International Association of Deposit Insurers

Deposit Insurance and Bail-in: Issues and Challenges

Research paper

(Draft for Public Consultation)

Prepared by the Core Principles and Research Council Committee

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TABLE OF CONTENT

LIST OF ABBREVIATIONS

BRRD	Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms
CPs	Core Principles for Effective Deposit Insurance Systems
DGSD	Directive 2014/49/EU on deposit guarantee schemes
DIA	Deposit insurance agency
EC	European Commission
ECB	European Central Bank
EU	European Union
FSB	Financial Stability Board
GDP	Gross domestic product
IADI	International Association of Deposit Insurers
KAs	Key Attributes of Effective Resolution Regimes for Financial Institutions
MPE	Multiple point of entry
MREL	Minimum requirements for own funds and eligible liabilities
NCWO	No creditor worse off
SIFI	Systemically important financial institution
SPE	Single point of entry
TBTF	Too big to fail
TLAC	Total loss-absorbing capacity

GLOSSARY[1]

Asset separation tool Transfer by a resolution authority of the assets, rights or liabilities of an institution in resolution to an asset management vehicle.

Bail-in A mechanism to recapitalise a bank in resolution or effectively capitalise a bridge bank, under specified conditions, through the write-down, conversion or exchange of debt instruments and other senior or subordinated unsecured liabilities of the bank in resolution into/for equity or other instruments in that bank, the parent company of that bank or a newly formed bridge bank, as appropriate to the legal framework and market capacity.

Bridge bank An entity that is established to temporarily take over and maintain certain assets, liabilities and operations of a failed bank as part of the resolution process.

Bridge bank/institution tool Transfer by a resolution authority of shares or other instruments of ownership issued by an institution in resolution, or assets, rights or liabilities of an institution in resolution, to a bridge bank/institution.

Contagion The spread of the financial problems of one bank to other banks or financial institutions, usually within the same jurisdiction, or the spread of economic and financial disruption within a jurisdiction or across jurisdictions.

Depositor preference Granting deposit liabilities a higher claim class than other general creditors against the proceeds of liquidation of an insolvent bank's assets, so that depositors must be paid in full before the remaining creditors can collect on their claims. Depositor preference can take a number of different forms. For example:

◦Eligible depositor preference gives preference to all deposits meeting the eligibility requirements for deposit insurance coverage;

◦Insured depositor preference gives preference to insured depositors (and the deposit insurer under subrogation);

◦A two-tiered depositor preference concept, in which eligible but uninsured deposits have a higher ranking than claims of ordinary unsecured, non-preferred creditors, and insured depositors have a higher

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

ranking than eligible depositors; and
◦General depositor preference, in which all deposits have a higher ranking than claims of ordinary unsecured, non-preferred creditors, regardless of their status (insured/uninsured or eligible/not eligible).

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 a Ministry of Finance or Treasury responsible for financial sector policy) is included in the financial safety-net.

Least-cost resolution A procedure which requires the resolution authority to implement the resolution option, including liquidation of the failed bank, that is least costly to the resolution authority, the financial system or the deposit insurance system.

Loss absorption Provision of funds to supplement a shortage in capital because of experienced losses.

Moral hazard Arises when parties have incentives to accept more risk because the costs stemming from such risk are borne, in whole or in part, by others.

Public protection/guarantee (implicit) A public expectation that some form of government protection would be provided in the event of financial institution failure. Implicit protection is, by definition, never formally specified. There are no statutory rules regarding the eligibility of financial institution liabilities, the level of protection provided or the form which reimbursement will take. Funding is discretionary and often depends on the government's ability to access public funds.

Recovery Collection of the assets of a failed bank.

Recovery rate The ratio of net collections to the book value of a failed bank's assets.

Resolution funding Funding of an entity (institution) in resolution or bridge institution through funds (solvency) or liquidity provision.

Sale of business tool Transfer by a resolution authority of shares or other instruments of ownership issued by an institution in resolution, or assets, rights or liabilities of an institution in resolution, to a purchaser that is not a bridge institution; tool under the EU Bank Recovery and Resolution Directive, equivalent to purchase and assumption measures.

Solvency funding	Provision of funds to absorb losses and recapitalise the institution.
Subrogation	The substitution of one party (e.g. the deposit insurer) for another (e.g. the insured depositor) with reference to a lawful claim, demand or right, so that the party which substitutes succeeds to the rights of the other in relation to the debt or claim, and its rights and remedies.
TBTF (too big to fail)	The belief that an institution is so systemically important that it cannot be allowed to fail as its failure would cause instability across the financial system as a whole and to the economy at large.
Uninsured deposits	The types or amount of deposits that are not covered by a deposit insurance system.

EXECUTIVE SUMMARY

The financial crisis that began in 2007 brought to light a series of limitations in the resolution and crisis management frameworks. While most jurisdictions had both depositor protection systems and bank resolution policies in place, the design and implementation of those policies differed significantly across jurisdictions. These differences made cross-country cooperation difficult and, in some cases, reflected weak or inadequate national resolution policies.

Faced with these limitations, international organisations including the FSB, the IMF and the World Bank sought to strengthen global safety-nets. They argued that the importance of close cooperation in crisis management pointed to the need for more robust depositor protection systems, improved international regulatory standards and strengthened toolkits for bank resolution. In particular, intensified efforts were needed to develop international standards on effective resolution frameworks for systemically important financial institutions (SIFIs).

A key innovation in this framework is the introduction of bail-in powers used for recapitalising a failed institution. Bail-in is a relatively new tool that allows the authorities to impose losses on creditors and/or converting their claims into equity in the newly restructured institution. This framework is still evolving and different approaches to bail-in have been developed in different jurisdictions.

Risks to the DIA

Under a strict definition, deposit insurers are not subject to bail-in policies since the DIA is not a creditor to either the distressed institution or the restructured institution. In the case of failure, the DIA has no outstanding credits that can be "bailed in".

Many jurisdictions, however, regard DIA funds as resources to be used in the resolution of a failed institution. In a broader sense, therefore, DIAs can be called on to contribute to financing the resolution of a failed institution.

This paper identifies several challenges or risks that may arise from these new policies and guidelines. Specifically, the use of deposit insurance funds for resolution raises five potential risks.

First, DIAs may end up with an ownership position in a bank. While DIAs are not typically considered creditors, some legal frameworks allow for a potential contribution from the DIA to recapitalise a failing institution. If a DIA is not permitted to hold an ownership stake in financial institutions, it will need to disinvest immediately. The risk is that, in a fire sale, the DIA will not get a fair price.

Second, DIA funds may be used in support of an ineffectual or excessively costly resolution strategy. The resolution strategy selected may use more DIA funds than alternative strategies. In addition, a risk arises from mis-estimation of the value of assets. If the assets of the failing institution are not correctly assessed, the DIA could face successive rounds of funding requests. If assets are overvalued in the first round of analysis, a second round of funding requests may be needed to complete the institution's recapitalisation. If assets are underestimated, pressures may emerge for an unnecessarily extensive bail-in of creditors and use of DIA funds.

Third, if the restructured institution subsequently fails, the DIA will be exposed to double jeopardy, in which the DIA first contributes to the resolution and then must pay out to insured depositors because the bank subsequently fails. Such a failure will increase costs for the DIA.

Fourth, asset encumbrance increases the level of securitised assets, reduces the liabilities that can be bailed in, and increases the cost of resolution for both the resolution agency and the DIA.

Finally, DIA credibility can be undermined if resolution funding depletes the deposit insurance fund, if restructured institutions subsequently fail, or if the DIA is seen as powerless in the overall safety-net framework.

Safeguards

The risks mainly arise from the use of DIA funds in a resolution. Authorities may consider a series of actions aimed at mitigating such risks or creating safeguards for the DIA funds.

An important first step is to establish a transparent framework for determining the DIA's contribution. Such a framework should define the purpose of the DIA's contribution, set up rules determining the maximum limits of the contribution, and establish mechanisms for quality control. This needs to include an effective valuation mechanism – with appropriate recourse to court oversight or other challenge.

A second action is to strengthen the institutional framework for determining the DIA's contribution to a resolution. The DIA should be part of the decision-making process on resolution funding if DIA funds are used, and should be able to monitor and conduct an ex post review of the use of its funds.

Third, crisis prevention and crisis management frameworks can be enhanced. Avoiding a crisis is the best option and, if banking distress threatens financial stability, early and effective actions are needed. The DIA has an important role to play in the design and implementation of such policies.

Fourth, the DIA must have an appropriate position in the hierarchy of claims. The higher its ranking, the lower the net costs of resolution for the DIA and the smaller the amount of funds available for resolution.

Finally, the authorities must ensure that all systemically important institutions have adequate loss-absorbing capacity, to avoid the need for the DIA to contribute to financing the resolution.

INTRODUCTION

Before the global financial crisis of 2007, crisis management frameworks around the world were highly differentiated. While most jurisdictions had both depositor protection systems and bank resolution policies in place, the design and implementation of those policies differed significantly across jurisdictions. The mandates and powers of deposit insurers varied widely and resolution tools ranged from comprehensive to inadequate. Cross-border cooperation and dialogue on resolution was largely non-existent.

The financial crisis brought these deficiencies into sharp focus. Faced with limited resolution tools and often inadequate depositor protection frameworks, countries adopted a series of ad hoc measures. Deposit protection systems were strengthened, in some cases providing blanket guarantees to both depositors and creditors. Some authorities provided significant capital injections/ liquidity support (or government guarantees) to financial institutions as well as regulatory forbearance to contain the spread of the crisis. While effective in stemming contagion and maintaining financial stability, such large-scale support[2] had a number of undesirable consequences including: (i) a sharp build-up of sovereign debt; (ii) an increase in moral hazard; and (iii) the maintenance of weak banks in the financial system. These issues were especially pronounced in Europe, where the banking sector is dominated by large and complex cross-border institutions, and assets held by banking groups often significantly exceed the GDP of the countries in which they operate.[3]

In response, international organisations including the FSB, the IMF and the World Bank advocated a strengthening of global safety-nets. They argued that the importance of close cooperation in crisis management pointed to the need for more robust depositor protection systems, improved international regulatory standards and strengthened toolkits for bank resolution. In particular, intensified efforts were needed to develop international standards on effective resolution frameworks for systematically important financial institutions (SIFIs).

IADI worked closely with the Basel Committee on Banking Supervision (BCBS) to issue the first Core Principles for Effective Deposit Insurance Systems (CPs). The CPs were approved in June 2009 and quickly became accepted as the benchmark for assessing the quality of deposit insurance systems. Both the IMF and the World Bank formally adopted them as part of their Financial Sector Assessment Program (FSAP) and the FSB included them in its Compendium of International Standards. The Core Principles were revised in 2014, incorporating the lessons learned in the aftermath of global financial crisis.

International work also intensified on strengthening resolution frameworks. In November 2011, the FSB issued the Key Attributes of Effective Resolution Regimes for Financial Institutions ("Key Attributes"), establishing standards for resolution regimes. A corresponding initiative was undertaken at European level, resulting in Directive 2014/59/EU establishing a framework for the recovery and

[2] In December 2009, the effective level of support to the financial sector in the EU reached EUR 1,541.9 billion (13% of aggregate EU GDP); EC, *The Evolution of Public Interventions in the EU Financial Sector,* June 2011, p. 6.

[3] At the end of 2012, in terms of country GDP, Luxembourg had the largest banking sector, with assets representing 1,666% of GDP, followed by Malta, Cyprus and Ireland with banking assets representing 789%, 630% and 609% of GDP respectively; ECB, *Banking Structures Report*, November 2013, p. 7.

resolution of credit institutions and investment firms (BRRD).[4] Both regulations identified critical tools for bank resolution. While the FSB Key Attributes primarily address global SIFIs (G-SIFIs), the BRRD is applicable to all financial institutions. These regulations provided a comprehensive framework for resolution. The toolkit included the power to write down capital, the centralisation of resolution authority, a separate special bank resolution regime, and new instruments to limit public costs such as bailing in the creditors of failing institutions.

An innovative tool included in both the KAs and the BRRD is creditor bail-in. This enables the authorities to impose losses on creditors and/or converting their claims into equity in the newly restructured institution. This "debt-equity swap" approach reduces, or may eliminate the need for, the use of public money in funding a resolution.

While innovative, the bail-in instrument exposes creditors and, possibly, government institutions to new risks. Creditors may be forced to either hold equity shares they do not want or sell their shares in a distressed market. The cash flows and profitability of creditors may be negatively affected. Finally, the banks that have been subject to bail-in may face difficulties in securing additional funding from debt markets. Market perceptions of the strength of creditors may be negatively affected when the market realises that they have been subject to an bail-in of a failing institution. The authorities will face a range of risks and challenges. The new owners will need to be reviewed and certified as fit and proper. Some response may be necessary if the bail-in creates an unacceptable concentration in bank ownership, and the ability of the new shareholders to manage the restructured firm will need to be carefully assessed.

In addition to affecting both creditors and national authorities, bail-in can have a significant impact on deposit insurers. The risks and challenges of bail-in to deposit insurers, however, remain relatively unexplored. Much of the work to date has focused on the design of the instrument and implementation challenges. This paper attempts to add to the growing literature on bail-in by identifying the risks and challenges faced by DIAs from the introduction of bail-in. The paper will describe the main risks and identify a number of safeguards to mitigate those risks.

The research methodology for the paper covers the broadest possible range of information on the issues addressed in the project plan. Available literature and legislation were reviewed. Analysis also included binding and draft legislation establishing a legal framework for a bail-in tool (even if it has not been applied). A thematic survey on issues related to bail-in was prepared to collect data from deposit insurers. As practical experience in the use of bail-in tools is very limited, in-depth analysis also covered more general cases. Because the resolution framework is still evolving and the concept of bail-in is relatively new, historical survey results may be of limited value and were used only as supplementary sources.

[4] The BRRD implements the KAs for the EU.

I. SYSTEMIC BANK RESOLUTION: AN EVOLVING FRAMEWORK

Resolution strategies

The resolution strategies[5] being developed for resolving SIFIs are broadly based on two models: "single point of entry" (SPE) resolution, in which resolution tools are applied at the top level of a consolidated group by the home resolution authority, and "multiple point of entry" (MPE) resolution, in which resolution tools are applied to different entities of the group by two or more resolution authorities in a coordinated manner.

In an SPE strategy, resolution powers are applied by the home resolution authority at the top (parent or holding company) level, whereas subsidiaries continue operating on a going-concern basis.[6] Any losses incurred by group subsidiaries are transferred to the parent company. Simultaneously, subsidiaries are recapitalised with capital provided by the parent.

In an MPE strategy, the resolution is applied at the point where problems have arisen. The resolution tools are applied to different group entities by two or more relevant resolution authorities. The restructuring measures taken by the local authorities must be coordinated across the group to ensure the efficiency of the restructuring process. While the MPE strategy does not require advanced consolidation in the fields of capital distribution and liquidity management as in the SPE approach, it does require basic financial separation of group entities.

Bail-in as a resolution tool

In the wake of the global financial crisis, standard setters and regulators sought to identify more robust toolkits for bank resolution. A significant first step was the introduction of the Key Attributes (KAs) by the FSB. The KAs set out a standardised framework for an effective resolution regime for financial institutions, identifying tools that can be used to resolve failing financial institutions without jeopardising financial stability and without relying on public financial support.

Bail-in is a financing tool introduced in the KAs to address the recapitalisation needs of distressed institutions. It can either be contractual or it can take the form of statutory powers allowing the authorities to write down unsecured debt of a distressed institution or to convert those debts into equity. Under such a regime, resources for bank resolution come first from shareholders and then from creditors through the write down and conversion of debt held by both unsecured and uninsured creditors into equity. Thus, bail-in rebuilds the capital base of a troubled entity or a newly established entity and ensures compliance with prudential capital requirements.

As bail-in is a financing tool aimed at a narrow recapitalisation, it must be combined with other resolution tools. The resolution authorities may opt to: merge a failed institution with another viable one; establish a bridge bank;

[5] The basic resolution strategies are detailed in the FSB Guidance (*Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Developing Effective Resolution Strategies,* 16 July 2013), and the Bank of England/FDIC joint paper (*Resolving Globally Active, Systemically Important, Financial Institutions*, 10 December 2012).

[6] Provided sufficient loss absorption capacity is available at the top of the group.

separate out good and bad assets and create a smaller, more viable institution; or restructure the failing institution. Bail-in is one of the financing options on which the authorities may then rely to complete the bank restructuring process.[7]

Approaches to bail-in differ across jurisdictions, as regulations typically reflect local circumstances. The bail-in methods can be broadly divided into two types: recapitalisation of the open entity ("open-bank bail-in"); or capitalisation of a newly established entity or bridge institution ("closed-bank bail-in"). Both approaches achieve the same economic effect – the write-down of debt and conversion into equity of all or some unsecured and uninsured creditor claims. Moreover, differences can exist in the legal basis for debt restructuring (statutory approach or contractual one), the scope of bail-in (which liabilities are eligible for bail-in), the hierarchy of write-downs, and the conversion or exchange mechanism. Cross-border resolutions may therefore be limited by these differences.

II. Resolution Strategies and the Role of the DIA in Bail-in

A. The DIA's role in bail-in

International framework

The role of the DIA in funding resolution differs significantly across jurisdictions. Some local regulations place strict limits on the use of deposit insurance funds, while others allow access to deposit insurance funds for a variety of purposes. Thus, the impact of bail-in on deposit insurers will depend, in part, on the local conditions and the jurisdiction's legal framework governing resolution and deposit insurance.

Under a strict definition of bail-in, deposit insurers are not subject to bail-in policies. The DIA is not a creditor to the distressed institution. If the institution is subject to an open-bank resolution, the deposit insurance system is not invoked, depositors are not paid out, and the DIA is not a creditor to the institution. In a closed-bank resolution, even if the deposit insurer pays out to depositors, it lines up with other creditors for asset distributions from the failed institution but is not a creditor to any new institution or bridge bank. The DIA, therefore, has no outstanding credits that can be "bailed in".

In a broader sense, however, DIAs may be expected to contribute to financing the resolution of a failed institution. The CPs envisage such a financing role, as do the KAs and the BRRD. Specifically:

- The CPs[8] recognise that DIA funds may be used for resolution but establish strict safeguards to prevent excessive use. In particular, the CPs state that, where the deposit insurer is not the resolution authority, it should retain the right to authorise the use of its funds for resolution. Moreover, the amount of DIA funds used in resolution should be limited to the amount that would otherwise have been paid out to insured depositors in a liquidation.

[7] For an analysis of other alternatives to bail-in in the US, see: Sommer J. H., *Why Bail-In? And How!* Federal Reserve Bank of New York, March 2014.

[8] *IADI Core Principles for Effective Deposit Insurance Systems*, November 2014, Principle 9, EC 8.

- The KAs state that deposit insurance funds can be used for resolution so long as (i) it is necessary to maintain financial stability and private sources are exhausted, and (ii) there are explicit provisions for the allocation of losses to equity holders and unsecured creditors and, if necessary, their coverage via industry contributions.[9]

- The BRRD requires DIAs in EU member states to participate in resolution funding. The statutes treat resolution funding as a substitute for payout for covered deposits. Therefore, the BRRD considers that the DIA is liable for the amount by which covered deposits would have been written down, had covered deposits been included in bail-in.

Country conditions

While deposit insurance funds may be regarded as a source of resolution funding, differences exist across jurisdictions. Differences in DIA mandates have an important impact on the role a DIA plays in resolution. Some DIAs only have a limited role in resolution, while others are expected to fund but not participate in resolution decisions. Some other DIAs are fully involved in the resolution process.

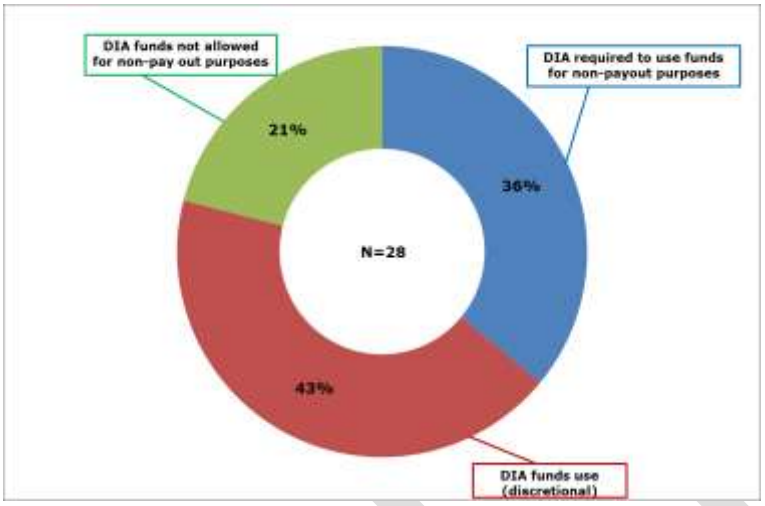
The role of the DIA in resolution is evolving. International standard setters are recognizing the usefulness of the DIA having an increased role in resolution in general, and for having a voice in resolution decisions when its funds are used.[10] This evolving role is reflected both in the design of new deposit insurance systems and in the reforms being implemented by many IADI members.

In order to have a baseline to monitor changes, IADI conducted a survey of members' role in resolution. The research project survey found that 80% of responding DIAs can finance measures other than payout. In more than 40% of responding jurisdictions, the DIA is able to decide discretionally on resolution funding (Figure 1), while 21% of DIAs are not allowed to fund resolution. Others are required to finance the resolution process.

[9] Details of developed resolution funding models are presented in FSB, *Key Attributes of Effective Resolution Regimes for Financial Institutions* and *Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms (art. 109)*.

[10] Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms, 15 May 2014, articles 3(2), 11(2) and 88(2g); FSB, *Key Attributes of Effective Resolution Regimes for Financial Institutions,* October 2011 – Principle 8.1.

Figure 1: Financial participation by the DIA in a resolution



Source: IADI, *Bail-in survey*, 2014.

B. Examples of resolution approaches

The approaches to bail-in vary across jurisdictions. Two examples are set out below for jurisdictions in which the bail-in approach has already been considered and formalised.

The US approach

In the US, resolution policies are established by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) of 2010.

Title I of the Dodd-Frank Act requires that large banking entities be resolvable through ordinary bankruptcy. Each G-SIB must periodically submit to the FDIC and the Federal Reserve a resolution plan outlining a feasible and orderly resolution under the US Bankruptcy Code. The FDIC and the Federal Reserve review the plans to verify whether the submitted plan is credible. If the plan is found to be deficient, the FDIC and the Federal Reserve may impose measures such as more stringent capital, leverage or liquidity requirements, restrictions on growth, activities or operations of the company including its subsidiaries, or a requirement to divest assets or operations.

Title II of the Dodd-Frank Act addresses the resolution of global conglomerates. Because the bankruptcy process may not be feasible for such institutions, Title II equips the FDIC with orderly liquidation authority (OLA). The FDIC may be appointed receiver for any US financial company that is failing or in danger of failing, and whose resolution under an insolvency process would likely endanger financial stability. Title II requires that the losses of a resolved entity be borne by stockholders, debt holders, and other unsecured creditors but not by the taxpayers. The management of the entity will be passed to the FDIC, with the

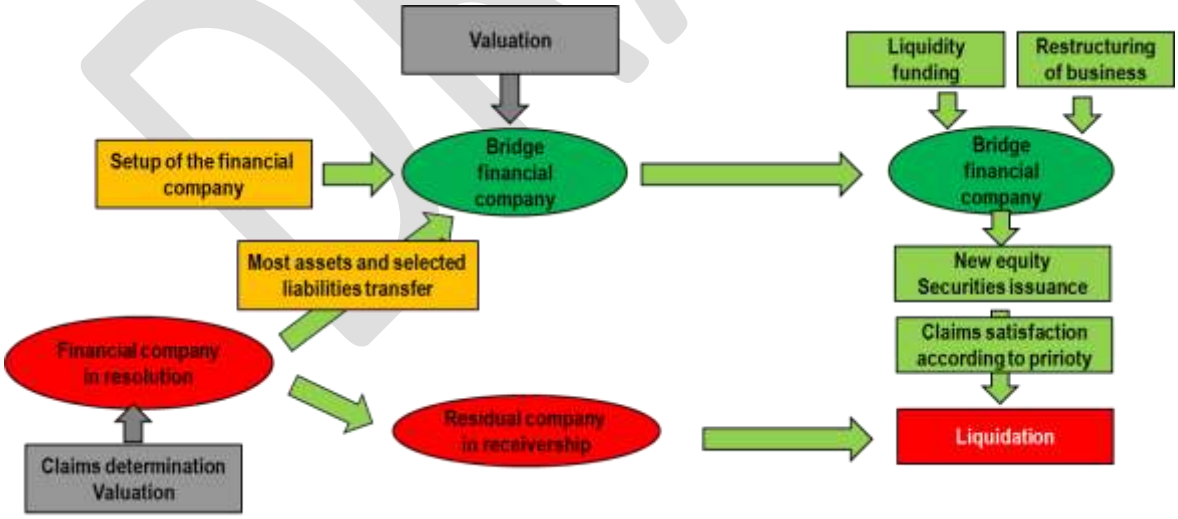
requirement that it carry out resolution in a way that preserves financial stability and limits moral hazard.

The FDIC has drafted a consultation document on an SPE resolution strategy using a closed-bank resolution [11] for SIFIs. The strategy applies single receivership at the top-tier holding company level, where losses are absorbed by shareholders and unsecured creditors of the holding company. Sound operating subsidiaries are transferred to a new solvent entity or entities.

Following the FDIC's appointment as receiver of the parent holding company, the FDIC may charter a bridge financial company to which most of the assets, including its investments in and loans to subsidiaries, and only liabilities to the extent necessary to maintain the business operations of the holding company are transferred. Holders of the rights related to equity, subordinated debt and senior unsecured debt have a claim against the receivership estate. In the next step, after valuations, identified losses of the failed institution are apportioned to the equity holders and creditors left in the residual entity. Residual creditors' claims are partly satisfied through a securities-for-claims exchange. Equity in and new debt of the company or companies, as the successor or successors to the bridge financial company, would be issued to creditors and shareholders in satisfaction of their claims against the receivership estate of the failed financial company.

The FDIC's closed-bank bail-in model is shown in Figure 2.

Figure 2: Closed-bank bail-in (FDIC)



Source: Own elaboration based on BFG (Bank Guarantee Fund, Poland, *Safeguards to Limit Risk of Bail-in for DISs*, High Level Seminar on Bail-in and Deposit Insurance System Interaction, Warsaw 2014, p 7.

[11] FDIC, *Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy*, 10 December 2013.

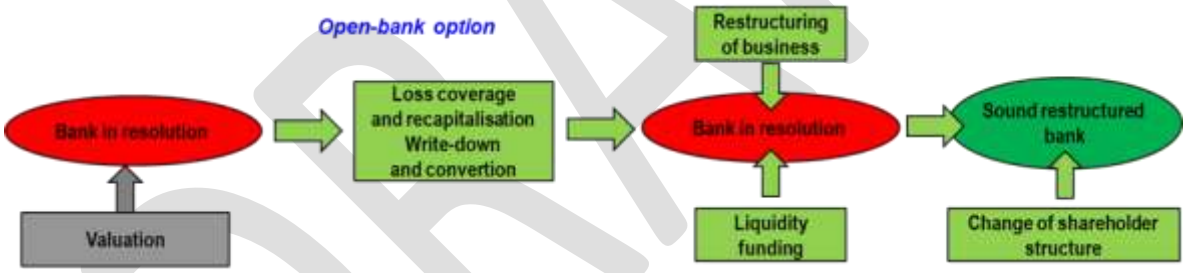
The EU approach

Resolution policies in the EU are contained in Directive 2014/59/EU, which established a framework for the recovery and resolution of credit institutions and investment firms (BRRD). It required EU countries to harmonise their legal framework with the BRRD by 2015, although legislation establishing bail-in since 1 January 2016[12].

The BRRD envisages both open- and closed-bank resolution approaches. The purpose of bail-in, in the BRRD context, is (i) to recapitalise an institution so that it can carry on critical functions, and (ii) establish a viable institution, either through capitalisation of a bridge entity or support for sale of business tools or the asset separation tool.

The EU open-bank resolution does not result in liquidation of the distressed institution. If open-bank bail-in is applied, the write-down of equity and liabilities covers losses, and the swap into equity restores capital (Figure 3). The legal existence of the problem entity is maintained and restructuring measures are implemented to remove financial deficiencies and restore long-term viability.

Figure 3: Open-bank bail-in (BRRD)



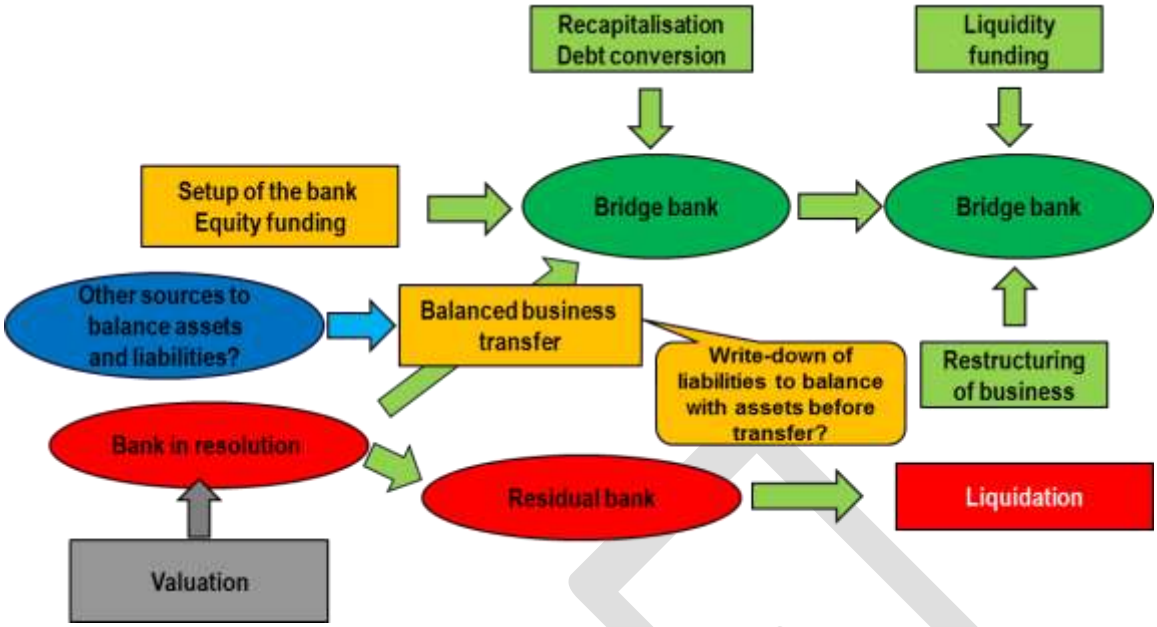
Source: Own elaboration based on BFG, *Safeguards to Limit Risk Risk of Bail-in for DISs …* op. cit., p. 5.

The EU closed-bank approach converts debt of the failing entity into equity to provide capital for a new institution (Figure 4). Selected assets and liabilities are transferred to the bridge institution or acquirer, supported by write-down and conversion of liabilities. Bail-in powers are applied in "parallel"[13] with the transfer of assets and liabilities. Both the separation of good and bad assets and a change of management are built into the closed-bank resolution approach. The bridge institution is a temporary solution, and in a second step it or its business will be sold to private investors.

[12] In November 2016 EC proposed Capital requirements (CRR/CRD IV) and resolution framework (BRRD/SRM) amendments that among others opt for alignment of the BRRD with FSB TLAC standard and harmonization of insolvency hierarchy of claims.

[13] This does not mean that both processes happen at the same pace. See: Bank of England, *Bank of England's approach to resolution*, October 2014.

Figure 4: Closed-bank bail-in (BRRD)



Source: Own elaboration based on BFG, *Safeguards to Limit Risk of Bail-in for DISs, op. cit.* p 6.

C. Challenges to the application of bail-in

The bail-in process has only been used in limited circumstances and not in the case of a G-SIB resolution. While it has important benefits, some limitations have been identified.[14] First, the imposition of losses and the conversion of debt to equity could negatively influence the behaviour of creditors. The bail-in operation could undermine the financial solvency of other institutions and lead to more general contagion. Second, the bail-in tool provides capital but not liquidity, an adequate business plan, or fit and proper shareholders. Bail-in, therefore, is at best considered one part of a comprehensive restructuring strategy. Third, the creation of new shareholders could undermine governance. These new shareholders may have little interest or capacity to oversee the complex operations of a global financial institution. Finally, an effective bail-in programme could reduce available creditors' willingness to invest in financial institutions, or cause creditors to shift from unsecured to secured lending. Accordingly, further work is needed to evaluate both the effectiveness and the appropriate design features of the tool.

[14] Avgouleas E, Goodhart C., *Critical reflections on bank bail-ins*, February 2015.

III. RISKS TO THE DIA ARISING FROM BAIL-IN

As bail-in is still a relatively new tool, the risks of its use for DIA are not fully understood. Nevertheless, a number of challenges or risks can already be identified from limited experience. While the findings in this paper are preliminary, authorities can take this opportunity both to identify emerging risks and to put in place appropriate safeguards. These risks include: the risk of inappropriate bank ownership changes, the risk of misuse of DIA funds (including risks related to evaluating the amount of DIA funding for bail-in resolution), double jeopardy risk, asset encumbrance as a factor that may increase the amount of DIA funding for bail-in resolution or reduce the recovery ratio of the DIA fund, and reputational and credibility risks to the DIA.

Some risks, such as the risk of bail-in failure, increased costs or asset encumbrance and the risk of suboptimal use of DIA funds, are not specific to bail-in but generic and applicable to the DIA under other resolution options/strategies.

A. Risk of inappropriate bank ownership changes

DIAs may end up with an ownership position in a bank.

Bail-in converts a creditor position into equity, and creditors into shareholders. As described above, DIAs are not typically considered creditors to a failing institution or newly established bridge bank and, therefore, are not usually directly affected by a bail-in tool. However, legal frameworks differ considerably across jurisdictions. There have been discussions about allowing for a potential contribution from the DIA to recapitalise a failing institution. In this sense, the DIA might be considered similar to a creditor.

If a DIA holds an ownership stake in a financial institution, this presents a significant conflict of interest. If the bank was bailed in with DIA funds and the DIA was given an equity position in a failing or a new bank, it may need to disinvest immediately unless managed appropriately. As an experienced creditor in financial institutions, the DIA may have such policies in place already. Otherwise the risk is that, in a fire sale, the DIA will not get a fair price.

B. Risk of misuse of DIA funds

DIA funds could be used in support of an ineffectual or excessively costly resolution strategy.

Misuse of DIA funds can arise in two situations. First, DIA funds could be considered a "free good" by the resolution agency, and be used in strategies that place excessive reliance on DIA funds. Second, the funds may be misused if the resolution authority either over- or underestimates the value of the failing institution's assets and liabilities.

Excessive use of DIA funds could be a result of pressure from creditors to limit the scope of bail-in, or from political pressure to restrict the resolution options under consideration. Moreover, if the DIA is not involved in resolution decisions, it cannot effectively influence the determination of resolution options or the options selected. The risk is that funds may become depleted when decisions on resolution are taken in isolation from the overall analysis of potential demands for DIA funding.

The second risk of misuse of DIA funds arises from the possibility that assets are incorrectly valued. If assets are overvalued in the first round of analysis, a second round of funding requests may be needed to complete the institution's recapitalisation. Alternatively, if assets are underestimated, pressures may emerge for an unnecessarily extensive bail-in of creditors and use of DIA funds. Finally, the DIA contribution may be determined outside the resolution planning framework for a given institution and end up being inadequate. Such a situation can arise when the DIA's contribution is determined in an ad hoc process, based on limited estimations or counterfactual calculations.

An effective resolution framework requires an adequate mechanism for pricing an institution's assets in a fair and accurate manner. Time pressure in the valuation process may influence both the accuracy of value estimations and the determination of the DIA's contribution. If the evaluation is done by the resolution authority, the DIA should participate in the valuation process and there should also be an ex post verification. Alternatively, the valuation can be carried out by an independent valuer. The process should allow for comment and challenge, and there should be provision for external review of the outcome – for example by the courts if necessary. Following an audit of the resolution process, the DIA should stand ready to recover any excessive contribution made for resolution purposes.

The risk of incorrectly estimating the DIA's contribution also arises from the difficulty in estimating recovery rates from distressed assets. Amounts to be paid out to depositors in a failure are not controversial. However, estimation of recoveries can be difficult. The lack of historical data on recovery processes increases the risk of over-optimistic recovery assumptions and can limit the DIA's ability to challenge estimation results.

The risk of DIA funds misuse grows if the DIA has not been involved in decisions concerning the use of its funds. For example, the DIA may be explicitly excluded from the resolution decisions if its voice is weak and its opinions are not taken seriously. Such disenfranchisement can be aggravated when the DIA lacks the analytical capacity to evaluate alternative resolution options and engage in a productive discussion with other safety-net members.

C. Double jeopardy risk

If the restructured institution subsequently fails, the DIA will be exposed to double jeopardy, in which the DIA first contributes to the resolution and then must pay out to insured depositors because the bank subsequently fails.

There is a risk that the problem institution will not be viable after restructuring and recapitalisation through bail-in. The continuing non-viability of the institution would result in increased costs for the DIA, as it would already have contributed to the resolution by bail-in. In extreme cases, failure of resolution could lead to cost duplication, in which the DIA first contributes to the recapitalisation of the institution and then pays out guaranteed deposits.

D. Risk that asset encumbrance will increase DIA funding obligations

Asset encumbrance increases the level of securitised assets, reduces liabilities that can be bailed in, and increases the cost of resolution to the resolution agency and to the DIA.

Secured borrowing reduces the assets eligible for bail-in. As secured liabilities are exempt from bail-in, this may encourage migration towards secured funding and increase the level of asset encumbrance.[15] The reduced availability of "bail-inable" liabilities makes more likely that more preferred classes will be written down or converted. Higher asset encumbrance, therefore, increases the likelihood that DIA funds will be used in the resolution.[16]

E. Reputational and credibility risks to the DIA

DIA credibility can be undermined if resolution funding depletes the deposit insurance fund, or if the restructured institution subsequently fails.

The limited role of public funding and the explicit role of the DIA in funding resolution increase the likelihood of DIA funds being used. There is a risk that the DIA will incur additional costs if the entity is not viable after bail-in. There is also a risk that an unsuccessful bail-in will deplete the DIA fund. These factors can undermine the DIA's credibility with depositors.

IV. SAFEGUARDS FOR DIAS

All DIAs have a fiduciary responsibility for the stewardship of their funds. As noted above, the role of the DIA in decisions on the use of its funds for bail-in can differ depending upon the mandate of the agency and whether it serves as resolution agency or not. Access to DIA funds can be appropriately managed by putting in place a transparent framework on the use of its funds, strengthening the institutional framework for determining the use of DIA funds, enhancing the role of the DIA in crisis prevention and management, ensuring a higher position for the DIA in the hierarchy of claims, and strengthening the requirements on loss absorption.

A. Transparent framework for determining the DIA's contribution to resolution funding

Determination of contribution limits

The DIA contribution to bank resolution should be clearly laid out in statutes and policy documents. Such a policy framework should define the terms and conditions of any DIA contribution, set up rules determining the maximum limits of any contribution, and establish mechanisms for the DIA's role in information sharing, coordination, decision-making and reporting on the use of funds.

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[15] Conlon T. Cotter J., *Anatomy of a Bail-In*, UCD Geary Institute, 1 April 2014, p. 15.

[16] Houben A., Slingerberg J. W, *Collateral scarcity and asset encumbrance: implications for the European financial system*, Banque de France, *Financial Stability Review*, No 17, April 2013; Juks R., *Asset encumbrance and its relevance for financial stability*, Sveriges Riksbank Economic Review, 2012:3, pp. 4–5.

Differences exist in national legislation on the role of the DIA in determining funding levels:

- The EU Directive on deposit guarantee schemes (DGSD) requires that, where the deposit insurer's funds are used for resolution purposes, the DIA is consulted when determining its contribution to the resolution funding in line with the BRRD.[17]

- Under the BRRD, it is the resolution authority that determines the amount which the DIA is liable to contribute, based on appropriate valuation.

- In other jurisdictions, such as the US, Canada and Korea, the DIA is both the deposit insurer and the resolution agency, ensuring that deposit insurance and resolution issues are treated together.

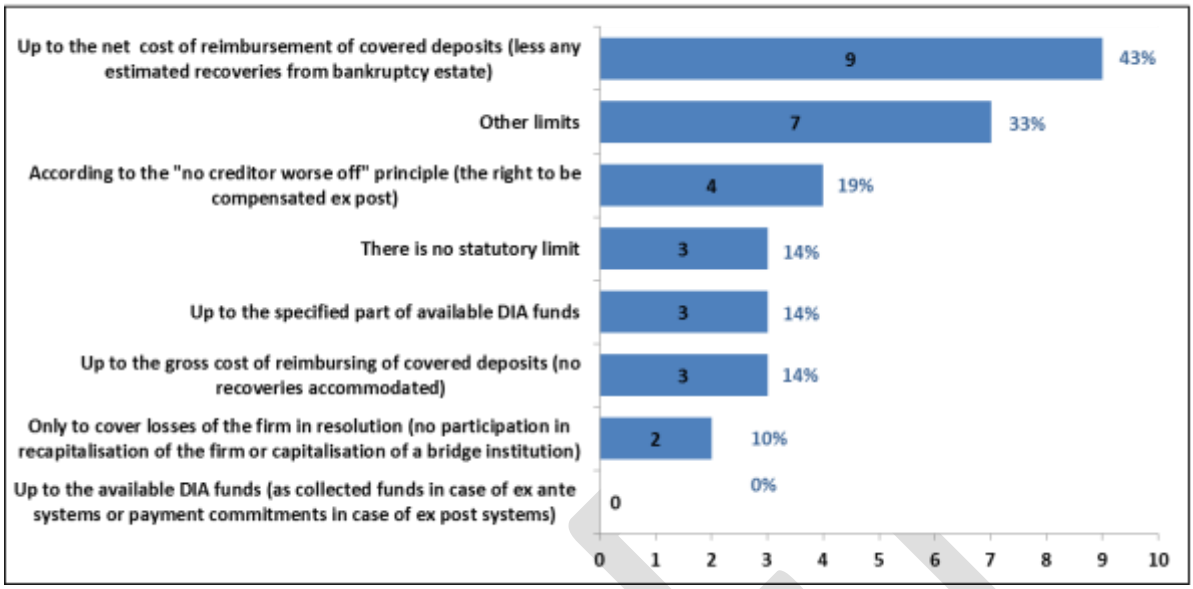
In many jurisdictions, the maximum contribution of a DIA to resolution is the net cost of payout to insured depositors. The net cost is defined as gross payouts minus asset recoveries by the DIA. Determination of the recovery component of the contribution level should be based on a transparent and detailed analysis of past resolutions. The DIA contribution and its use in resolution should be subject to strict ex post verification. If the DIA contributed excessive amounts to the resolution, it should be adequately compensated on a "no creditor worse off" basis.

Current contribution limits

The research project survey found a wide range of mechanisms for determining the DIA contribution. The least-cost solution approach is used by nine respondents (another three do not deduct recoveries from the reimbursement amount) and four apply the "no creditor worse off" principle, which in the case of a DIA is close to the least-cost approach. Seven respondents had other limits and three had no limit (Figure 5). The DIA contribution limited to cover losses only addresses risk the DIA would hold an ownership stake in a financial institution.

[17] In articles 3(2) and 11(2).

Figure 5: Statutory limits for the use of DIA funds to finance resolution measures other than paybox



Number of respondents = 21

Source: IADI, *Bail-in survey*, 2014.

B. Strengthened institutional framework for determining the DIA's contribution to resolution

The DIA should have a role in determining the use of its resources, irrespective of its mandate. Risk minimising and loss minimising DIAs certainly have an important role in determining and implementing the resolution strategy. But even pure paybox and paybox-plus schemes need to play an active part in the resolution decision. Their participation is important because, while many DIAs are not responsible for resolution, all DIAs have a fiduciary responsibility to protect the DIA fund. Even payboxes, with no supervisory or resolution role, are responsible for stewardship of the funds collected from the private sector. Because the DIA collects premiums from the banks and is entrusted with the oversight of the use of those funds, as a public fiduciary it must ensure that the funds are not used inappropriately even when the purpose of contributions is established by statute. The DIA must ensure that the funds are not used excessively for activities outside the purpose of such funds. Even simple payboxes, therefore, should have the information and capability needed to participate as a full member in the safety-net team.

In order to ensure that the oversight function is exercised, all DIAs should have a role in the resolution process. The DIA should have the analytical capacity to play an adequate role in the authorisation and use of its funds for resolution. The DIA must have the capacity to analyse, on its own, the impact of the resolution strategy, have a view about the effectiveness of the strategy, and determine if the contribution being requested is consistent with guidelines on contributions. Moreover, the DIA should be part of a monitoring function and an ex post review

of the use of its funds. In particular, the DIA should be a member of a crisis management oversight group or organization which conducts risk analysis and develops policy responses to those risks.

A policy should be in place ensuring that the results of the resolution process are reviewed and reported. In some jurisdictions, resolution results are publicly reported.[18] Similarly, there should be clear accountability requirements that enable review of the process. Alternatively, requirements could be in place for an independent audit of resolution process. These mechanisms reinforce the ability of the DIA to determine whether delivered funds were used properly and efficiently according to defined rules and purposes.

C. Enhanced role of the DIA in prevention and crisis management frameworks

Given the risks of misuse of funding, the DIA should be involved in monitoring the risk of institution failure, in the discussion of options for resolving failing institutions, and in the ex post evaluation of the effectiveness of the resolution process.

All DIAs, regardless of their mandate, should become aware of those problem entities at risk of resolution as early as possible. Early warning gives time to prepare appropriate actions, depending on the role played by the DIA, from simple payout option to resolution powers. Early engagement is important as it (i) gets the DIA a "seat at the table", (ii) strengthens its interactions with supervisors and other safety-net members, and (iii) facilitates early preparation of possible payout.

DIAs should establish effective channels of communication with other safety-net members. Each institution has its own approach and its own comparative advantage in understanding risks. Supervisors, for example, focus on preventing failure, while the central bank focuses on systemic stability and the DIA focuses on rapid payout and depositor protection. An efficient communication and coordination framework allows all members of the safety-net to benefit from institutional expertise. The exchange of information and opinions is facilitated if there are formal bodies[19] responsible for financial stability. They are composed of financial safety-net partners and perform monitoring on an ongoing basis.[20] Participation by the DIA in such arrangements is an efficient way of obtaining the information necessary to prepare and execute its tasks.

The DIA should be a member of an institutional framework for ongoing communication and coordination involving safety-net participants related to system-wide crisis preparedness and management. The DIA should participate in crisis management oversight groups for specific entities (crisis management groups and resolution colleges). Decisions about the selection of resolution options, the implementation of such options and the monitoring of progress involve a broad range of specialised activities, to which the DIA can make an important contribution. Such participation should not depend on the DIA's mandate. All DIAs have a fiduciary responsibility to protect and oversee resources collected from the private sector. The DIA's role is to seek to ensure the most effective use of such resources.

[18] This is the rule in the US, UK and Spain.
[19] In most cases, set up as formal committees or similar arrangements.
[20] The assessment is usually done at recurring meetings.

This role of the DIA in the crisis management framework is reflected in the principles advocated by international standard setters. Specifically:

- The revised CPs call for a formal framework for the close coordination of activities and information sharing between the deposit insurer and other financial safety-net participants, and argue that the deposit insurer should be part of the framework for the early detection of and intervention in troubled banks.
- The KAs state that crisis management groups should include supervisory authorities, central banks, resolution authorities, finance ministries and authorities responsible for guarantee schemes of the home or host jurisdictions to the material entities of the group.
- The BRRD envisages an active role for deposit insurers in crisis management, including as members of resolution colleges.

D. Position of depositors and the DIA in the claims hierarchy

If the DIA contributes to a resolution with bail-in, its position in the hierarchy of claims has an impact on the amount of the contribution.

The higher (more senior) the DIA's position in the hierarchy of claims, the smaller the DIA's contribution to bail-in. The determination of a DIA's contribution is based on the amounts reimbursed to depositors, netted against the expected recoveries from the failure.

If the position of the DIA in the hierarchy of claims is higher, the DIA's proportion of total recoveries will be higher and the net costs will be lower. As net costs place a limit on the DIA's bail-in contribution, the higher ranking limits its exposure to resolution funding.

EU countries have agreed on the harmonization of depositor preference. Article 108 of the BRRD requires EU member states to shape the hierarchy of claims in a way that ensures "super-preference" for covered deposits and deposit insurers subrogated for covered depositors. Additionally, "*in order to provide a certain level of protection for natural persons and micro, small and medium-sized enterprises holding eligible deposits above the level of covered deposits, such deposits should have a higher priority ranking over the claims of ordinary unsecured, non-preferred creditors*"[21] (depositor preference).

Apart from EU member states, depositor preference is applied in Argentina, Australia, Hong Kong, India, Indonesia, Nigeria, Russia, Singapore, Switzerland, Turkey and the US.[22]

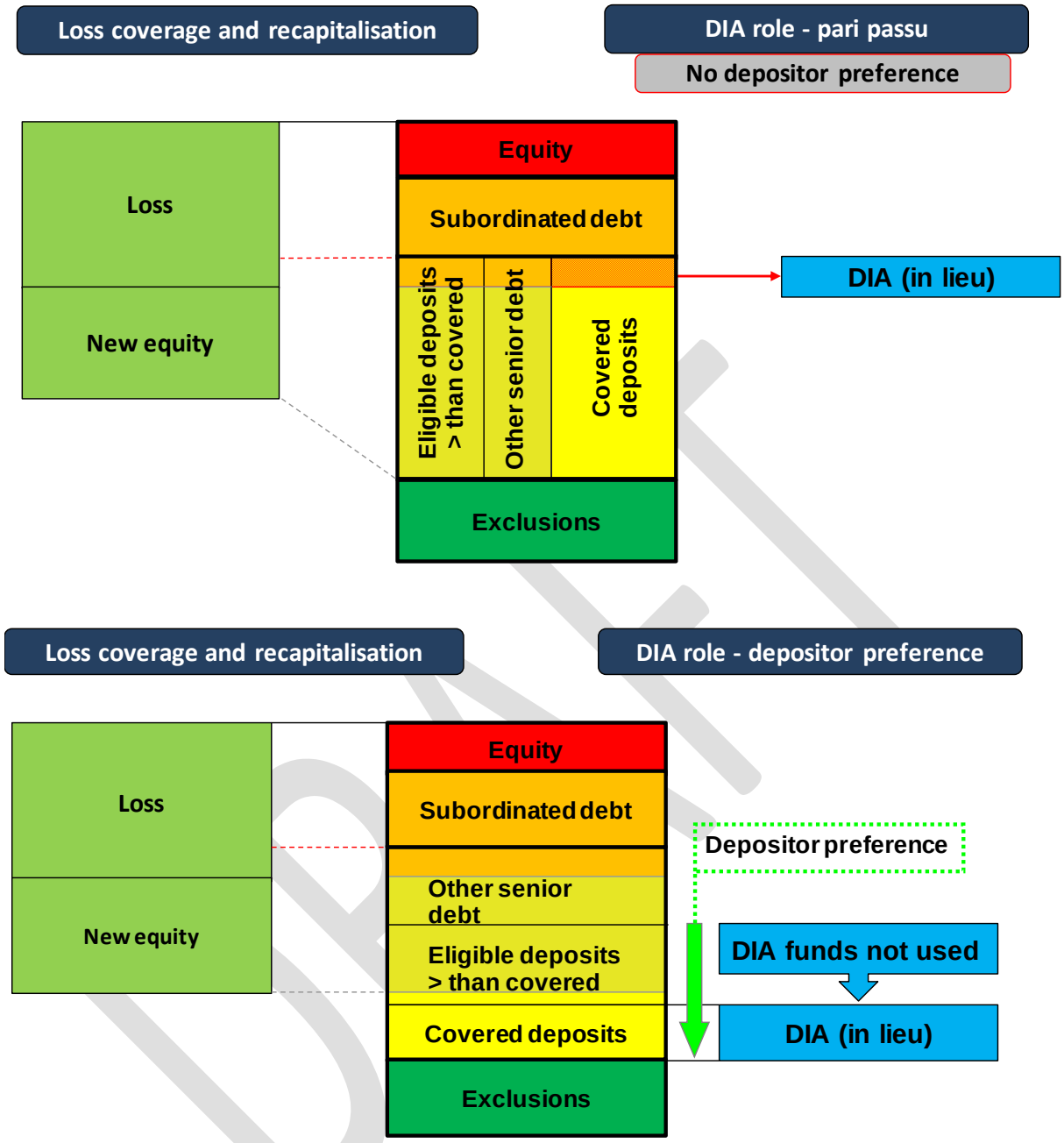
Figure 6 shows the impact of depositors' ranking if the DIA contributes to bail-in in lieu of depositors[23].

[21] Paragraph 111 of recital to the BRRD.

[22] In some countries, the creditor preference rule is subject to certain limitations, e.g. only retail deposits, up to a certain amount or only in local currency. Based on: Question 35 in IADI's Bail-in Survey; Clifford Chance, *Asian bank resolution regimes,* May 2013; and Clifford Chance, *Depositor preference in the G20*, September 2011.

[23] DIA participates only in loss coverage not recapitalization.

Figure 6: Impact of depositors ranking for DIA



Source: Own elaboration.

E. Strengthened requirements on loss absorption

DIA resources can be partially protected by ensuring that failing institutions have a sufficient amount of liabilities that can be bailed in. International standard setters, as well as some national resolution regimes, require financial institutions (typically large, complex institutions) to issue a certain amount of unsecured liabilities ("bail-inable" liabilities). In a failure, such liabilities can absorb losses of the institution and be converted into equity, recapitalising the institution (bail-in). Without such a requirement, banks may (i) issue secured liabilities because their

funding costs are low, (ii) have smaller amounts of convertible liabilities, and (iii) rely on correspondingly large support from public funds, including from the DIA.

The requirement for issuing a specific level of debt that can be bailed in is incorporated into international standards. The FSB includes in the TLAC Term Sheet[24] a requirement that large, complex institutions (typically G-SIFIs) hold a specified level of convertible liabilities – the Total Loss-Absorbing Capacity (TLAC). That amount includes equity, subordinated debt and unsecured liabilities. The EU has incorporated into the BRRD a requirement to hold convertible liabilities – the minimum requirement for own funds and eligible liabilities (MREL). These requirements are aimed at making bail-in an effective resolution.

There are some design differences between TLAC and MREL requirements. First, TLAC sets a global standard for G-SIBs, while MREL applies to all EU banks. Second, TLAC describes a minimum capital requirement, while the resolution authority sets MREL for individual banks on the basis of a resolution plan. Third, TLAC requirements are set in terms of risk-weighted assets (RWAs) and leverage, while MREL is formally set in relation to total liabilities and own funds. Finally, the FSB report specifies the quantum and quality of TLAC while the BRRD provides for more flexibility for the resolution authorities[25].

Notwithstanding these design differences, the purpose of TLAC and MREL is to ensure that a financial institution has enough capital and debt instruments to absorb losses and to be converted into equity. In this way, creditor resources, rather than other government resources or DIA funding, are used for recapitalisation purposes. If set at appropriate levels, therefore, these requirements create an adequate buffer, offering a degree of protection for DIA resources during a bank resolution.

[24] FSB, *Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution, Total Loss-absorbing Capacity (TLAC) Term Sheet*, 9 November 2015.

[25] In November 2016 EC proposed Capital requirements (CRR/CRD IV) and resolution framework (BRRD/SRM) amendments that among others opt for alignment of the BRRD with FSB TLAC standard.

CONCLUSIONS

Since the global financial crisis, international organisations have taken steps to strengthen the global safety-net framework, with a number of reforms aimed at strengthening the toolkits for bank resolution. A key innovation has been the introduction of bail-in powers for recapitalising distressed financial institutions. The bail-in framework is still evolving and even with the limited experience so far, it is recognised that the bail-in tool poses some risks for DIAs.

The risks related to the use of DIA funds for bail-in arise from a change in the ownership pattern of banks after bail-in, the inappropriate use of funds, a costly resolution strategy from the DIA's perspective, and threats to the credibility of the DIA if resolution funding and subsequent failure of the resolved institution deplete the deposit insurance fund .

There is, accordingly, the need to safeguard the interests of the DIA and the use of its funds. This supports an enhancement in the role of DIAs in crisis prevention and crisis management frameworks. It is important that DIAs are involved in discussions on the process for resolving failing institutions, and in the ex post evaluation of the effectiveness of the resolution process.

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LIST OF FIGURES