical committee comprising key technical staff from a number of agencies including the finance ministry, the central bank, the supervisory authority, the resolution agency and the deposit insurer. This committee reviews pertinent and up-to-date information and conducts a preliminary analysis of the most recent developments. The deposit insurer, even a simple pay box, benefits from being involved in this framework of inter-agency coordination and becoming a member of coordinating committees. The payout process influences private sector confidence, and information on available resources is an important input to policy planning.

Crises are information-intensive and arrangements should be made that allow the senior policy group to receive critical, up-to-date information from banks, and from each other. The supervisors and the resolution authority/deposit insurer receive a wide range of information from banks. As the crisis intensifies, the provision and frequency of such data may be increased. In particular, if the deposit insurer does not have primary access to all information on a routine basis, it needs to receive timely data during a crisis.

According to the TC survey, three-quarters of the respondents' jurisdictions have inter-agency committees (Figure 7). More importantly, only about two-fifths of respondents that have such agencies include the deposit insurer. Both risk minimisers and loss minimisers, as resolution authorities, are typically included in such groups. However, it is important that pay box/pay box plus deposit insurers are included in the inter-agency committee.

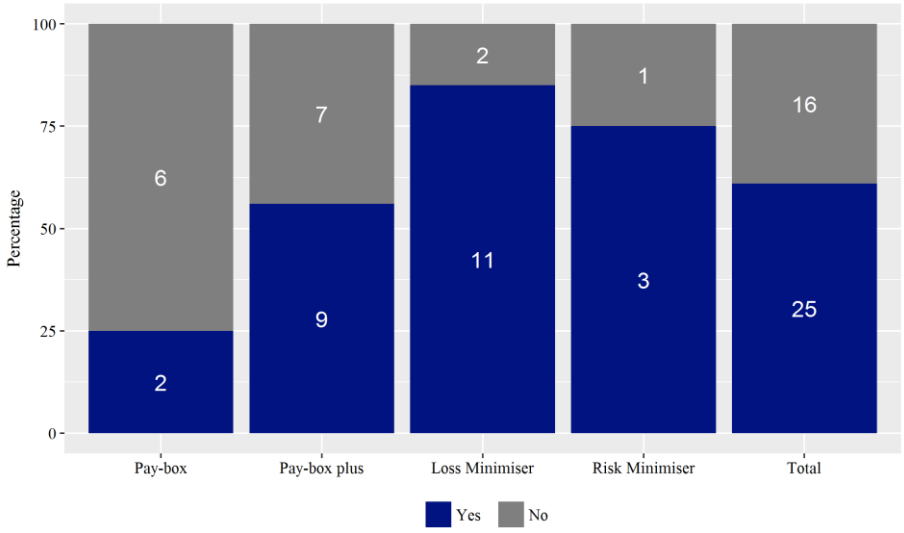
[23] The securities regulator may also be included if appropriate in the specific country circumstances.

Figure 7a:
Inter-agency group among IADI members



Source: TC Survey

Figure 7b:
Membership of DI in inter-agency group



Source: TC Survey

IV.3.b. Role of the deposit insurer in crisis management

Depositor confidence is a critical element of financial stability. The importance of deposit guarantees and the role played by deposit protection in helping maintain the confidence of depositors and restore financial stability was highlighted in the 2008 global financial crisis. Deposit insurers, irrespective of their mandate, play an important role in containing the spread of a crisis. However, their specific involvement in the management of the crisis is determined by their mandate.

All deposit insurers, including pay boxes, have a responsibility to ensure that depositors are protected in a crisis and to ensure that deposit insurance funds are used prudently. Deposit insurers must be involved at an early stage and have sufficient notice of emerging problems. Deposit insurers understand depositor behaviour and are aware of issues determining private

sector confidence. An important task for deposit insurers is ensuring that there are adequate mechanisms for reimbursing depositors. Experience shows that depositors can start a run on banks as financial pressures intensify. Depositor confidence is restored if they are able to get their funds quickly. The testing of operational frameworks and contingency plans (as discussed in Section III) is an essential element of preparedness by the deposit insurer.

Deposit insurers are also responsible for maintaining the sufficiency and adequacy of the deposit insurance fund. In many jurisdictions, the deposit insurer can, or must, contribute to financing the resolution of failed institutions. In some others, the inter-agency coordinating body can authorise the use of deposit insurance funds for purposes other than payout during a crisis. The deposit insurer should be involved in the decision-making regarding the use of its funds. Additionally, the use of deposit insurance funds should be subject to safeguards as provided in Core Principle 9. It is important that, where the deposit insurer's funds can be used in resolution, the deposit insurer should be involved in decision-making about the use of those funds. In several jurisdictions, the use of DI funds is subjected to a 'least cost' test that requires implementation of the resolution or liquidation option that is least costly to the deposit insurer.

Deposit insurers also need to prepare for any possible increase in the level of deposit protection. In a system-wide crisis, depositors in all banks are prone to a run. Depositors must have the confidence that their deposits are protected up to a specified maximum amount even if the bank holding them fails. Depositor protection plays an important role in preventing depositor flight from sound banks and limits contagion. In the context of the global financial crisis, a number of jurisdictions (the US, UK, and the euro zone) increased the levels of guarantees while some others introduced full deposit guarantees. The deposit insurer must be prepared to manage any changes in the level of depositor protection.

The decision to adjust deposit guarantees under such circumstances may require legal amendments or may be a broad political decision, but the implementation typically lies with the deposit insurer. The deposit insurer must be prepared to administer and implement such changes in the level of depositor guarantees. The deposit insurer needs to be prepared to ensure adequate financing[24] and, where needed, have adequate mechanism to pay out depositors quickly, or assist in the rapid and orderly transfer of deposits from the failing institution to the bridge institution or another institution. This effort requires considerable preparation and should be planned for and tested on a regular basis:

- laws and regulations must be reviewed to ensure that the deposit insurer has the authority to implement the enhanced deposit guarantee;
- arrangements for receiving adequate deposit data on a timely basis must be in place and tested regularly, as deposit levels can change rapidly during a crisis;
- mechanisms for reimbursing depositors in failed banks must be developed and tested.

IV.3.c. Communication policies

Public communication is at the core of maintaining depositor confidence, especially in a crisis. In stable times, the deposit insurer must ensure that information about factors such as coverage, any restrictions on coverage and the strength of the deposit insurance fund are well known and publicised. In a system-wide crisis, the deposit insurer must ensure that depositors are made aware and understand the measures undertaken for their protection. If any of such measures are temporary such that the level of guarantee or deposit insurance coverage will revert to its level

[24] Deposit insurance schemes are not typically funded to manage system wide failures and may rely on government support for such situations.

prior to the crisis, the same should be clearly explained to avoid giving rise to undue expectations post-crisis and address the risk of moral hazard.

The tasks of communication change in a system-wide crisis. As the crisis unfolds, the public needs more information about the safety of their deposits. It needs clarity on the cause of the crisis, what policies are being implemented to contain that crisis, and which agencies are guiding the crisis response. Individual agencies need to take a step back and allow the inter-agency coordinating body to take the lead. The coordinating body can draft a message that is consistent across all FSN agencies. A common public communications strategy must be developed among the FSN agencies using previously agreed upon channels and conveying a common message in order to avoid confusion among depositors and the public.

Many jurisdictions consider communication a vital activity, and permanent arrangements are made to ensure that appropriate strategies are adopted. For example:

- In Canada, CDIC maintains an "evergreen" communication plan. In the event of a single bank failure, CDIC takes the lead. It has set out a detailed communications plan outlining: the communications approach; target audiences; key messages; sample depositors' questions and answers; sample media questions and answers; questions and answers for deposit brokers; and an internal approval process. In the event of a system-wide financial crisis, the Finance Ministry coordinates communication. It sets out scripts and defined timelines for all members of the FSN, including CDIC. Moreover, there is a communications subcommittee that acts as the central source/contact point for communication coordination among FSN members.
- In the US, the Financial Stability Oversight Council (FSOC), the high-level coordinating body, will coordinate communications and ensure that the government speaks with a single voice.
- In Australia, the permanent Crisis Communications Working Group oversees public relations in a crisis. In this case, the Australian Prudential Regulation Authority (APRA) is the primary point of contact and will coordinate with the other agencies in relation to public communications.

IV.4. Cross-border considerations

The cross-border nature of banking activities poses challenges for contingency planning and system-wide crisis management arrangements. Plans prepared by domestic authorities, for jurisdictions with a material presence of cross-border banks, need to take into consideration the institutional and legal frameworks in other jurisdictions. This raises the need for information sharing arrangements and cooperation frameworks between home and host supervisors, resolution authorities and deposit insurers. These arrangements are needed to minimise the asymmetry of information between home and host authorities.

The realisation that there was a risk of conflicting interests between the home and host authorities during the global financial crisis, especially in developing contingency plans for the resolution of G-SIFIs, led to important regulatory reforms. The Key Attributes set out the need for an effective structure for cross-border resolution arrangements. The Core Principles also emphasise the need for cross-border information sharing arrangements where there is a material presence of cross-border banks. Significant measures have subsequently been introduced to implement such arrangements, to mitigate the risks and minimise the costs of resolving cross-border banks. Deposit insurers are beginning to establish such arrangements.

In determining the type of cross-border framework needed, consideration must be given to the composition of the domestic financial system and the proportion of domestic and foreign banks. The higher the foreign banking presence is in a jurisdiction, the more important it will be to identify the corresponding cross-border authorities' supervision, resolution and deposit protection frameworks. The home and host authorities then jointly need to prepare cross-border stress scenarios and test them to assess the robustness of arrangements for crisis management.

The supervisory colleges and crisis management groups (CMGs) are a starting point for discussing the challenges facing resolution authorities. These groups can identify how and what information will be exchanged and what will trigger information exchange. It is important for the authorities to determine ex ante the likelihood of cooperation in resolution and insolvency and the recognition of proceedings. Some IADI members are, as resolution authorities, members of CMGs.

The Core Principles call for deposit insurers to have formal information sharing and coordination arrangements with foreign deposit insurers when there is a material presence of foreign banks (CP 5). While supervisors may have such arrangements, deposit insurers will benefit from having their own arrangements with foreign counterparts. For risk minimisers and loss minimisers, such arrangements are critical. These types of deposit insurer may develop their own plans for orderly resolution or insolvency, and ensure that their foreign counterparts share information and develop well-coordinated resolution strategies. For pay boxes and pay box plus systems, such cooperation is likewise beneficial. Mechanisms for payout of deposits can differ across jurisdictions. For example, some countries may rely on a direct payout while others may want a resolution strategy such as P&A. Understanding the role and procedures of the deposit insurers beforehand will make the process more effective.

The need for clear understanding and testing of information sharing arrangements is particularly relevant when deposit insurers do not have the same mandate. Loss minimisers may expect some actions and information sharing that a pay box may not be able to provide. Preparing contingency plans and testing them, therefore, can help in clarifying rules and understanding procedures.

Based on the survey, of the 33 respondents, more than half (19 members or 58%) reported formal cross-border information or knowledge sharing arrangements (Table 4). As would be expected, pay boxes showed the lowest proportion having such arrangements (4 out of 11 or 36%). Pay box plus systems reported that almost 60% have such arrangements, while 100% of loss minimisers have them. The use of information sharing among risk minimisers is, however, unclear – only half reported that they have such arrangements but a number of respondents said that such information is confidential or under revision.

Table 4: Cross-border arrangements among IADI members

Mandate	Number of respondents	Number of members with cross-border arrangements	MoU	Letter of support
Pay box	11	4	2	1
Pay box plus	10	6	5	1
Loss minimiser	6	6	2	-
Risk minimiser	6	3	1	-
Total	**33**	**19**	**10**	**2**

Source: TC survey.

At the individual member level, a wide range of cross-border arrangements have been established:

- In the EU, the EBA has undertaken work on a template for multilateral cooperation agreements between DGSs. The guidelines will enable the designated authorities to put in place ex ante cooperation agreements with each other, setting out the criteria with which they seek to comply for repaying and transferring contributions.
- In the US, the FDIC has entered into multiple cooperation agreements and cross-border resolution MoUs with foreign authorities. An important aspect of these agreements is that they cover not only the exchange of information but also the sharing of data and policies concerning coordination of cross-border resolution. Both aspects are important for risk minimiser and loss minimisers.
- In Hong Kong, the HKDPB has signed MoUs with two German deposit insurers, since the deposit protection schemes operated by them cover the deposits taken by Hong Kong branches of banks incorporated in Germany. The HKDPB has also signed and MoU with the CDIC (Chinese Taipei) on coordinating communication in cases where a failed member bank has branches operating in Chinese Taipei or vice versa.

Most of the cross-border efforts have so far been aimed at establishing robust information sharing mechanisms. The MoUs need to be expanded to include the sharing of information on resolution strategies.

In addition to information sharing, there is also a need to conduct cross-border crisis simulations. In 2015 and 2016, the UK and the US conducted a series of table-top exercises to test their ability to resolve a G-SIFI. The lessons learned from that exercise led to revisions in practices and approaches. Other regions where regional SIFIs are common could benefit from similar exercises.

To summarise, preparations for system-wide crisis require that FSN participants work closely and in a coordinated manner. Unlike the contingency planning carried out by individual institutions, crisis preparedness involves being clear about the role of each FSN participant, the decision-making process, the coordinated implementation of actions, and the communication strategy. The coordination typically occurs through an inter-agency coordinating committee or agency. The deposit insurer should be a member of any system-wide entity or group responsible for crisis management. The task of communication is especially important in a crisis and should be carefully prepared. As part of preparedness for a systemic crisis, communication protocols are important and should be developed in stable times. FSN participants need to be able to help prepare mechanisms to develop a common public communication approach. The cross-border

nature of banking activities needs to be taken into consideration for contingency planning and crisis management arrangements.

V. Concluding observations

Important lessons about system-wide crisis preparedness and management mechanisms have been learned from past crises, such as the need to prepare and test contingency plans and the need for coordination among FSN participants (including at the cross-border level).

The main conclusions of the paper are summarised below:

- Contingency planning is critical for authorities forming part of the FSN, whereby each authority prepares and plans for the actions required to handle an unexpected situation. The contingency plan outlines (i) measures that can be applied to contain the damage from unexpected developments; and (ii) steps for coordination with other FSN agencies and foreign authorities. The testing of a contingency plan helps identify weaknesses in the plan and improve it by addressing the weaknesses observed in the testing phase.

- Deposit insurers need to run a variety of different tests covering areas to improve the effectiveness of contingency planning. Regular evaluations of what works best and how to improve the contingency toolkit are essential elements of this framework.

- All deposit insurers play a key role in minimising the risk of runs and in contributing to financial stability in a crisis. Deposit insurers with more extensive resolution powers play a greater role in system-wide crisis preparedness and management.

- Progress on fully incorporating deposit insurers into crisis management frameworks has been uneven. The integration of deposit insurers into crisis management frameworks can improve effective resolution, which can help strengthen financial stability and reduce resolution costs.

- The design of FSN arrangements must include effective methods for coordination and cooperation among FSN participants. The deposit insurers need to be aware of financial conditions of member institutions well in advance, in order to prepare for a payout and provide financing for resolution. The information sharing and coordination arrangements between FSN participants need to be established in stable times to serve as a basis for enhanced sharing of information and coordination during crisis situations.

- Development of cross-border crisis preparedness and management frameworks is essential when there is a material presence of cross-border banks. Such a framework would enhance practices for dealing more effectively with cross-border bank failures and for alleviating international contagion effects.

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ANNEX I: List of Technical Committee members

No.	Name	Organisation
1	Kumudini Hajra (Chairperson)	International Association of Deposit Insurers, Switzerland
2	Rafiz Azuan Abdullah	Malaysia Deposit Insurance Corporation, Malaysia
3	Giuseppe Boccuzzi	Interbank Deposit Protection Fund, Italy
4	John Mafungei Chikura	Deposit Protection Corporation, Zimbabwe (till July 2018)
5	Patrick Déry	Autorité des marchés financiers, Québec, Canada
6	Nikolay Evstratenko	Deposit Insurance Agency, Russian Federation
7	Yvonne Fan	Central Deposit Insurance Corporation, Chinese Taipei
8	David Hoelscher	Federal Deposit Insurance Corporation, United States
9	Sung Wook Youn / Taewook Chang	Korea Deposit Insurance Corporation, South Korea
10	Alex Kuczynski	Financial Services Compensation Scheme, United Kingdom
11	Oana Maria Nedelescu / Jan Philipp Nolte	International Monetary Fund
12	Jan Philipp Nolte	The World Bank (till February 2018)
13	Hiroyuki Obata / Takamasa Hisada	Deposit Insurance Corporation of Japan, Japan
14	Nancy L. Sevilla-Samson	Philippine Deposit Insurance Corporation, Philippines
15	Dalvinder Singh	Professor, University of Warwick, United Kingdom
16	Zdzisław Sokal	Bank Guarantee Fund, Poland
17	Sven Stevenson	De Nederlandsche Bank, the Netherlands

ANNEX II: Contingency planning practices among IADI members

BRAZIL

Components (tools) of DIA contingency planning process

- Systems and procedures for payout and financial assistance.
- Operational contingency policy and procedures, which are tested and in place.
- Backup funding: the FGC can call on prepayments and extraordinary contributions from member institutions. It can also conduct credit operations with private, official or multilateral institutions, as well as issue negotiable instruments. Other sources of funds can be proposed by FGC's management and authorised by the central bank, but immediate access to public funds for emergency liquidity purposes is not available.
- Internal stress tests, which focus on member institutions that are identified as more risky by our internal scoring and rating procedures.
- Internal communication plan (which does not involve other safety-net participants).
- The implementation of operational contingency policy and preparation of internal stress tests are relatively recent. The FGC has also developed an optimal fund size model to assess whether its funds are sufficient to deal with stress scenarios and manage banking crisis. The methodology and results of this model have been approved by the Brazilian central bank's technical team, and have served as a basis for the setting of the new target size of FGC by the National Monetary Council in April 2018.
- While FGC has not carried out simulations of payouts and financial assistance with the participation of the central bank and other safety-net agencies, FGC's board has recently approved, under its strategic planning initiatives for 2019-2020, the launching of a comprehensive crisis simulation for the year 2020.

Risk assessment of individual banks

The FGC has a proprietary single-obligor model of risk rating and probability of default. The model uses a factor-based approach to map, for each entity, idiosyncratic and common risk factors into an internal rating scale and its probability of default. The model is run for all financial institutions on a monthly basis. Potential risks are identified by assembling financial institutions with one of the following characteristics: (1) weak ratings and significant exposure to DIA; or (2) institutions bearing rating downgrades.

Scenario testing of contingency plans

The FGC also has a proprietary Credit Value at Risk Model that allows the measurement of funds sufficiency in a very large number of scenarios, and the calculation of the loss which the FGC would incur if a particular scenario were realised. In each scenario the model randomly simulates the failure of financial institutions according to their probability of default and the risk of contagion to the rest of the system. The simulation procedure produces both normal and distressed scenarios. As a consequence, the FGC is able to evaluate the sufficiency of its fund balance under normal and crisis situations with a high level of confidence by comparing it with the hypothetical losses incurred in each scenario.

CANADA

Components (tools) of DIA contingency planning process

CDIC employs several tools in its contingency planning process:

- *Simulations*: CDIC conducts payout simulations internally and with operational level staff of Canadian FSN agencies. Since 2004, CDIC's resolution department has conducted 10 full-scale/broader-scope payout simulations. The last full-scale payout simulation was conducted in September 2015 and simulated a payout conducted over a weekend (except for registered accounts and some trust accounts). Full-scale simulations sometimes include consultants trained in payout procedures and observers such as CDIC's Internal Audit Department. CDIC has also completed approximately 10 limited scope simulations to date (e.g. an October 2014 simulation of its customer care module, call centre and dark website; a July 2015 simulation of its failure communications models for complex inquiries and a deposit transfer of registered deposit accounts; and in September 2015 a simulation of a non-netting insurance determination and payout of trust deposits).

  CDIC's Finance Division also conducts simulations with the Department of Finance and the Bank of Canada, to test its ability to access funds. For example, in November 2016, there was a simulation with the Department of Finance to test drawdown of liquidity funding under the Crown Corporation Borrowing programme (CDIC is a Crown Corporation). The objective of the 2016 test was to ensure SWIFT functionality and the accuracy of account information. In addition, in June 2015, there was a simulation with the Bank of Canada to test drawdown of the repo facility.

- *Table-top exercises*: CDIC has completed three table-top exercises with resolutions specific to large banks: March 2014 (with FSN partners), March 2015 (internal only) and March 2016 (with FSN partners). In March 2017, a table-top exercise was conducted internally, focusing on a hypothetical resolution of a medium-sized bank. The participants in table-top exercises were mid- to senior-level decision-makers.

- *Playbooks*: To prepare for and to support execution of CDIC's intervention processes for payout and non-payout resolution options, CDIC continues to develop its playbooks, which include reference documents, intervention procedures and guidelines. CDIC playbooks also include evergreen contingency planning and crisis management procedures in the event of a large bank failure. They envision CDIC as a decision-making body for strategic, restructuring and financing decisions in respect of a large bank resolution. Playbooks would establish a resolution management office as its own unit within CDIC, which would ramp up to full capacity over the course of 30 days.

- *Standby agreements*: CDIC has entered into standby agreements with selected third parties, to secure specialised expertise as necessary and support CDIC's staff in executing intervention activities.

- *Resolution plans*: For the largest banks designated as domestic systemically important banks (D-SIBs), the resolution plans are written by the banks. CDIC is also in the process of extending resolution planning to medium-sized members and typically requires small high-risk members (who are on the acute watch list) to prepare resolution plans.

- *Crisis management groups (CMGs)*: In relation to D-SIBs, CDIC, on a rotation basis with the Office of the Superintendent of Financial Institutions (OSFI), hosts annual CMGs with participation from domestic and international partners to discuss recovery and/or resolution of these largest banks, including cross-border issues.

- *Business continuity plans*: CDIC is in the process of updating its business continuity plan, which includes the scope, procedures and strategies to handle a disruption event. The updated business continuity plan will be tested annually by conducting a simulation of a disruption event (e.g. building fire, flood, active shooter, server catches fire, pandemic influenza, etc.).The business continuity plan is accompanied by a recent business impact assessment that describes the key business processes at CDIC and prioritises these processes and their related systems. The business impact assessment includes details of the maximum allowable downtime for the systems in each business process, if CDIC were to encounter a service disruption scenario. CDIC also has offsite backup server redundancies and is able to restore critical operations from backups and operate remotely, if an event were to damage or impair access to its premises. CDIC has two secondary office locations with full IT service availability that would be available for use if required.

Risk assessment of individual banks

In order to meet CDIC's objectives, the Corporation must be able to assess the risk associated with member institutions and have the capacity to effectively and expeditiously carry out required interventions. CDIC's Risk Assessment Department monitors and manages risks of CDIC member institutions in order to identify early warning signs. This work complements and informs CDIC's resolution planning and preparedness activities (contingency planning) the Risk Assessment Department, which is conducting and coordinating with other CDIC departments (e.g. Resolution Division, Emerging Risks and Data Analytics, Communications, etc.).

The level of monitoring and reporting undertaken by the Risk Assessment Department is commensurate with the level of insurance risk posed by CDIC's membership. Accordingly, CDIC members that pose a high level of insurance risk will be placed on CDIC's watch list and be subject to heightened monitoring and resolution planning and preparedness activities, which will be prioritised and undertaken as needed. The inclusion of a member on CDIC's watch list is independent of "staging" decisions made by OSFI but typically these are highly correlated.

A fundamental objective of the risk assessment process is to identify problems at an early stage, so that appropriate interventions can be implemented to minimise the Corporation's exposure to loss.

In order to fulfil the above objectives, the Risk Assessment Department will:

- Form an opinion of the risk posed to CDIC of each individual member institution, as well as at a peer group and aggregate membership level;
- Support other CDIC departments to ensure that CDIC can effectively manage risk and anticipate/respond to the potential failure of any member;
- Add value to the regulatory process by complementing the risk-based approach to supervision with ongoing offsite monitoring and early warning indicator analysis (these are enabled through CDIC's involvement in the regulatory reporting system, which provides timely access to detailed filings from each member);
- Identify member-specific and macroeconomic issues and discuss them with OSFI examiners and, when appropriate, member institutions;
- Determine an appropriate risk-based monitoring strategy.

The Risk Assessment Department's overall assessments of an individual member institution are informed by assessments of its financial condition as well as inputs from the supervisor/regulator

(in particular those pertaining to governance and the quality of risk management control functions). These inputs are complemented by an analysis of the operating environment and applicable risk factors that affect members' abilities to realise their strategic and business targets.

Scenario testing of contingency plans

CDIC contingency planning process tests the following areas:[25]

- risks posed to the DIA by banks;
- sufficiency of funds in normal situations;
- backup funding support in both normal and crisis situations;
- identification of insured deposits;
- the operational process of payout, and ability to reimburse depositors quickly;
- non-payout resolution options.

In addition, table-top exercises focus on identifying gaps in roles, responsibilities and the decision-making process for the resolution of a member institution.

ITALY

Components (tools) of DIA contingency planning process

Contingency planning process is part of risk management, which aims at coping with unexpected and extreme events. FITD has identified two major categories of contingencies: Business Continuity and Funding. FITD is finalising a contingency plan for business continuity and disaster recovery and initiatives are underway for the contingency funding plan.

Business continuity plan

BCP aims at identifying, monitoring and managing risks than can cause a disruption to FITD operational processes and have severe impact on the FITD's business continuity. BCP is the process for creating systems of prevention and recovery to deal with potential threats to the FITD.

BCP includes a number of phases: i) mapping the processes, identification of related risks and assessment of the IT infrastructure; ii) business impact analysis, *i.e*. identifying risk levels of each process and impact on business; (iii) drafting the BCP and the disaster recovery plan; and (iv) training and testing.

Overall, the BCP includes: roles and responsibilities during and after an event; procedures for response; instructions for managing the immediate consequences of a serious incident, with due attention to personnel safety; strategic options, procedures and operations for disaster response; further backup measures to prevent further losses and failure of first responses; details of ways and means to communicate with personnel and family, interested parties, emergency contacts,

25 Many of CDIC's contingency planning and crisis management policies and procedures cover both of its roles as the deposit insurer (responsible for a payout of insurance in case of a member institution's failure) and resolution authority (responsible for non-payout resolution of a member institution, e.g. by way of forced sale, bridge bank, or bail-in).

procedures for continuing or restarting first responses within fixed times; instructions for communicating with the media and post event procedures.

Funding adequacy

FITD conducts stress tests of funding adequacy, aiming at verifying the adequacy of financial resources, given a certain pre-defined scenario. The test covers ex-ante funds composed of bank contributions, ex-post funding and other financial arrangements. Depending on the result of the funding test, the need for contingency planning to face extraordinary situations in which FITD resources would not be enough could emerge and a backstop would be needed.

Currently, Italian legislation makes no provision for backup funding support. The FITD is engaged in discussions with the Bank of Italy with a view to introducing backup funding in various forms. Discussions are also under way with member banks on introducing a credit line to be used by the Fund in crisis situations.

Risk assessment of individual banks

FITD has models and processes in place for identifying and analysing risks as part of its operational readiness. In particular, the FITD assesses the risk of its member banks using a statistics-based risk model composed of 11 risk indicators. Ratios are assigned to the following risk factors: asset quality, solvency, liquidity and funding, profitability, and potential losses for the deposit insurer. In addition to these ratios, the FITD also monitors bank risks using 12 other risk indicators which supplement the assessment of banks' risk profiles. FITD also monitors bank risks along with other additional risk indicators completing the assessment of banks' risk profiles.

The contingency plan could be a possible option depending on the results of risk assessment.

Scenario testing of contingency plans

Identification of insured deposits

As part of operational preparedness, member banks are required to extract the Single Customer View file (SCV) according to the rules defined by FITD. Banks must identify insured deposits according to the SCV.

Operational process of payout, and ability to reimburse depositors quickly

In 2016, the FITD introduced a detailed procedure for depositor reimbursement in seven working days

The FITD payout procedure regulates the activities and timeline for all subjects involved in a payout (FITD, liquidator of the failed bank, resolution authority, and bank acting as FITD treasurer (agent bank)). Specifically, according the procedure, the bank shall submit SCV files to the Fund within five working days from the date on which the liquidation proceedings take effect.

The FITD payout procedure is subjected to stress test, in line with the provisions of the Deposit Guarantee Schemes Directive (DGSD). The DGSD states that DIAs shall perform stress tests of their capacity to carry out the interventions (reimburse depositors, contribute to the financing of resolution, alternative measure in order to prevent the failure of member banks, measures to preserve the access of depositors to covered deposits).

To this end, as part of a depositor reimbursement scenario, the "operational capability" test aims to verify the ability of FITD to efficiently manage processes, resources and IT systems under conditions of stress. The processes and mechanisms subjected to stress under the operational

capability test include the following thematic areas: access to data; operational and personnel resources; communication; payment systems; timing measurement; cooperation between home and host Authorities.

In particular, FITD conducts exercises to test the payout procedure and the capability of the member bans to extract and submit SCV files in compliance with the set timeline and respecting the format and contents defined in FITD Instructions.

FITD's SCV test includes quality control of the Single Customer View (SCV) file that can be evaluated not only in a scenario-based stress exercise but also through periodic routine tests. In any case, the test aims to verify: i) the compliance of the file produced by the bank with the instructions defined by the FITD; ii) the completeness of the information required for the reimbursement, including the evidence of covered deposits of branches established in other EU member states; and iii) compliance with the deadline set by the FITD for sending the SCV file.

Stress tests are performed according to the following steps:

- planning phase
- running phase
- reporting phase
- corrective action phase

Results of the tests may serve as inputs for contingency planning.

Cross-border operations

The FITD conducts tests of cross-border cooperation with other EU deposit insurers. These tests evaluate the FITD's ability to: i) effectively transmit, as home deposit insurer, a payment instruction file to the host deposit insurer, the latter confirming that the file contains all the information necessary for the execution of the payment; or ii) carry out, as host deposit insurer, the reimbursement of depositors of a European branch established in Italy, on the basis of the payment instructions and resources received from the home deposit insurer.

PHILIPPINES

Components (tools) of DIA contingency planning process

Offsite-Bank Risk Monitoring (OBRM) System

This system categorises banks according to the risks they pose to the DIF. It is an insurance risk assessment tool that generates quarterly individual bank ratings of performance and condition on a scale of 1 (worst) to 5 (best). Ratings are based on indicators of capital adequacy, asset quality, management, earnings, liquidity and sensitivity to market risk (or CAMELS), derived from submitted financial statements, onsite examination findings and other pertinent market information.

Bank failure prediction model

This model identifies banks with a high probability of failure. It supplements the OBRM by providing a forward-looking approach for predicting bank failures and resulting insurance fund losses.

Bank stress testing model

This model simulates various stress scenarios and their impact on member banks. Onsite bank assessments are either done jointly with the BSP or independently by the PDIC.

Enterprise Risk Monitoring System (ERMS)

This allows the PDIC to assess the internal and external risks it is facing.

Business continuity management system (BCMS) framework

This allows the PDIC to update, align and put in place policies, guidelines and processes consistent with best practices and international standards in business continuity management, as well as to enhance its crisis management and disaster preparedness, procurement and control, and the response, recovery and restoration of critical activities and processes. This ensures proper coordination and synchronised and simplified processes before, during and after any disruptive event.

Governance, risk and compliance (GRC) framework

This allows the PDIC to integrate and improve risk mitigation, compliance and internal control measures in managing and monitoring the activities, programmes and processes of PDIC.

Scenario testing of contingency plans:

- identifying risks posed to the DIA by banks;
- sufficiency of funds in normal situations;
- backup funding support in both normal and crisis situations;
- identification of insured deposits;
- the operational process of payout, and ability to reimburse depositors quickly.

POLAND

Components (tools) of DIA contingency planning process

The Fund developed and submitted the "Bank Guarantee Fund stress test schedule for 2017–2019" to the designated authorities and the EBA by 19 April 2017.

The following assumptions have been adopted by the Fund when developing the stress testing programme:

- the test programme covers the period up to 3 July 2019;
- the programme includes estimated deadlines for completion of the tests and specifies the planned scope of each test;
- the programme cycle includes all priority tests listed in the EBA Guidelines,
- when performing the tests, real-life interventions carried out by the Fund are to be used;
- the programme will be updated on a regular basis, taking into account the results of previous stress tests (e.g. results that would highlight a need for a more in-depth assessment of certain areas) and actual interventions;

- in case of a real-life intervention, the BFG will focus on the reporting and corrective action phases (in accordance with point 5.1.20 of the Guidelines).

Risk assessment of individual banks

Stress tests should cover two main risk areas:

(i) Operational risk, i.e. the risk that the DGS cannot meet its obligations due to inadequate or failed internal processes, inadequate staffing and systems;

(ii) Funding risk, i.e. the risk that the funding sources provided for in Article 10 of Directive 2014/49/EU (regular contributions, extraordinary contributions and alternative funding arrangements) are insufficient to enable the DGS to meet its potential liabilities, or to meet them within the time periods required by national or EU law.

Stress tests cover various operational stages of a DGS intervention, ranging from pre-failure planning to preparation upon failure, to execution of intervention, including repayment, contribution to resolution, etc. They apply both quantitative and qualitative indicators, and at a minimum measure the indicators set out in this section, in accordance with the EBA Guidelines.

Scenario testing of contingency plans

Identifying risks posed to the DIA by banks

Consequently, the main areas in which steps were taken to reduce risk in the process of reimbursement of guaranteed deposits were:

- Direct contacts with managers of banks which demonstrate increased risk, to discuss in detail the actions that an entity is required to undertake in the case of fulfilment of the guarantee condition, including the need for timely determination of the state of the financial accounts, as well as drafting a depositor list. This element was also included in the BFG's internal regulations on the payout process.
- Increasing the frequency of SCV file checks at higher-risk entities (sequential checks), which resulted in an improvement in the quality of the data used in the calculation system.

Sufficiency of funds in normal situations

A funding capability test in a reimbursement scenario will form part of stress tests scheduled for 2018–2019. The test will cover either a small and medium-sized bank or a credit union and a large bank. The test will assess and measure funding capability in a scenario of guarantee deposit reimbursement, as well as the efficiency of liquidity mobilisation.

Backup funding support in both normal and crisis situations

Tests were conducted only in normal scenarios during the process of actual reimbursement of guaranteed funds.

The capability of entities to participate effectively in the process of reimbursement of guaranteed deposits was verified based on real-life cases of reimbursement. From July 2014 to the end of May 2017, the BFG conducted 11 reimbursements of guaranteed deposits: eight small entities (one bank and seven credit unions) and three medium-sized entities (one bank and two credit unions).

Identification of insured deposits

Tests were conducted as part of the systematic control of data stored in the calculation systems of banks and credit unions, as well as during the real process of reimbursement.

The BFG's tests concerned all institutions covered by the guarantee scheme (banks and credit unions), and the data of all clients were checked.

The BFG carried out checks of entities' data as follows:

- 30 June 2012 – all banks were tested once. A second series of tests was then conducted on entities with the highest risk and the worst data quality, as identified during previous tests. By 31 December 2016, 1,414 checks of SCV files had carried out. By this time, at least 97% of banks had been subjected to at least two checks.
- 31 December 2013 – checks on the SCV files of all credit unions were carried out. By 31 December 2016, a total of 248 checks had been carried out. All credit unions were checked at least three times, 8% of them were checked four times.

Moreover, verification of depositors' data and guaranteed funds took place during the 11 real-life reimbursement processes mentioned above.

Operational process of payout, and ability to reimburse depositors quickly

This was tested as part of the process of checking the data stored in the calculation systems of banks and credit unions, as well as during real-life reimbursement processes (the whole range).

The receiver or receivership administrator of an entity which fulfils the guarantee condition has three statutory working days to transmit the valid SCV file (the list of depositors), starting from the day of fulfilment of the guarantee condition.

In order to perform data checks, when calling on an entity to transmit files the BFG sets a three-day deadline for SCV file transmission. Cases where an entity failed to transmit a file within the indicated time period were incidental (less than 1%), and occurred during the period immediately after the provisions on entities' obligation to maintain calculation systems came into force. Delays generally did not result from the inability to transmit SCV files, but for organisational and technical reasons.

Regarding the 11 complete real-life reimbursement processes, transmission of an SCV file to the BFG variously took one working day (one entity), two working days (seven entities) and three working days (three entities).

In accordance with the legal provisions, the reimbursement of guaranteed deposits shall be payable within seven working days from the day of fulfilment of the guarantee condition. In all 11 cases of conducted reimbursements, the statutory time limit was not exceeded (the start of reimbursements ranged from five to seven working days).

So far, the BFG has used three banks – as intermediaries – to conduct the reimbursement of guaranteed deposits. The BFG had signed agreements with these banks on their readiness to conduct the payouts. Each agency bank has a branch network, which allows for reimbursements throughout the country. They have a total of about 2,500 outlets.

Other tests

As part of stress testing, the following tests are scheduled for 2018–2019:

- test on the use of alternative funding means to prevent bankruptcy of financial institutions based on real data. The test will concern small or medium-sized credit unions;

- funding capability test in a forced restructuring scenario, involving an assessment and measurement of funding capability in a forced restructuring scenario for a national entity;
- operational capability test of cross-border payments under the following assumptions:
    - Polish DGS as home DGS
    - the assessment of the effective funds available
    - transfer and use of depositor data
    - funds for reimbursement process transfer

RUSSIA

Components (tools) of DIA contingency planning process

As the DIA and the Central Bank of Russia (CBR) face bank failures and resolution cases rather frequently (77 payout cases in 2015, 88 in 2016 and 27 in January–July 2017; in January–July 2017, the DIA was appointed as receiver in 38 failed banks and started implementation of bank rehabilitation measures in relation to six banks), they use practical cases for developing their joint response to such situations. The contingency planning process includes: the identification of deficiencies and successful practices; the discussion of possible options and necessary regulations and actions; the development of requirements for the resolution strategies to be applied in various situations; joint inspections of failing banks; the development of resolution plans; etc. The DIA also participates in the CBR's regular inspections to assess compliance of DIS member banks with the Deposit Insurance Law, including their ability to promptly generate the register of insured liabilities to depositors for hypothetical payout cases.

Risk assessment of individual banks

The DIA has a risk monitoring toolkit that is used for the early detection of weak banks, so as to be prepared for resolving them in a timely and effective manner. The DIA uses several models to analyse and forecast bank failures and the financial resources needed for resolving such banks. These models include econometric models, rating models, market models (banks' bond price fluctuations) and expert models.

Scenario testing of contingency plans

- identifying risks posed to the DIA by banks;
- sufficiency of funds in normal situations;
- backup funding support in both normal and crisis situations;
- identification of insured deposits;
- the operational process of payout, and ability to reimburse depositors quickly;
- Other tests – various resolution strategies and their applicability in different situations.

UNITED KINGDOM

Components (tools) of DIA contingency planning process

The FSCS has a business resilience department[26] responsible for both disaster contingency and contingency planning. Contingency planning for deposit taker failures is owned by the operations area, but supported for content and testing by the resilience team. FSCS works closely with colleagues at the regulatory authorities (PRA and FCA) and the Bank of England Resolution Directorate.

Scenario testing of contingency plans

- identifying risks posed to the DIA by banks

  The identification of firms which are within proximate risk of failure is performed by the resolution authority. The details of said firms are shared and discussed between the FSCS and the resolution authority.

- sufficiency of funds in normal situations

  The FSCS holds a small operating reserve. In the event of a sizeable failure, an ex post funding model is first used, which is funded by industry levy payable in 30 days.

- backup funding support in both normal and crisis situations

  If reserves are insufficient and the ex post levy inadequate or not raised, the FSCS has contractual agreements with commercial lenders. This provides access to liquidity (currently to £1.45 billion). Banks also fund a bank levy of which part is allocated to a FSCS pre fund which FSCS may also access – from the HM Treasury National Loans Fund, who may also lend additional funds if required. Borrowings are repaid by FSCS deposit takers levy payers, or from recoveries.

- identification of insured deposits

  The FSCS routinely reviews deposit taker's SCV files, providing assurance on their quality and completing the review of data, such as insured deposits.

- the operational process of payout, and ability to reimburse depositors quickly

  The FSCS routinely reviews the analysis of firms for which liquidation and payout is the preferred resolution strategy, to ensure that the FSCS is operationally capable of effecting such payout. The operational process is tested through the resolution of small deposit takers which have failed.

[26] The FSCS is an integrated scheme so the business resilience department is responsible for contingency planning for deposit, investment and insurance scenarios.

UNITED STATES

Components (tools) of DIA contingency planning process

Funding

The FDIC has a statutory deposit insurance fund (DIF) to cover the costs of its supervision responsibilities, to pay claims on insured deposits when IDIs fail, and to resolve failed IDIs. The DIF has regular and backup resources available from:

- Existing balances totalling USD 88 billion as of 30 June 2017;
- Quarterly risk-based assessments on IDIs;
- Its authority to increase assessment rates, impose special assessments, and require IDIs to prepay assessments;
- Legally established lines of credit with the US Treasury;
- Its ability to borrow from IDIs and Federal Home Loan Banks (FHLBs);

Resolution plans

- (12 CFR § 360.10) – IDIs with USD 50 billion or more in total assets are required to submit periodically to the FDIC a plan for the resolution of such institution in the event of its failure. Such plans should enable the FDIC, as receiver, to resolve the institution under Sections 11 and 13 of the FDI Act, 12 U.S.C. §§ 1821 and 1823, in a manner that ensures that depositors receive access to their insured deposits within one business day of the institution's failure (two business days if the failure occurs on a day other than Friday), maximises the net present value return from the sale or disposition of its assets, and minimises the amount of any loss realised by the creditors in the resolution.
- The FDIC also prepares internal, operational resolution plans for resolving IDIs with USD 50 billion or more in total assets.

Simulations

- Contracts in place to ensure human resource needs are fulfilled in crisis situations;
- Information sharing arrangements with domestic and international counterparts;
- For severely distressed institutions, strategic resolution plans are developed to outline the proposed resolution strategy and identify potential impediments;
- The FDIC has statutory backup supervisory authority over all IDIs, which allows it to conduct onsite examination activities at certain institutions. The authority is coordinated under the Interagency Memorandum of Understanding on Special Examinations with the Federal Reserve and OCC, which can be found on the FDIC website https://www.fdic.gov/news/board/2010july12no1.pdf;
- The FDIC has a variety of models to identify risks in individual institutions and the system as a whole.

Risk assessment of individual banks

All IDIs are examined by supervisory authorities every 12 to 18 months. If the FDIC is not the primary federal regulator, it may exercise its backup authority described above. The other federal regulators are legally required to send their completed reports of exam to the FDIC.

Scenario testing of contingency plans

The FDIC regularly tests various scenarios as part of contingency planning. For financial companies whose resolution would be carried out under the DFA, the FDIC conducts various exercises, including:

- Operational exercises – discussions among staff and heads of US authorities to test various steps in the resolution process for systemically important financial institutions;
- Principal level exercises – discussions among heads of US and foreign authorities regarding issues (on a cross-border basis) that would be likely to arise in the resolution of a systemically important financial institution;
- Table-top exercises – discussions among staff of US and foreign authorities to understand resolution procedures and regulations in specific jurisdictions.

For institutions whose resolution would be conducted under FDI Act authority, the FDIC conducts exercises that focus on the resolution of the IDI, including:

- Liquidity simulations – test of a liquidity crisis/closure of an IDI with assets of between USD 5 billion and USD 50 billion;
- Planning sessions for setting up and running bridge banks.

In addition, compliance testing is conducted under the "Large-Bank Deposit Insurance Determination Modernisation" Rule. This rule requires the largest insured depository institutions to implement functionality for posting provisional holds and supplying depositor and customer data in a standard format. For more information see 12 CFR § 360.9.

The FDIC also continuously monitors the adequacy of the DIF to meet its responsibilities as deposit insurer and resolution authority under various scenarios by:

- Updating projections of fund income and expenses every six months;
- Updating its contingent loss reserve each quarter to reflect the cost of resolving bank failures anticipated over a 12-month horizon.
- Annually setting or reaffirming a designated reserve ratio (long-range target size for the fund) as part of the long-range management plan for the DIF. The target is based on an analysis of the resources that would be needed to maintain a positive fund balance during a banking crisis, and allows for steady assessment rates over the long term. For further information see: https://www.fdic.gov/regulations/laws/federal/2010/10finaldec20.pdf.

ANNEX III: DGS stress testing in the EU

The European Banking Authority (EBA) published guidelines on stress tests for deposit guarantee schemes (DGSs) in May 2016. The EBA Guidelines provide a methodology for planning, running and reporting on stress tests conducted by DGSs to assess their resilience to various types of scenarios in times of banking stress. These guidelines specify the minimum principles and content of stress tests that DGSs must perform.

Objectives of stress tests

The objective of the stress tests is to verify that operational and funding capabilities are sufficient to ensure deposit protection in times of increased pressure. Results of stress tests performed at the level of each DGS will be analysed at the European level through a peer review to be performed by the EBA at least every five years.

Broadly, stress tests should cover two main risk areas:

- Operational risk, i.e. the risk that the DGS cannot meet its obligations in terms of repayment, contribution to resolution proceedings or, where consistent with its mandate, the ability to support preventive measures;
- Funding risk, i.e. the risk that the funding sources (regular contributions, extraordinary contributions and alternative funding arrangements) are insufficient to enable the DGS to meet its obligations.

Stress tests should cover each stage of DGS activities, from pre-failure planning to preparation upon failure, to execution of intervention, including repayment, contribution to resolution, etc. While the guidelines provide indications of how to proceed, a proportionate approach has been adopted. DGSs retain the ability to calibrate their tests to best fit their circumstances (in terms of size, banking model, cross-border footprint, etc.), but specific tests have been defined to allow for a cross-European peer review.

Methodology

DGSs should define a two-to-five-year testing programme covering specific tests to be conducted. The programme should set out the estimated timeframe of programmed exercises and define the planned scope of each exercise in terms of test areas and types of intervention scenarios. The programme may include comprehensive tests covering all test areas under a given scenario, or targeted tests covering only some test areas such as access to data, routine SCV file checking, etc.

DGSs should test their ability to meet all operational tasks including (i) compensation to depositors, (ii) financing the resolution options, (iii) financing alternative measures to prevent a failure and, if allowed under national law, (iv) measures to preserve the access of depositors in the context of national insolvency proceedings.

Test areas and indicators

Payout capabilities

DGS stress tests should cover the DGS's capacity to manage operational mechanisms, including access to data and payout mechanisms. Specifically:

- Access to data should be tested as a matter of priority. Access to SCV files and ability to assess the quality and timeliness of those files is a priority. The DGS should include the following indicators:
    - Overall quality assessment of the SCV files;
    - Accuracy of depositor contact details, accounts held, and amounts of eligible and covered deposits;
    - Quality assessment of arrangements in place for obtaining SCV files;
    - Time needed to obtain transmission of SCV files;
    - Share of substandard SCV files or SCV file entries (missing, inaccurate, or not containing the data necessary for processing and payment). This is a quantitative measure.
- Access to timely information on problems detected at a credit institution. DGSs should assess the arrangements for obtaining sufficiently early information on the deterioration of an institution's financial situation.
- The ability to pay out efficiently should be tested. Such tests include
    - Effectiveness of payment instruments including bank transfers, cheques, prepaid cards, and, where applicable, the capacity to pay in foreign currencies;
    - Ability to transfer repayment amounts effectively to depositors.

Staff and other operational resources

DGSs should test whether they have at their disposal the necessary resources to cope with the sudden increase in activity caused by an intervention, in terms of budget, staff, office space, IT equipment, call centres, outsourcing arrangements, etc. DGSs should use the following indicators:

- Adequacy of the existing staff, budget and other resources that would be available in a real-life scenario;
- Adequacy of extra staff, budget and other resources that would be available at short notice when needed.

Communication with depositors and the wider public

DGSs should make an assessment of the communication processes that would be applied on the occurrence of a repayment scenario, reviewing the communication strategy and resources. DGSs should use the following indicators:

- Quality of existing processes for collecting payment details;
- Time needed to set up call centres and ad hoc websites or webpages;
- Capacity of websites or call centres in terms of number of connections or calls;
- Adequacy when applied to a high number of payments, as defined in the scenarios.

Repayment and contribution periods

DGSs should measure the time from the determination of unavailability of deposits until the point when the repayable amount must be available. DGSs should use the following indicators:

- Time between the determination of unavailability of deposits and the availability of the repayable amount;
- For resolution scenarios, time elapsed from the resolution authority's request to the payment of the contribution (quantitative).

Home-host cooperation

DGSs should test the systems in place for repaying depositors at branches set up by their affiliated credit institutions in other member states. First, DGSs should verify that they are able to retrieve SCV files regarding depositors at such branches. Second, they should measure the time taken to prepare payment instruction files and to submit them to the DGSs of host member states, and whether this is within the deadlines provided for in the EBA Guidelines.

Funding capabilities

DGSs should test that their funding is adequate to meet their payment obligations. First, they should assess the adequacy of the ex ante funding available at the time of the exercise for the necessary repayment or resolution contribution. Second, where ex ante funding is insufficient, DGSs should assess the adequacy of extraordinary ex post contributions and alternative funding means to meet the shortfall. Likewise, DGSs should consider whether the necessary extraordinary ex post contributions would meet the annual 0.5% ceiling laid down in the EBA Guidelines. Where this is not the case, they should make an explicit judgment as to whether they would be able to raise the 0.5% ceiling.

ANNEX IV: Selected case studies

CANADA DEPOSIT INSURANCE CORPORATION, CANADA

I. History of banking crises during past 10 years

Canada avoided the worst effects of the global financial crisis in 2008. While there were no failures of financial institutions, the well-structured coordination mechanisms among FSN members allowed for rapid monitoring, response and planning in order to ensure readiness to act at all times.

II. Legal framework for crisis prevention

The legislation related to the financial system is embedded in several acts of Parliament, including the Bank Act, Bank of Canada Act, Canada Deposit Insurance Corporation (CDIC) Act, Office of the Superintendent of Financial Institutions (OSFI) Act, and Financial Consumer Agency of Canada (FCAC) Act. Financial regulators in Canada are governed by the Financial Administration Act, which provides for the financial administration of the Government of Canada, the establishment and maintenance of the accounts of Canada, and the governance of Crown corporations such as CDIC.

CDIC and the FSN organisations have clear statutory mandates with little overlap. These organisations have the power to take individual and collective actions to intervene in financial institution failures and to safeguard the stability of the financial system in a timely manner.[27] There are several forums for communication and coordination of FSN issues. These forums have been in place for decades and operate on a regular basis during stable times. As a result, in the lead-up to and during an intervention or a crisis, these are leveraged quickly to address problems as they arise, with CDIC being an integral and active participant.

III. Institutional framework for crisis prevention

The federal FSN includes CDIC, the central bank (Bank of Canada), the supervisor (OSFI), the Department of Finance and the consumer protection agency (FCAC). CDIC also participates in other forums and agreements with certain provincial regulators and deposit insurers on common issues relating to deposit-taking institutions.

There are three main inter-agency mechanisms in which FSN decision-makers, including CDIC, collaborate to ensure timely and effective interventions: the CDIC Board of Directors, and the Financial Institution Supervisory Committee (FISC) and Senior Advisory Committee (SAC).

As a deposit insurer and resolution authority, CDIC's objectives include the promotion of the stability of the financial system in Canada.[28] As a loss minimiser, our objectives reflect a deliberate balance between the interests of the depositing public and the member institutions who pay CDIC's premiums.

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[27] In the Canadian system, the political branch has the ultimate decision-making authority for broad stability actions and the Minister of Finance has additional tools if required. The Bank of Canada may provide liquidity assistance to an eligible financial institution under its emergency lending assistance (ELA) facility and has other stability tools – see Bank of Canada website at: https://www.bankofcanada.ca/markets/market-operations-liquidity-provision/framework-market-operations-liquidity-provision/. This case study does not address these tools.

[28] The CDIC Act is available at: http://laws-lois.justice.gc.ca/eng/acts/C-3/. See section 7 of the Act for CDIC's objectives.

CDIC acts through its *Board of Directors*, which brings together the five most senior representatives from the FSN, as ex officio directors, together with a private sector non-bank chairperson and five private sector non-bank directors. The interaction of ex officio directors together with experienced business professionals is designed to improved decision-making on matters of deposit insurance, risk monitoring and CDIC's broad range of resolution powers.

The OSFI Act established the *Financial Institutions Supervisory Committee (FISC)*. FISC facilitates consultations and exchanges of information among its members on all matters relating directly to the supervision of financial institutions, bank holding companies or insurance holding companies; this also includes information on supervision trends, any emerging risks and institutions at risk. It is not a decision-making body but coordinates matters related to interventions and system-wide issues, and it enshrines in law the role of CDIC's Chief Executive Officer (CEO) as a statutory member of FISC; as a result the CEO has the right to obtain any information relating directly to the supervision of financial institutions. A bilateral agreement between CDIC and the supervisor elaborates the practical applications of information sharing between these two organisations.

A *Senior Advisory Committee (SAC)* (non-statutory) discusses financial sector policy and macro prudential oversight and is chaired by a senior executive from the Department of Finance. Members include CDIC's CEO. SAC is not a decision-making body but is a forum where issues are raised and discussed in a timely manner. These interactions occur on a regular basis in stable times and with greater frequency leading up to and during an intervention or a crisis.

IV. Policy framework for contingency planning

CDIC preparedness begins with contingency planning during stable periods. For member institutions that present a lower risk and which are not D-SIBs, CDIC's direct interactions with them are relatively limited and mostly of an administrative and compliance nature. However, as a loss minimiser CDIC is active in assessing the risks of each member or group of members. CDIC and the FSN agencies have access to electronic financial regulatory filings via a shared modern data warehouse at the central bank. CDIC undertakes its own analysis of member institutions' financial information. A key action of coordination is reflected in the CDIC Act with the requirement that the supervisor annually inspect every institution on CDIC's behalf. As a result the supervisor, OSFI, communicates to CDIC its ratings, its findings of inspections, and any recommendations it is making, with regular meetings between CDIC and OSFI being held to discuss findings and risks.

Contemporaneously with this work, resolution preparedness activities are undertaken. This includes input to the preparation (by the banks) of recovery plans and the development of resolution plans, with the latter plans building on the banks' recovery plans. Resolution plans for the D-SIBs are developed by the D-SIBs themselves based on guidance from CDIC, while resolution plans for medium-sized members are developed by CDIC. The early development of resolution plans for D-SIBs and medium-sized members assists with decision-making in cases of member-specific financial distress or in wider crisis conditions.

Key among resolution activities are the development of playbooks, assessing the need for and the implementation of standby arrangements with external experts, as well as regular testing of readiness through simulations and table-top exercises.

- *Playbooks*: CDIC updates its playbooks on different resolution options (payout and non-payout) for all member institutions. Playbooks include reference documents, legal templates, operational procedures, and guidelines. CDIC playbooks also include evergreen contingency planning procedures in the event of a D-SIB failure.

- *Standby agreements*: CDIC has a number of standby agreements with selected third parties to secure specialised expertise, as necessary, and/or supplement CDIC's internal staff in executing intervention activities. Areas where standby agreements are in place include: investment banking, legal, accounting, IT, and communications and call centre.
- *Simulations*: These exercises are conducted annually to test the operational readiness of organisational processes. CDIC conducts payout simulations internally and with the FSN (including testing of access to funds and a repurchase facility). Some simulations are broader in scope (e.g. involving staff, the board and standby agents), while others are more limited, and involve staff only. Lists of the lessons learned are compiled and any gaps noted for future work.
- *Table-top exercises*: A table-top exercise is a facilitated discussion on strategic issues that focuses on problem-solving. Table-tops have been CDIC's preferred approach to D-SIBs and medium-sized institutions' resolution readiness. Table-top exercises do not simulate activities in real time; instead, using a scenario as a backdrop, participants engage in a facilitated discussion that covers specific decision points, roles and responsibilities, coordination of activities, and problem-solving. Members of the FSN participate to ensure an understanding of authorities, powers, coordination and communication.

CDIC has also developed its own communications plans for use in a bank failure. These foresee CDIC taking a leading role in communications relating to deposit insurance, while considering the external advice of its FISC partners and coordinating communications with those partners. The detailed intervention communications plans contain: communications approach; target audiences; key messages; sample depositors' questions and answers; sample media questions and answers; questions and answers for deposit brokers; and an internal approval process.

V. Policy framework for bank failure and crisis management

Individual bank failure

As the member institution's condition begins to deteriorate, CDIC will place it on its watch list and advise the institution of the designation and what is required of it; the status of the institution is reported to the CDIC Board. Management's decision to place it on the watch list will generally, but not always, coincide with an elevated risk of intervention rating by the supervisor. The watch list is actively managed by CDIC to reduce CDIC's exposure to loss. Regular and more frequent discussions take place between OSFI and CDIC staff throughout the situation.

There are a number of collective actions that can be taken. Supervisory tools are deployed (supervisory orders and implementation of the recovery plan) and are coordinated with CDIC. CDIC may bring heightened pressure via onsite examinations to ensure that it obtains an overview of the scope and scale of problems at the member and the associated exposure; CDIC also assesses the marketability of the institution and prepares to execute a rapid reimbursement of insured deposits. Summary conclusions are shared with the FSN through the CDIC Board.

CDIC typically cannot trigger the resolution. The Superintendent's opinion of non-viability is a pre-condition to most CDIC resolution actions. The CDIC Board, however, makes the decision with respect to the choice of the resolution tool deployed, which could include bail-in (for D-SIBs), bridge bank, forced sale, liquidation, or payout. The Minister of Finance can object to a CDIC resolution action for reasons of public interest or in situations where there may be an adverse impact on the stability of the financial system or public confidence in that stability.

Systemic crisis

CDIC and other members of the FSN had resolution tools appropriate for use with its D-SIBs in place before the global financial crisis and before the FSB Key Attributes of Effective Resolution Regimes were introduced. However, the crisis highlighted areas where Canada could improve and, as a result, a comprehensive risk management framework for Canada's D-SIBs was put into place, including the development of a Taxpayer Protection and Bank Recapitalisation (or "bail-in") regime for these banks. CDIC became the resolution authority for the D-SIBs. With improved resolution capabilities, CDIC/Canada is now virtually in full compliance with the Key Attributes. MoUs on information sharing with foreign and national jurisdictions deemed material to the orderly resolution of a D-SIB round out CDIC's complement of tools.

In a system-wide crisis, these coordination mechanisms and preparations would be leveraged by the same agencies, with a focus on sector-wide issues taking place at FISC. Mitigation policies (and to policies address possible contagion) and stability enhancement mechanisms would be discussed in the SAC. Each agency, including CDIC as resolution authority, would individually and collectively prepare option/policy papers and other materials and actions as needed. Mitigation strategies would include (and as, indeed, occurred in the global financial crisis) liquidity to the sector, expanding mortgage insurance, and expanding coverage under ELA.[29]

During a crisis, the management of public communications within the FSN is critically important. To that end, the Ministry of Finance maintains an evergreen communications plan for the event of a system-wide financial crisis. It sets out in general terms who would communicate what and when for all members of the FSN. A FISC communications subcommittee would act as the central contact point for communications coordination between FSN partners.

Although every crisis will be different, the Canadian FSN system-wide crisis preparedness and management is well coordinated, and the mature planning process itself provides value as it enables the FSN partners and the D-SIBs to have the framework in place to respond to a crisis in a more orderly way while intending to mitigate the impact on Canadians and the economy.

INTERBANK DEPOSIT PROTECTION FUND (FITD), ITALY

I. History of banking crises during past 10 years

FITD interventions

Since its establishment in 1987, the FITD has intervened in 11 banks. Two of these interventions related to small banks and involved a payout to depositors; in seven cases, the FITD participated in the transfer of assets and liabilities of the failed bank to another bank; and on two occasions it intervened in support of a member bank, which was restructured though a comprehensive restructuring plan.

In the most recent period (2007–2017), the FITD carried out five interventions: three were resolved through transfers of assets and liabilities, which was less expensive than a payout, as the banks were in compulsory administrative liquidation; one institution under special administration received support from the Fund; and one intervention involved a direct payout to depositors.

[29] See background on the Bank of Canada website. See also: Longworth, David. Financial System Responses to the Crisis (March 2009). Speech by the Deputy Governor of the Bank of Canada. Available at: https://www.bis.org/review/r090316e.pdf.

In 2015, the FITD Voluntary Intervention Scheme was established. The scheme has its own separate governance structure and resources, and is aimed at supporting participating banks in distress. It may provide support to member banks that are subject to early intervention measures or failing/likely to fail (by means of loans, guarantees, share purchase, purchases of assets and liabilities, branches and goods and relationships en bloc, etc.), when there are real prospects of recovery. In addition, its mandate includes interventions in transfers of assets and liabilities when banks are in compulsory administrative liquidation.

Other bank failures

In 2015, the resolution procedure was opened for four banks. The resolution strategy included setting up a bridge bank for each failed bank. Bank non-performing loans were transferred to a management vehicle that was created for the purpose. The national resolution fund capitalised the four bridge banks and the vehicle for a total amount of EUR 3.6 billion.

In 2017, two FITD member banks were liquidated. On 23 June 2017, the ECB declared the two banks failing or likely to fail. On the same day, the Single Resolution Board stated that the conditions for resolution were not met, as resolution was not in the public interest. As a result, compulsory administrative liquidation became applicable. In response, the performing part of the business of the two banks was transferred to a major Italian bank, subject to an injection of cash and a provision of guarantees by the Italian Government. The non-performing part was transferred to a management vehicle; equity and subordinated shareholders were written down, with burden-sharing rules applied.

II. Legal framework for crisis prevention

Italy adopted the European bank resolution framework and the associated Directive (BRRD) in November 2015. The European framework applies to all members of the EU. The Directive distinguishes three phases, each of them associated with specific sets of tools for action by banks and authorities: preparation and prevention, early intervention and resolution.

The *preparatory and preventative phase* addresses banks in the normal course of business. It includes the strengthening of ongoing supervision and the adoption of measures aimed at increasing preparation of supervisory authorities and banks, in order to avoid the occurrence of problems and ensure the orderly resolution or liquidation of the bank. In this stage, banks are required to prepare recovery and resolution plans, identifying activities to be carried out in the event of difficulty or crisis.

Early intervention includes all measures that supervisory authorities may take in order to solve, in a timely manner, problems that may arise in the economic and financial situation of banks, or in specific areas. These actions are designed to restore normal conditions for the conduct of business and to prevent further deterioration, which could lead to resolution.

According to the Italian Banking Law, one of the main measures is special administration. The Bank of Italy may put a bank into special administration by dissolving the bank’s administrative and control bodies where:

- serious violations of laws, regulations or bylaws governing the bank’s activity or serious administrative irregularities are found; or
- the deterioration of the bank or the banking group is particularly serious; or
- serious capital losses are expected; or
- the dissolution has been the subject of a reasoned request by the administrative bodies or an extraordinary general meeting.

Special administration may last for a maximum of one year, unless a shorter period is specified in the Bank of Italy's decision. In exceptional circumstances, the procedure may be extended for a maximum of one year.

One or more special administrators and an oversight committee are appointed. Unless otherwise stipulated, the special administrators perform all the administrative functions and exercise the administrative powers of the ordinary board of the bank. The oversight committee exercises control functions and gives opinions to the special administrators in the cases provided for by the law.

III. Institutional framework for crisis prevention

The Bank of Italy is the supervisory authority. Its responsibilities extend to banks and non-bank financial intermediaries. Since November 2014, bank supervision has been conducted within the context of the European Single Supervisory Mechanism (SSM). In 2014, the Bank of Italy was entrusted to act as the national resolution authority. The Bank has accordingly established a Resolution and Crisis Management Unit, which carries out the preliminary and operational tasks envisaged by the Single Resolution Mechanism, cooperates with the Single Resolution Board's offices, and manages the liquidation procedures for banks and investment firms.

Under the DGSD, the Bank of Italy is also the designated supervisory authority for deposit guarantee schemes established in Italy.

Within the framework for managing banking crises, the Ministry for Economy and Finance (MEF) is entrusted with the powers provided for in the Banking Law and in the resolution framework. In particular, a bank is put into compulsory administrative liquidation by a decree issued, at the proposal of the Bank of Italy, by the MEF; a resolution procedure is opened following MEF approval of the resolution measures adopted by the Bank of Italy in its capacity as resolution authority.

A system-wide crisis is managed by the Committee for the Safeguarding of Financial Stability. It was established in 2008 with a formal MoU agreed between the Bank of Italy, the Ministry for Economy and Finance, the financial market supervisory authority (Consob) and the Institute for the Supervision of Insurance (IVASS). The four authorities agree to cooperate and share information and assessments in order to safeguard the stability of the Italian financial system. The Committee is composed of the Minister for Economy and Finance (who chairs the Committee), the Governor of the Bank of Italy, the President of Consob and the President of IVASS. The Committee meets at least twice a year, and whenever necessary due to a situation that might potentially trigger a systemic financial crisis.

IV. Policy framework for contingency planning

Contingency planning by the DIA

Contingency planning process is part of risk management, which aims at coping with unexpected and extreme events. FITD has identified two major categories of contingencies: Business Continuity and Funding.

The BCP aims at identifying, monitoring and managing risks that can cause a disruption of FITD operational processes and have severe impacts on the FITD business continuity. Business Continuity Plan (BCP) is the process for creating systems of prevention and recovery to deal with potential threats to the FITD.

The adequacy of funding is evaluated by FITD through stress tests aimed at verifying the adequacy of financial resources, given a certain pre-defined scenario. The test covers ex-ante funds composed of bank contributions, ex-post funding and other financial arrangements.

Participation by the DIA in system-wide contingency planning

System-wide contingency planning is the responsibility of the Committee for the Safeguarding of Financial Stability. The DIA is not a member of the inter-agency committee.

Tools for contingency planning

A central part of contingency planning by FITD involves testing of operational preparedness, FITD is conducting a multiannual programme of stress tests (following the DGSD provisions and the EBA guidelines). There are two categories of risks subjected to stress tests:

- "operational" risk, meaning the risk that FITD may be unable to fulfil its role due to the inadequacy or malfunction of internal procedures or the inadequacy of staff and systems;
- "financing" risk, meaning the risk that the sources of funding are not sufficient to allow the FITD to face its potential liabilities.

1. Operational risk

Member banks are required to extract the Single Customer View file (SCV) according to the rules defined by FITD. The FITD's SCV test includes quality control of the SCV file, which is evaluated in a scenario-based stress exercise or through periodic routine tests. In any case, the test aims to verify: i) the compliance of the file produced by the bank with the instructions defined by the FITD; ii) the completeness of the information required for the reimbursement, including the evidence of covered deposits of branches established in other EU member states; and iii) compliance with the deadline set by the FITD for sending the SCV file.

In 2016, the FITD introduced a detailed procedure for depositor reimbursement in seven working days, to be counted from the date on which the liquidation proceedings take effect. The payout procedure is subject to stress test under depositor reimbursement scenario, aiming at verifying the operational capability of FITD to efficiently manage processes, resources and IT systems under conditions of stress. The processes and mechanisms subjected to stress under the operational capability test include the following thematic areas: access to data; operational and personnel resources; communication; payment systems; timing measurement; cooperation between home and host Authorities.

2. Financing risk

FITD conducts stress tests of funding adequacy. The test aims at verifying the adequacy of financial resources, given a certain pre-defined scenario. The test regards all type of funds: ex-ante funds composed of already collected banks contributions, ex-post funding and other financial arrangements. Depending on the result of the funding test, the need for contingency planning could emerge to face extraordinary situations in which FITD resources would not be enough and a backstop would be needed.

The FITD conducts also tests on cross-border cooperation with other EU deposit insurer. These tests evaluate the FITD's ability to: i) effectively transmit, as home deposit insurer, a payment instruction file to the host deposit insurer, the latter confirming that the file contains all the information necessary for the execution of the payment; or ii) carry out, as host deposit insurer, the reimbursement of depositors of a European branch established in Italy, on the basis of the payment instructions and resources received from the home deposit insurer.

V. Policy framework for crisis management

In Italy, the BRRD was transposed into Italian legislation in November 2015. In the Italian legislation, in compliance with the BRRD framework, resolution is the formal procedure aimed at reorganising and restructuring a bank that is failing or likely to fail. The resolution action entails far-reaching interventions in the bank and addresses loss distribution stakeholders (burden-sharing). Under the BRRD, the first losses from the resolution must be charged to shareholders then to creditors, according to the priority rules established by ordinary insolvency proceedings.

Resolution objectives are: i) ensure the continuity of essential functions; ii) avoid adverse effects on financial stability; iii) protect public funds by minimising reliance on extraordinary financial public support; iv) protect the depositors guaranteed by the deposit insurance systems and the investors; v) protect the funds of customers and the assets of clients.

According to the BRRD, triggers for resolution include:

- the bank is failing or likely to fail, a determination which is made by the supervisory authority;
- there is no reasonable prospect that alternative action by the private sector or supervisory action would prevent the failure within a reasonable timeframe;
- resolution is in the public interest.

The third trigger is met where resolution is deemed necessary to achieve one or more of the resolution objectives set in the Directive, and where liquidation based on ordinary insolvency proceedings would not achieve the resolution objectives to the same extent.

Following the BRRD, the law stipulates a minimum resolution toolkit composed of the following tools:

- bail-in tool, aimed primarily at recapitalising a failed or failing bank with creditor resources;
- sale of business;
- bridge bank;
- good bank-bad bank portfolio separation.

In a systemic crisis, the law provides for government financial stabilisation tools. Such tools could include public capital support and the temporary acquisition of ownership. These tools represent the last resort, and are aimed at maintaining financial stability.

Role of the DIA in intervention

The DGSD was transposed into Italian legislation by Legislative Decree No. 30 of 15 February 2016. The European legislation states that the deposit insurance agency should be able to go beyond a pure reimbursement function and use its resources to prevent the failure of a member bank. Such interventions can be utilised in the different phases of the crisis and in various forms.

These different forms of intervention may be divided into two categories: mandatory interventions and alternative interventions. The first category includes depositor payout and the contribution to a resolution procedure. According to the BRRD and DGSD, deposit insurance systems are required to contribute to resolution financing up to 50% of their available resources; in this way, the DIS absorbs the losses that would have been borne by insured depositors in case they were not excluded from the resolution.

The second category refers to optional or voluntary interventions, such as: i) alternative measures to prevent a bank failure, in compliance with all the conditions provided for in the DGSD; ii) interventions in transfers of assets and liabilities in a liquidation, as an alternative to depositor payout.

Constraints and limitations apply to this second category of interventions, due to rules on state aid.

Tools for crisis management

In the Italian legislation implementing the BRRD (Legislative Decree No. 180/2015, Article 20), the applicable crisis procedures are identified as follows:

When the following two triggers are met:

- the bank is failing or likely to fail;
- there is no reasonable prospect that alternative action by the private sector (including measures taken by an institutional protection scheme (IPS)) or supervisory action (including early intervention measures or the write-down or contractual conversion of capital instruments) would prevent the failure within a reasonable timeframe;

the decision is made to apply the following measures to the bank:

i. write-down or conversion of shares and other capital instruments issued by the bank if this allows the condition of "failing or likely to fail" to be reversed; or

ii. resolution (if the public interest trigger is also met) or administrative compulsory liquidation where the measures under i) do not allow the condition of "failing or likely to fail" to be reversed.

In case of resolution, the legislation provides for a minimum resolution toolkit including the following tools: sale of business; bridge bank; good bank-bad bank separation; bail-in.

Funding is provided by resolution funds (in the euro area, national resolution funds have been transformed into national components of the Single Resolution Fund).

Funding of crisis management

In the euro area, credit institutions can receive central bank credit not only through monetary policy operations but exceptionally through emergency liquidity assistance (ELA). ELA aims to provide central bank money to solvent financial institutions that are facing temporary liquidity problems, outside normal Eurosystem monetary policy operations.

The rules and procedures surrounding the provision of ELA are laid down in the ELA agreement, which sets out the Governing Council's role in the provision of ELA by national central banks, in particular when assessing, pursuant to Article 14.4 of the Statute of the European System of Central Banks (ESCB) and of the ECB, whether the provision of ELA by Eurosystem NCBs interferes with the objectives and tasks of the ESCB.

DEPOSIT INSURANCE CORPORATION OF JAPAN (DICJ), JAPAN

I. History of banking crises during past 10 years

Since 1992, the Deposit Insurance Corporation of Japan (DICJ) has implemented 182 resolutions of failed financial institutions based on the provisions of the Deposit Insurance Act (hereinafter referred to as the "Act"). Most of the institutions were resolved through direct transfer of the failed institution to an assuming institution, using business transfer. In three cases, the DICJ used a bridge bank to resolve the banks.

Depositor protection shifted from full protection of deposits to limited coverage from 2002 onwards. The current system (protection provided up to JPY 10 million in principal plus interest; deposits for payment and settlement purposes are fully protected) has been in place since April 2005.

In 2010, the Incubator Bank of Japan failed, which was the first bank failure resolution case under the current limited coverage system. The resolution procedure was implemented by the DICJ, as financial administrator, in tandem with the court (civil rehabilitation proceedings). The Incubator Bank of Japan was resolved using the "financial assistance method". Under that strategy, an assuming financial institution takes over the business of the failed bank and maintains the financial functions such as lending. The "financial assistance method" was adopted (i) because the estimated cost was likely to be less than the estimated cost of a payout; and (ii) in order to minimise any disorder that might accompany the failure.

II. Legal framework for crisis prevention

The bank resolution regime is distinct from the ordinary corporate insolvency regime. In cases where a financial institution has failed, the DICJ, as part of the normal procedures, makes insurance payouts to protect eligible deposits up to a certain amount, or provides financial assistance to the assuming financial institution or assuming bank holding company, which will take over the business operations of the failed financial institution, or implement a merger or other assuming measure. When appointed as financial administrator following the Financial Services Agency (FSA) Commissioner's "disposition ordering management", the DICJ also conducts operations such as the maintenance, continuation and transfer of the business operations of a failed financial institution to an assuming financial institution. The current legal system also provides for measures to be taken when it is found that an extremely serious hindrance could jeopardise the maintenance of an orderly credit system in Japan or in a certain region where financial institutions are operating.

III. Institutional framework for crisis prevention

The FSA is an integrated supervisory authority, and is responsible for protecting depositors, insurance policyholders and investors. The FSA also conducts systemic risk monitoring and pursues financial stability in general, using its micro-supervisory powers in cooperation with the Bank of Japan (BOJ) and the DICJ. The FSA accumulates and analyses financial information on individual financial institutions, identifies risk accumulation and problems, and monitors improvements. When a serious problem is identified and voluntary improvements are not effective, the FSA implements mandatory supervisory measures. The FSA conducts follow-up monitoring, such as checking the status of financial institutions' response to the supervisory measures.

The BOJ is Japan's central bank. As the central bank, the BOJ has two main missions: price stability and stability of the financial system. It conducts on-site examinations and off-site monitoring of a wide range of financial institutions, including account holders and their holding companies, and acts as the lender of last resort.

The DICJ is the deposit insurance agency, and also acts as financial administrator for the resolution of failed financial institutions, when so appointed by the FSA Commissioner. The DICJ provides temporary funding to facilitate bank resolution using funds from its General Account or Crisis Management Account. The DICJ is supervised by the Ministry of Finance and the FSA, which approve its annual budget and borrowing.

Together with the DICJ and the BOJ, the FSA set up a crisis management group (CMG) for G-SIBs with relevant foreign resolution authorities; the group meets once a year. In this meeting, participants discuss and share information on recovery and resolution planning for G-SIBs with host authorities.

IV. Policy framework for contingency planning

The FSA has established the Deposit Insurance and Resolution Framework Office at the Supervision Bureau, which prescribes the failure resolution of banks. Through this office, the FSA routinely exchanges information and opinions with the DICJ concerning the failure resolution framework.

The DICJ is authorised by the FSA to conduct inspections, focusing on: 1) maintenance of depositor data; 2) development of data systems; and 3) development of procedures and manuals for ensuring smooth reimbursement of the insured deposits.

The DICJ maintains close cooperation with relevant authorities and financial industry-related organisations, and conducts practical training. The objective is to improve the quality of financial administrator operations and to develop appropriate responses.

V. Policy framework for crisis management

The DICJ and tools for crisis management

1. Disposition ordering management and the financial administrator system

When recognising the risk that a financial institution does not have sufficient assets to fully discharge its obligations, or the risk that a financial institution may suspend the reimbursement of deposits in light of the status of its business operations or its assets, or when a financial institution has suspended the reimbursement of deposits, the FSA Commissioner may order that the business and property of the financial institution be placed under the management of a financial administrator. This order is known as a "disposition ordering management".

In such cases, the DICJ, when appointed as financial administrator, has the right to represent the failed financial institution, execute its business operations and manage and dispose of its assets, and is responsible for making the decision concerning the transfer of business to an assuming financial institution and pursuing the liability of executives of the failed financial institution.

In addition, under the Act, necessary systems have been developed to use a bridge bank to implement failure resolution, repay insured deposits, lend funds for discharging settlement obligations, purchase deposit claims and provide financial assistance to assuming financial institutions.

2. Measures and tools to deal with a systemic financial crisis, etc.

(i) Measures against a financial crisis

If the Prime Minister finds that the maintenance of an orderly credit system in Japan or in a certain region of Japan where the insured financial institution conducts its business could be severely hindered, the DICJ conducts financial crisis management operations, such as capital injection (subscription for shares and other capital-raising instruments), financial assistance in excess of the insurance payout cost (full protection for deposits is possible) and special crisis management of the failed financial institution (acquisition of all outstanding shares, etc.), following deliberation by the Financial Crisis Response Council (FCRC).

The FCRC is charged with developing the response to the financial crisis. In an emerging crisis, the FCRC coordinates the policy response and monitors policy implementation. The FCRC is composed of the Prime Minister (Chair), the Chief Cabinet Secretary, the Minister of State for Financial Services, the FSA Commissioner, the Minister of Finance, and the Governor of the BOJ. Other participants can be called if considered necessary. The FCRC was convened twice in the past (in 2003) in response to banking crises.

With regard to scope, the following measures against financial crisis apply to deposit-taking financial institutions/banks:

(a) Capital injections into financial institutions, excluding financial institutions which have failed or whose liabilities are in excess of assets: The DICJ strengthens the capital base of insured financial institutions (except failed or insolvent ones) by subscribing for common shares, preferred shares or subordinated bonds and other capital-raising instruments that they or their holding companies issue, based on the decision of the FSA Commissioner (subject to the consent of the Minister of Finance).

(b) Financial assistance in excess of the insurance payout cost: In cases where the insured financial institution is failed or insolvent, the DICJ may provide financial assistance in an amount exceeding the insurance payout cost to an assuming financial institution involved in a merger, etc. This makes it possible to fully protect deposits and other claims.

(c) Special crisis management under which the DICJ turns the failed financial institution into a subsidiary by acquiring its shares: Special crisis management may be implemented only in cases where the insured financial institution is a failed financial institution that is an insolvent bank, and where it is found that even if financial assistance were provided in an amount exceeding the insurance payout cost, it would be impossible to maintain an orderly credit system in Japan or in a certain region of Japan where the insured bank conducts its business.

When special crisis management is implemented, the DICJ acquires the shares of the insured bank based on the decision of the FSA Commissioner, and appoints the directors, auditors and other officers of the bank as nominated by the FSA Commissioner. Moreover, the DICJ may provide financial assistance to the failed bank without taking into account the insurance payout cost. This enables full protection of deposits and other claims. It is prescribed that special crisis management should be terminated as early as possible by implementing the merger, transfer of business, disposal of shares, or company split.

(ii) Orderly resolution

If the Prime Minister finds that severe disruption may be caused in Japan’s financial market and any other financial systems, the DICJ conducts operations related to measures for the orderly resolution of the assets and liabilities of a financial institution, etc., such as provision of liquidity, capital injection, and provision of specified financial assistance, following deliberation by the FCRC, in order to secure repayment of systemically important debts.

With regard to scope, orderly resolution applies not only to deposit-taking financial institutions, but also to insurance companies, and securities companies, etc.

(a) Liquidity provision/capital injection (when the financial institution, etc. is not insolvent): When a financial institution, etc. is not insolvent but is likely to cause severe disruption in the financial system as a result of a liquidity shortage, etc., the DICJ places the institution under its special oversight, provides liquidity and/or makes capital injections to ensure that systemically important debts are repaid.

(b) Specified financial assistance/related measure (when the financial institution, etc. is insolvent, etc.): When a financial institution, etc. is insolvent or likely to be insolvent, etc., and this is likely to cause severe disruption in the financial system, the DICJ places the institution under its special oversight, and while assuming the power to execute operations and manage and dispose of assets, promptly transfers systemically important debts, etc. from the institution to a specified assuming financial institution, etc. In doing so, the DICJ provides specified financial assistance to the specified assuming financial institution, etc. to ensure that systemically important debts are repaid.

b. Funding of crisis management

The DICJ funds itself through different accounts for different purposes. The General Account is used for ordinary failure resolution, and the Crisis Management Account is, in principle, used for measures against a financial crisis and for orderly resolution.

For the "General Account", the deposit insurance funds ("liability reserves") are funded by insurance premiums. If a financing shortfall occurs during a failure resolution, the DICJ may take out loans (including from the BOJ) or issue DICJ bonds subject to authorisation from the Prime Minister and the Minister of Finance. The government may provide guarantees for obligations pertaining to the borrowing and bond issues.

For the "Crisis Management Account", 1) all expenses for capital injection and financial assistance in excess of the insurance payout cost arising from measures against financial crisis should be financed by "contributions" paid ex post by financial institutions covered by deposit insurance system; and 2) a cost arising from orderly resolution should be financed by "specified contributions" paid ex post by financial institutions, etc. The government may provide financial support in exceptional cases.

c. Public communication policies

The DICJ routinely devotes efforts to public relations concerning the deposit insurance system through measures such as distributing printed materials, developing its website, using mass media, social media, and addressing universities, private companies, and government-affiliated organisations. The DICJ has also developed preparedness to minimise confusion in the event of a financial institution failure by posting relevant information on its website and providing information through press conferences in a timely manner.

KOREA DEPOSIT INSURANCE CORPORATION (KDIC), KOREA

I. History of banking crises during the past 10 years

Korea has not experienced any systemic crises since the 1997 Asian financial crisis. However, as a spillover effect of the 2008 global financial crisis, a total of 36 savings banks have failed since 2008; in particular, 31 savings banks were shut down in 2011–2015. Their project finance loans

soured following the recession in the domestic real estate markets, in part triggered by the global financial crisis in 2008.

A series of measures was adopted to ensure prompt depositor reimbursement, in order to prevent market disruptions and minimise depositor inconvenience from the disruption in banking services of failed savings banks.

In 2003, the timeframe for interim payments was 26 days, but this has gradually shortened. In 2012, the 'Non-disruptive Resolution Regime' was implemented, which enables depositors to continue financial transactions even after their bank has failed. It successfully accelerated P&A transactions with third-party investors or bridge banks owned by the KDIC without any disruption to financial services. This kept customer inconvenience and financial market turmoil to a minimum.

In 2012, the limit on interim payments was increased to 40% of the principal for depositors whose deposits exceed the coverage limit, up to KRW 50 million. In addition, under the 'Advance Dividend Payment System', the KDIC takes over depositors' claims upon their request and pays them advance bankruptcy dividends, which are calculated using the estimated amount of recoveries from the proceeds of the failed institution's asset sale.

The KDIC also set up a 'Special Account for Mutual Savings Bank Restructuring' in 2011, as a separate account to be operated temporarily until the end of 2026, to provide assistance for the restructuring of savings banks that failed in 2011.

II. Legal framework for crisis prevention

Article 1 of the Depositor Protection Act (DPA) specifies the KDIC's purpose as protecting depositors and maintaining financial stability. To do so, the KDIC is assigned the following mandates, and the powers necessary to meet the mandates, under Article 18 of the DPA: (i) management of the Deposit Insurance Fund and the Deposit Insurance Fund Bond Redemption Fund; (ii) monitoring of risks at KDIC-insured financial institutions; (iii) collection of deposit insurance premiums and payment of deposit insurance; (iv) resolution of failed financial institutions and recovery of funds; and (v) investigations against parties at fault in a failure.

The KDIC has strengthened the risk surveillance of insured financial institutions to enable early detection of risks and prevent the occurrence of an insurance contingency. It has set up the Ongoing Risk Surveillance Council, which is responsible for overseeing, coordinating and assessing risk monitoring activities. The KDIC has also assigned specially designated staff to different financial sectors or insured institutions to conduct risk surveillance on an ongoing basis.

The specific risk management process is as follows. First, information is gathered from risk surveillance activities and the financial information system. Then risk indicators for each sector or institution are developed through various models. Regular review meetings are held to identify risk factors in the financial markets and the routes of risk contagion.

For financial institutions that have been found to be in financial distress by the ongoing risk surveillance or risk model analysis, the KDIC conducts examinations jointly with the Financial Supervisory Service (FSS). Following these examinations, the KDIC meets with the management of the financial institutions to discuss measures to improve their management practices.

To enhance cooperation among relevant agencies and reduce the burden on financial institutions, the five public agencies – the Ministry of Strategy and Finance, the Financial Services Commission, the Bank of Korea (BOK), the FSS and the KDIC – agreed to revise a MoU on the sharing of financial information, which was initially signed on 15 September 2009. Under a

revised version of the MoU issued on 26 September 2012, the scope of information to be shared with the Bank of Korea and the FSS was expanded.

III. Institutional framework for crisis prevention

The FSN in Korea comprises: the Ministry of Strategy and Finance (MOSF), which is responsible for developing policies on foreign exchange and international finance; the Financial Services Commission (FSC), which is responsible for developing financial policies; the BOK, which formulates and implements monetary and credit policies; the FSS, which supervises financial institutions and provides protection to financial consumers; and the KDIC, which operates the deposit insurance scheme, resolves failed financial institutions and monitors risks in the financial system with a view to preventing the failure of a financial institution.

The Macroeconomic and Finance Meeting (MEFM), established by a Presidential Decree, is an inter-agency committee tasked with ensuring coordination among the FSN agencies. The MEFM ensures close cooperation among FSN participants by monitoring the trends and risk factors that affect the macroeconomic soundness of the economy, financial and foreign exchange markets at home and abroad, and facilitating the exchange of information within the FSN.

The KDIC is a participant in the MEFM, but not a standing member. The KDIC can attend by invitation only when there is an agenda item that requires decisions on the exchange of information or the conduct of joint examinations between the BOK, the FSS and the KDIC.

IV. Policy framework for contingency planning

As the resolution authority, the KDIC is a participant in the MEFM, a government committee responsible for responding to a financial crisis. It helps to minimise the external impact of the failure of a financial institution and maintain the stability of financial markets. Also, as a deposit insurer, it protects retail depositors by guaranteeing the payment of insured deposits in case their bank fails.

The KDIC also prepares itself for a possible financial crisis. It defines the term “crisis” as a situation in which the soundness of the Deposit Insurance Fund and the national economy is seriously affected due to the failure of financial institutions. To ensure a timely and coordinated response to such a crisis, the KDIC develops a systematic contingency plan in advance and conducts simulation exercises to test its crisis preparedness.

The level of crisis, decided by the Ongoing Risk Surveillance Council or the Emergency Management Council of the KDIC, is assigned one of the following four categories: attention; signs of a crisis; escalation of the crisis; and full-blown crisis situation. Other factors that go into the Council’s decision on the severity of the crisis include: whether it exhibits risk signals contained in the FSC’s early warning system; what level the BOK’s financial stability index has reached; and how many financial institutions are under prompt corrective action and what their combined market share is.

The regular contingency planning cycle is as follows: the KDIC develops a contingency plan, conducts a simulation exercise based on the plan, and updates the plan to address any weaknesses or areas of improvement identified during or after the simulation exercise.

The main contents of the KDIC’s contingency plan are: (i) an overview (definition of a crisis, contingency planning framework, major actions at each level of crisis, potential channels of contagion, and the KDIC’s role); (ii) crisis management modules (what each module should do in a crisis situation, relevant laws and regulations and business manuals, etc.); (iii) scenario-by-scenario action plans assuming several crisis scenarios that are most likely to occur.

The KDIC's contingency plans are modularised by function, to cover a variety of crisis scenarios in a comprehensive manner, and scenario-by-scenario action plans are developed with several specific scenarios in mind, such as a long recession and the outbreak of a global financial crisis.

Recently, the KDIC updated its contingency plan to incorporate key changes in laws, regulations and policies. Simulation exercises are held about three times a year and the most recent one was held in December 2017. One of the main lessons from the exercises, particularly the second joint exercise with other FSN agencies which was held in August 2017, was that each agency's role in crisis management should be clarified further. The exercises also highlighted which areas are most in need of inter-agency cooperation and coordination. The KDIC's contingency plan is going through continuous updates in reflection of the lessons learnt from these simulation exercises.

V. Policy framework for crisis management

a. Policies for intervening in bank resolution

In the aftermath of the 2008 global financial crisis, depositor protection was strengthened. A number of measures were adopted to reduce the inconvenience to depositors after the suspension of a savings bank, and this in turn contributed to the prevention of deposit runs and to financial market stability.

First, the timeframe for interim payments was shortened and the payment limit was raised. In particular, the 'Non-disruptive Resolution Regime' adopted in 2012 enabled depositors with deposits not exceeding the coverage limit (KRW 50 million), to continue their transactions even after the bank was suspended. Under this regime, the bank's operations were suspended at the close of business on a Friday, then a P&A with a bridge bank was completed over the weekend so that business could resume on the following Monday. Thus, the KDIC has established a robust new resolution system that reduces not only depositor inconvenience, but also its burden concerning the sale and management of bridge banks, and has greatly accelerated the restructuring of insolvent savings banks.

Table - Changes in Timeframe for Interim Payment and the Coverage Limit

	Before		After
Timeframe	26 business days in 2003 12 business days in 2008	→	<2011 H1> 8 business days <2011 H2> 4 business days
Coverage Limit	<Dec. 2000–2008> KRW 5 million <2009–2010> KRW 10 million	→	<Jan. 2011> KRW 15 million <Mar. 2011> KRW 20 million <May 2012> KRW 20 million (for uncovered depositors, 40% of the principal up to KRW 50 million)

Second, for depositors with deposits in excess of the coverage limit, the 'Advance Dividend Payment System' was implemented so that they could quickly receive compensation for their claims on the uninsured portion of their deposits. Payment can start as early as the next business day following a bank's suspension from operations. Under the scheme, the KDIC takes over

depositors' claims upon their request and pays them advance dividends, which are calculated using the estimated amount of recoveries from the sale of assets.

In addition, many depositors have difficulty visiting a paying agent during business hours. In this connection, the KDIC set up an online system in August 2011 to enable depositors to file claims for advance dividend payments at home. Moreover, the payment time was extended until 21:00. The number of paying agents increased to six commercial banks, so that the deposits are available for withdrawal in the account on the day of application.

Lastly, the differential premium system can play a significant role in discouraging the risk-taking behaviour of insured institutions, such as moral hazard or adverse selection, by directly reflecting their risk and affecting incentive structures. Accordingly, it can reduce the potential losses to the DIF.

b. Tools for crisis management

The tools for managing a crisis are as follows: prompt corrective action measures are imposed by the FSC; requests by the FSC to the government or the KDIC to provide financial assistance to a failed financial institution for recapitalisation, etc.; decisions by the FSC to order a P&A transaction to resolve a failed financial institution; suspension of its operations or withdrawal of its business licence or permit; financial assistance from the KDIC to a failed financial institution; granting an exemption from the least-cost principle in case of financial assistance from the KDIC; emergency lending by the BOK to troubled financial institutions; and a range of other tools to deal with crisis situations.

c. Funding of crisis management

In 2002, the government established the 'Deposit Insurance Fund Bond Redemption Fund (DIF Bond Redemption Fund)' to manage the legacy assets and liabilities from the previous round of financial restructuring (which was undertaken from the outbreak of the 1997 Asian financial crisis until 31 December 2002) separately from the of the Deposit Insurance Fund. The DIF Bond Redemption Fund was to be financed by contributions from the Fund for the Redemption of Public Funds, the issuance of bonds, special contributions from insured financial institutions, and funds recovered from the resolution of failed financial institutions.

In 2003, the KDIC launched a new DIF, financed by insurance premiums, contributions, and recovered assets, and funds recovered from 2003 onwards. Its governance structure and rules of operation were designed to meet international principles of least cost and loss sharing, self-help efforts, and transparency and objectivity.

To promote the advancement of the deposit insurance system, a target fund system was introduced in 2007 and implemented in 2009. It was followed by the introduction of a differential premium system in 2009. With the implementation of this new system in 2014, insurance premiums can be tailored to the risk profile of individual financial institutions.

d. Public communication policies

Prompted by the rising need for financial literacy education, the KDIC expanded the scope of its financial literacy programme. In 2017, it held 1,107 financial literacy education sessions for 75,814 financially underserved persons, including students, market merchants, the disabled and the elderly.

As part of the effort, the KDIC appointed college students as SNS (social networking service) reporters, to accelerate communication with young users of new media. The KDIC also took part in investment technique exhibitions, where more than 70% of the participants were people in their

fifties or older, to offer information on deposit insurance. These efforts greatly increased the level of public awareness of the depositor protection system and the KDIC.

Under the DPA, insured financial institutions must indicate whether a certain financial product is covered by deposit insurance in their passbooks, advertisements and promotional materials, so that financial consumers can make informed decisions when choosing what products to buy. The KDIC is authorised to verify their compliance with the requirements, and it has an IT system which enables it to monitor compliance by directly receiving the necessary data from financial institutions.

In addition, the KDIC provides guides and other information materials on the depositor protection system, including leaflets, posters and ATM stickers (all available at insured financial institutions), in order to publicise and provide accurate information. It translated the guides into foreign languages to prevent foreigners who may lack access to financial information from sustaining damage. It also engages in other publicity initiatives to raise public awareness of the depositor protection system, including television broadcasting, media reports and Seoul Metro advertisements.

In December 2015, as part of the amendment of the DPA, the KDIC introduced the notification and confirmation scheme on deposit insurance coverage. This scheme mandates that insured financial institutions make 'notification' to customers and receive 'confirmation' by signature or seal from them that they understand such explanation. This is expected to prevent the filing of complaints and lawsuits in response to unexpected damage arising from improper selling practices. The scheme was fully implemented in June 2016. In September 2016, the KDIC conducted sweeping onsite inspections of 161 financial institutions in six financial sectors (300 branches), to ensure they were implementing the scheme.

DEPOSIT INSURANCE AGENCY (DIA), RUSSIAN FEDERATION

I. History of banking crises during past 10 years

Between 2007 and 2016, Russia experienced 392 bank failures.[30] During this period, the Russian DIA paid insurance to more than 3 million depositors for the total amount of RUB 1,316.7 billion (about USD 24 billion[31]).

During the period from 2006 to 2016, Russia faced two systemic crises – in 2008–2009 and in 2014–2016.

a. 2008–2009

The Russian economy faced a severe crisis in late 2008 and early 2009. Real GDP contracted sharply by 7.9% in 2009, reflecting plummeting world oil prices and a sudden surge in global risk aversion.[32] The Russian ruble was devalued by about 40% (from RUB 23.40 per USD in May 2008 to RUB 33.00 per USD in early December 2008[33]).

The initial policy response to the crisis focused on maintaining the stability of the national currency while providing large-scale liquidity support to financial institutions. The Central Bank

[30] The figure includes only failures of DIS member banks.

[31] The average weighted exchange rate is approximately 55 rubles per USD.

[32] Source: IMF FSAP Report (Financial System Stability Assessment), IMF, SM/11/229, 19 August 2011.

[33] The exchange rate as at 31 December 2008 was RUB 29.38 per USD.

of Russia (CBR) used its reserves to stabilise the exchange rate, provided emergency liquidity assistance and guarantees for interbank lending, widened the range of acceptable collateral on repurchase and Lombard operations, extended loans that were unsecured or backed by non-marketable collateral, and auctioned excess budgetary funds to banks.

As the crisis eased, the authorities modified their policy response: the CBR allowed a faster depreciation of the ruble and curtailed liquidity support, allowing interest rates to rise significantly.

In the context of a more stable ruble and recovering oil prices, monetary policy was gradually eased between April 2009 and June 2010. The reserve requirements were lowered and policy interest rates were cut from 13% in April 2009 to 7.25% in June 2010. The authorities provided capital injections and enhanced deposit insurance. The deposit insurance limit was raised from RUB 400,000 to RUB 700,000.

The bank resolution regime was improved. In October 2008, the DIA was authorised to resolve systemically important banks through the use of such resolution tools as open bank assistance (assisted mergers and acquisitions, temporary ownership, asset purchase) and P&A. The Government capitalised the DIA. Between 2008 and 2010, more than 70 banks failed and the DIA had to reimburse the depositors of these banks. The CBR also used regulatory forbearance, temporarily easing loan classification and provisioning requirements.

b. 2014–2016

Between 2014 and 2016, the Russian economy experienced another systemic crisis. The sharp decline in oil prices and the reduced access to international capital markets contributed to a 2.8% contraction in real GDP in 2015 and a 0.2% contraction in 2016. The ruble came under severe pressure at end-2014 amid concerns about external debt redemptions. To curb foreign exchange reserve losses, the CBR floated the exchange rate and hiked the CBR policy rate by 650 basis points to 17%. Inflation accelerated sharply, peaking at 17% in March 2015 before declining to 5.4% by the end of 2016. Accordingly, the policy rate was cut in stages and reached 10% by the end of 2016.

In 2014–2016, 226 DIS member banks failed and the DIA had to pay insurance to the covered depositors of these banks. During this period, the DIA used its resolution authority powers to resolve 32 socially and economically important banks.

The authorities took decisive anti-crisis policy measures to preserve financial stability. These policies were successful, and the authorities gradually changed their focus to exiting from the measures. In the first half of 2015, confidence in banks strengthened. Retail deposits increased, liquidity conditions improved, and banks' reliance on CBR funding decreased. In addition, banks built up sufficient foreign exchange (FX) buffers to repay the CBR FX facilities. On 1 January 2016, most of the remaining regulatory forbearance measures were lifted.

The institutional setting for crisis management was strengthened by the establishment in 2013 of the National Council on Ensuring Financial Stability (NFSC) and the CBR's internal Financial Stability Committee.

Among measures taken by the authorities during this period were the expansion of deposit insurance coverage to accounts of unincorporated entrepreneurs, an increase in coverage from RUB 700,000 to RUB 1.4 million and the introduction of risk-based insurance premiums.

II. Legal framework for crisis prevention

The legal framework for crisis preparedness and crisis management includes the following laws:

The law "On Banks and Banking" establishes procedures for bank licensing and winding-down, determines operations that banks can perform, and sets requirements for bank capital, reporting, governing bodies and management of banks. The law also requires banks, especially systemically important ones, to develop recovery plans and submit them to the CBR.

The law "On the Central Bank of the Russian Federation (the Bank of Russia)" determines: the mandate, powers and responsibilities of the CBR, including its regulatory and supervisory powers, and powers to require any specific bank to develop and submit its recovery plan; the early warning and timely intervention systems' indicators and triggers; and its relations with other FSN participants, banks and third parties, including foreign supervisory and resolution authorities. The law also contains provisions on triggers and procedures for initiating bank resolution, cooperation with the DIA prior to and in the course of implementation of bank resolution measures, etc.

The Deposit Insurance Law regulates the operation of the deposit insurance system and the Deposit insurance Agency (DIA), its role in crisis preparedness and crisis management, and its interactions with other FSN participants. The law prescribes the composition of the DIA Board of Directors, other governing bodies, the DIA's mandate, powers and accountability.

The law "On Insolvency (Bankruptcy)" contains special sections on the resolution and liquidation of financial institutions: both banks and non-banks. It regulates the implementation of bank recovery and resolution plans, receivership proceedings, powers and responsibilities of a bank's provisional administration, receivers/liquidators, involvement of courts, creditors, etc. This law also regulates the implementation of various available resolution tools.

In 2014, the Government approved an anti-crisis programme that allows it to provide financial support in the form of subsidised loans and guarantees to corporations, to recapitalise systemically important banks through the DIA using specially issued government bonds, etc. The Government, through the Ministry of Finance, has the ability to provide liquidity to the banking sector through deposit auctions or subsidised loans. It also plays an important role in the development of legislative proposals for strengthening the financial system of the Russian Federation.

III. Institutional framework for crisis prevention

The institutional framework for crisis management and coordination within the FSN includes the National Council on Ensuring Financial Stability (NFSC), the CBR's internal Financial Stability Committee and the DIA Board of Directors.

The ***Ministry of Finance*** is responsible for development and implementation of the Government's anti-crisis programme. The Ministry as an institution is generally not involved in the resolution of individual banks, but it is indirectly involved in the decision-making process through membership in the NFSC, the DIA Board and the CBR Board (as a non-voting member).

The CBR is the decision-making authority for the supervision and resolution of banks and other financial institutions**.** All supervisory measures are decided solely by the CBR. With regard to resolution measures, if a bank is resolved through bankruptcy or liquidation proceedings with insured deposit payouts, the decision is made solely by the CBR. If, however, the measure involves DIA participation (either an open bank resolution or a P&A transaction), the DIA has power of veto over the CBR's proposal for its participation. The final decision to adopt the resolution measure is made by the CBR, through its endorsement of the DIA's plan for

participation. The DIA's decision on whether to participate is made based on the principles of fairness, reasonableness, sufficient awareness of the bank's financial position, and minimisation of the assets of the DIF and of other DIA funds to be spent.

DIA Board of Directors includes five representatives from the Government (Ministry of Finance, Ministry of Economic Development, President's Administration, Government Office, and Federal Tax Service) and seven representatives from the CBR. The Board is chaired by the Governor of the CBR, meets every two to three months and is used as a platform for discussions and decision-making on the issues related to the DIA's mandate.

IV. Policy framework for contingency planning

Contingency planning by DIA

Russia's DIA has significant experience in deposit insurance payouts and bank resolution. It has developed a number of internal regulations that summarise its methodology and practices and provide guidance on various types of DIA operations and actions.

The DIA has developed a procedure for selecting agency banks and cooperating with them at all stages of preparation and execution of payouts to insured depositors. Currently, the DIA has standby agreements with 62 banks that can be used for executing such payouts. As the DIA is authorised to participate with the CBR in joint inspections of DIS member banks, it has drawn up a special bylaw that regulates such inspections and describes the methodology and sanctions to be applied in the course of such inspections.

The DIA also has bylaws regulating the submission, acceptance and verification of depositor claims, the compilation of the register of deposit liabilities (SCV), the handling of complaints from depositors, etc. An important element of the DIA's work with depositor claims is the identification and investigation of fraudulent actions by ineligible claimants seeking to receive deposit insurance payment by ineligible claimants.

The DIA has developed a number of internal regulations that describe the methodology and practice of resolution planning; the selection, commencement and implementation of various resolution tools; and collaboration with the CBR, other FSN participants, new investors in failing banks, creditors and other counterparties that may be involved in or may influence resolution projects. The DIA also has various pro-forma plans for managing receivership proceedings, resolution projects, marketing and sale of assets of failed banks, dealing with creditors, creditor meetings, creditor committees, courts, etc. Some DIA regulations have been developed in close collaboration with the CBR, others by the DIA independently.

Participation of DIA in system-wide contingency planning

The DIA Director General, as a member of the NFSC, participates in meetings of this inter-agency body, in which its members discuss various issues related to approaches, practices and coordination of actions of the FSN players. The DIA closely cooperates with the CBR, and representatives of the two organisations hold regular policy and technical meetings to discuss emerging issues and develop common approaches to specific areas of crisis preparedness and crisis management.

Tools for contingency planning

Offsite and onsite training and simulation exercises (for DIA employees and jointly with the CBR); joint (with the CBR) working groups and bilateral meetings and discussions.

Testing of contingency planning

As the DIA and other FSN participants have faced several system-wide crises with a large number of bank failures and bank resolution projects, they have had the opportunity to test their approaches and practices. Based on the results of implementation of various resolution tools, they have developed a number of legislative proposals and amendments to the regulations that govern crisis preparedness and crisis management efforts and actions. A number of these proposals and amendments has been enacted.

V. Policy framework for crisis management

Policies for intervening in banks

A number of laws regulate bank regulation and supervision, bank resolution and deposit insurance system operation. The CBR plays a key role in initiating interventions in failing banks. There is a system of early detection of problem banks and prompt corrective actions that are used by the CBR. The CBR can impose sanctions on a bank if it violates legislation or the CBR requirements, and can appoint a provisional administrator to manage a problem bank's affairs. In some cases DIA is authorised by the CBR to act as a bank's provisional administrator.

The legislation and the CBR regulations contain criteria that are used as grounds for intervening in a bank. They include lack of capital adequacy, inability to execute payments from customer accounts and/or to provide banking services, violation of laws and CBR regulations, etc. When the CBR proposes that the DIA resolve a bank, the DIA and the CBR jointly conduct due diligence and prepare a report that can serve as a basis for decision-making on the possible and preferable resolution strategy to be utilised. The DIA develops a resolution plan that is submitted to the CBR. After approval of the resolution plan by the CBR, the DIA implements this plan – by itself (if it becomes a major shareholder of the bank) or jointly with an investor that was selected on a competitive basis (through a closed bidding process) or an acquirer of the bank's assets and liabilities (in the case of a P&A transaction). The DIA can use its own funds for finding a resolution project (the Government's contribution to DIA capital) or borrow money from the CBR.

In the case of a bank's closure by the CBR, the CBR files a petition with the court to declare the bank insolvent or subject to forced liquidation, and if the bank was a DIS member, the court appoints the DIA as receiver or liquidator.

Tools for crisis management

The Government has a number of crisis management tools such as: government guarantees to systemically important industrial enterprises and government-owned banks; subsidising interest rates for loans to specific industries or companies; placement of deposits in specific systemically important banks; and issuing government bonds to be exchanged for capital instruments to recapitalise systemically important banks and industrial enterprises, etc. The Government can provide loans and capital support to the DIA.

The CBR can use such crisis management tools as regulatory forbearance, easing of regulatory requirements, emergency liquidity assistance, lending with an expanded range of collateral including non-marketable securities and other assets, FX repo facilities, and loans to the DIA in support of DIF and bank resolution operations. The CBR can also take over systemically important banks or bank holding companies in order to resolve them through open bank resolution, or can propose that the DIA resolve a systemically important federal or regional bank.

The DIA can act as the resolution authority and use such resolution tools as open bank resolution (capital injection, temporary ownership, assisted mergers and acquisitions, asset purchase, quasi-

voluntary bail-in, etc.) and closed bank resolution (deposit insurance payouts, P&A, bank liquidation).

Funding of crisis management

The Government can allocate necessary funds for the provision of financial support to systemically important banks, industries and individual companies. It can also provide funds for replenishing DIF and DIA capital that can be used for resolution funding. The CBR can provide loans to banks as an emergency liquidity support, for recapitalising specific systemically important banks in resolution.

Public communication policies

All FSN participants use their communication tools for crisis prevention and crisis management. They coordinate their communication policies through participation in the NFSC, the CBR Board of Directors, DIA Board of Directors, various meetings and working groups. The DIA uses its toll-free telephone hotline and its website, publishes press releases, organises press conferences (on its own or jointly with other FSN players), TV and radio interviews and shows, etc. The DIA also actively uses social networks.

FEDERAL DEPOSIT INSURANCE CORPORATION (FDIC), UNITED STATES

I. History of banking crises during past 10 years

Amid the unprecedented disruption in the financial markets that occurred nearly a decade ago, the number of failures of FDIC-insured institutions rose sharply. While there were no failures among FDIC-insured depository institutions (IDIs) between 2005 and 2006, 25 IDIs failed in 2008 and 140 failed in 2009. At the peak, 157 IDIs failed in 2010 alone. Overall, during the ten-year period ending in 2017, the FDIC resolved 529 IDIs.

The US federal government took extraordinary measures to calm market fears and encourage lending during the banking crisis. For example, the Emergency Economic Stabilization Act of 2008 temporarily increased the basic limit on federal deposit insurance coverage from USD 100,000 to USD 250,000 per depositor through 2009.[34] In addition, the FDIC established the Temporary Liquidity Guarantee Program (TLGP), which consisted of two components: (1) the Transaction Account Guarantee Program (TAGP); and (2) the Debt Guarantee Program (DGP). Participating entities were assessed certain fees related to both components of TLGP.

- The TAGP guaranteed, in full, certain non-interest-bearing transaction deposits held at participating IDIs and thrifts up to 31 December 2009. The deadline was extended twice and expired on 31 December 2010.
- The DGP guaranteed, in full, up to maturity or 30 June 2012, whichever came first, the senior unsecured debt issued by a participating entity between 14 October 2008 and 30 June 2009. In 2009, the issuance period was extended until 31October 2009. The FDIC's guarantee on each debt instrument was also extended in 2009 to the earlier of the stated maturity date of the debt or 31 December 2012.

[34] In 2009, the Helping Families Save Their Homes Act extended the increase through 2013. The increase was made permanent in the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act.

The high number of bank failures and the associated losses during the banking crisis put pressure on the FDIC's Deposit Insurance Fund (DIF). In early 2007, the DIF had over USD 50 billion and a reserve ratio over 1.20; however, the ratio dropped to a low of –0.39% in 2009.[35] To return the DIF to a stronger level, the FDIC imposed a special assessment in June 2009 that brought in additional funds from the banking industry. Further, in November 2009, to increase the FDIC's liquidity, the FDIC required that the industry prepay three years of estimated assessments.

II. Legal framework for crisis prevention

Crisis prevention in the US, as it relates to IDIs, is carried out primarily through the regulation and supervision framework. IDIs are monitored continuously offsite and are subject to onsite examinations every 12-18 months. The federal regulatory agencies (Federal Reserve, the Office of the Comptroller of the Currency (OCC), and FDIC) have a wide range of tools available to identify and address risks early. In addition, a statutory Prompt Corrective Action framework is in place to ensure that actions are taken as necessary as an IDI's health deteriorates. Regulations are also used to ensure adequate capital and liquidity provisions.

III. Institutional framework for crisis prevention

The FDIC, Federal Reserve, OCC and state banking authorities are responsible for the supervision of IDIs in the US; the Federal Reserve supervises bank holding companies.

IDIs are required to file a Consolidated Report of Condition and Income, known as a Call Report, every quarter. The specific reporting requirements depend upon the size of the institution, the nature of its activities, and whether it has any foreign offices. Call Reports are used by the regulatory agencies to monitor the financial condition of the banks and to supplement onsite reviews and examinations.

The FDIC maintains continuous access to the supervisory findings, ratings, reports and actions of the Federal Reserve, OCC and state banking supervisors. The FDIC monitors a bank's condition and activities through onsite activities, including regular examinations, and offsite activities. As deposit insurer, the FDIC also has statutory backup supervisory authority over IDIs where it is not the primary federal regulator, which allows the FDIC to conduct onsite examination activities at certain institutions. This authority is coordinated under the Interagency Memorandum of Understanding on Special Examinations with the Federal Reserve and OCC.[36]

In addition, the Federal Financial Institutions Examination Council (FFIEC) was formed in 1979 as a formal inter-agency body empowered to prescribe uniform principles, standards and report forms for the federal examination of financial institutions. Its members include the Federal Reserve, the FDIC, the NCUA, the OCC and the CFPB. Additionally, there is a State Liaison Committee, which represents state banking supervisors. Its authority is statutory.[37]

[35]The reserve ratio compares the fund to estimated insured deposits and is a measure of the FDIC's exposure and fund adequacy.
https://www.fdic.gov/bank/analytical/quarterly/2010-vol4-4/fdic-quarterly-v4n4-fundmgmt-121610.pdf.

[36] https://www.fdic.gov/news/board/2010july12no1.pdf.
[37] https://www.ffiec.gov/.

IV. The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act)

In 2010, the Congress passed the Dodd-Frank Act, which gave the federal regulatory agencies extensive new authorities to: (i) monitor the systemic risk of the U.S. financial system and to take steps to reduce that risk; (ii) impose strict controls on large bank holding companies and systemically significant non-bank financial companies; and (iii) place, under certain circumstances, a failing systemically important financial company into resolution. Under Dodd-Frank, systemically important financial institutions are subject to annual stress tests and must submit resolution plans, also known as living wills, to the FDIC and Federal Reserve.

The Dodd-Frank Act established the Financial Stability Oversight Council (FSOC), which is responsible for identifying risks and responding to emerging threats to financial stability. Among other things, the FSOC: facilitates coordination and information sharing among financial regulators; designates non-bank financial companies for consolidated supervision; and designates systemic financial market utilities and systemic payment, clearing and settlement activities for heightened oversight.

The FSOC is chaired by the Secretary of the Treasury and reports directly to the US Congress. It is required to meet at least quarterly, but may convene more often. The FSOC's ten voting members consist of the Secretary of the Treasury, the Chairman of the Board of Governors of the Federal Reserve System, the Comptroller of the Currency, the Chairperson of the FDIC, the Director of the Consumer Financial Protection Bureau (CFPB), the Chairman of the Securities and Exchange Commission (SEC), the Chairperson of the Commodity Futures Trading Commission, the Director of the Federal Housing Finance Agency, the Chairman of the National Credit Union Administration (NCUA), and an independent member with insurance expertise. Five non-voting members also serve on the FSOC.[38]

V. Policy framework for contingency planning

Contingency planning

The FDIC develops plans for the resolution of the largest US financial institutions under Title II of the Dodd-Frank Act. In the institution-specific resolution plans, the FDIC takes into account the nature of the individual firm's operations, as well as its complexity, interconnectedness, level of substitutability and size, and the extent of its cross-border operations. The FDIC also establishes appropriate arrangements for cross-border cooperation, including information sharing arrangements to ensure coordination in a cross-border situation. For severely distressed institutions, strategic resolution plans are developed to outline the proposed resolution strategy and identify potential impediments.

The FDIC requires IDIs with USD 50 billion or more in total assets to submit resolution plans periodically. The plans should enable the FDIC, as receiver, to resolve the institution in a manner which ensures that depositors receive access to their insured deposits within one business day of the institution's failure (two business days if the failure occurs on a day other than Friday), maximises the net present value return from the sale or disposition of its assets and minimises the amount of any loss realised by the creditors in the resolution.

The Dodd-Frank Act requires bank holding companies with total consolidated assets of USD 50 billion or more, and non-bank financial companies designated by the FSOC for supervision by the Federal Reserve, to submit resolution plans for joint review by the Federal Reserve and the FDIC. Plans must demonstrate the company's strategy for rapid and orderly resolution under the US

[38] https://www.treasury.gov/initiatives/fsoc/Pages/home.aspx.

Bankruptcy Code, or other applicable regime, in the event of material financial distress or failure of the company.

US federal supervisory authorities also require certain firms to prepare recovery plans. Recovery plans include options designed to remedy financial weakness and restore market confidence in the firm without extraordinary governmental support. The recovery plan should include options to conserve or restore liquidity and capital. Overall, the options should prepare the firm to respond to a broad range of internal or external stresses of different levels of severity. The firm's recovery plan is expected to identify recovery triggers and escalation procedures, and the recovery planning process is expected to lead to the timely implementation of options or other remediating actions in a stress situation.

Participation by the DIA in system-wide contingency planning

The FDIC is a member of the FSOC, and is regularly in touch with the other federal banking regulators through a number of formal and informal arrangements.

Testing of contingency planning

The FDIC regularly analyses its planning activities under various scenarios. For financial companies whose resolution would be carried out under the Dodd-Frank Act, the FDIC conducts various exercises, including:

- Operational exercises – discussions among staff and heads of US authorities to test various steps in the resolution process for systemically important financial institutions;
- Principal level exercises – discussions among heads of US and foreign authorities regarding issues (on a cross-border basis) that would be likely to arise in the resolution of a systemically important financial institution;
- Table-top exercises – discussions among staff of US and foreign authorities to understand resolution procedures and regulations in specific jurisdictions.

The FDIC also conducts exercises that focus on the resolution of an IDI under the Federal Deposit Insurance Act (FDI Act), including:

- Liquidity simulation – test of a liquidity crisis/closure of an IDI with assets of between USD 5 billion and USD 50 billion;
- Planning sessions for setting up and running bridge banks.

In addition, compliance testing is conducted under the "Large-Bank Deposit Insurance Determination Modernization" Rule. The rule requires the largest IDIs to implement functionality for posting provisional holds and supplying depositor and customer data in a standard format. The FDIC continuously monitors the adequacy of the DIF to meet its responsibilities.

VI. Policy framework for crisis management

a. Policies for intervening in banks

With respect to the resolution of an IDI under the FDI Act, the criteria for appointment of the FDIC as receiver for failing IDIs are specified in the statute.

With respect to the appointment of the FDIC as receiver of a financial company under Title II of the Dodd-Frank Act, the process is set forth in the statute.

b. Role of the DIA in intervention

The FDIC is the resolution authority for IDIs under the FDI Act and the resolution authority for systemically important financial institutions under Title II of the Dodd-Frank Act. With respect to the resolution of an IDI under the FDI Act, the FDIC, as the resolution authority, would determine which resolution action or actions will be taken. The FDIC must ordinarily exercise its powers subject to the least-cost test. The FDI Act, however, provides that compliance with the least-cost test is not required if, upon the written recommendation of at least two-thirds of the members of the FDIC's Board of Directors and two-thirds of the members of the Federal Reserve Board, the Secretary (in consultation with the President) determines that:

i. compliance with the least-cost test would have serious adverse effects on economic conditions or financial stability; and

ii. action or assistance that does not comply with the least-cost test would avoid or mitigate such adverse effects.

With respect to the resolution of a financial company under Title II of the Dodd-Frank Act, the recommendations that must be provided to the Secretary in connection with the appointment process require, among other things, a recommendation regarding the nature and the extent of actions to be taken under Title II regarding the financial company. Ultimately, the FDIC, as the resolution authority, would determine which resolution action or actions will be taken.

c. Funding of crisis management

There are separate funding arrangements for resolution under the FDI Act and under Title II. For the FDI Act, the DIF, which is funded by ex ante premiums levied on IDIs, is available. In addition, the FDIC has the authority to borrow from the US Treasury if necessary for insurance purposes. For Title II, the Dodd-Frank Act established the Orderly Liquidation Fund (OLF), a mechanism for the provision of temporary funding to support the resolution of a failed financial company under Title II. The OLF may serve as a temporary backup source of liquidity in the event that private sector funding cannot immediately be obtained. Any amounts borrowed from the OLF that are not repaid from the proceeds of the resolution are to be repaid through risk-based assessments on certain large financial companies as specified in the Dodd-Frank Act.

d. Public communication policies

The FDIC executes a comprehensive public communication strategy for every bank failure. This includes issuing press releases, using social media, providing detailed information and frequently-asked questions on the FDIC website, and establishing a customer service hotline.

In crisis situations, the FDIC utilises a number of additional tools, including press conferences, public service announcements, television, radio and print advertisements, and video news releases.