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RESOLUTION: IMPLICATIONS FOR SUPERVISORS

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RESOLUTION: IMPLICATIONS FOR SUPERVISORS

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RESOLUTION: IMPLICATIONS FOR SUPERVISORS

Introduction[1]

The global financial crisis (GFC) demonstrated the limited options available at that time to the authorities in dealing with failed (or failing) systemically important financial institutions (SIFIs).

Three options were available. First, to pursue a rapid sale to another financial institution or perhaps a consortium of investors. Second, to put the failed institution into whatever national liquidation regime[2] applied to it. Third, to support the failed institution through an injection of public funds (capital injection, full public ownership, or the guarantee of some or all liabilities).

All three options were unattractive. Finding a sufficiently strong and large immediate buyer of a failed or failing SIFI is difficult, and even if successful[3] this turns the purchaser into an even larger and more complex SIFI. Allowing a major financial institution to fail risks causing severe contagion and confidence effects and disruption to the critical functions provided by the failing institution (as with Lehman Brothers in September 2008). Government support imposes potentially high costs on taxpayers and reinforces the expectation that 'too big to fail' financial institutions would always be rescued by governments.

In response, the Financial Stability Board (FSB 2011) introduced a framework to enable failing SIFIs to be "resolved" in a more orderly manner than liquidation, while limiting the cost to taxpayers. This was part of a series of measures – together with recovery planning, capital surcharges, and more intensive supervision – to address the problem of 'too big to fail' financial institutions.

This Toronto Centre Note describes the main features of the FSB's approach to resolution and draws out some key implications for financial sector supervisors.

Summary of implications for financial sector supervisors

Financial sector supervisors should work in close cooperation with the resolution authority in:

Resolution planning

- Identifying SIFIs and any other institutions that should be subject to a resolution strategy
- Assisting the resolution authority in monitoring whether these institutions are themselves prepared for resolution, for example in terms of liquidity pre-positioning, access to FMIs, and valuation preparedness

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[1] This Toronto Centre Note was prepared by Clive Briault.
[2] In this Note, "liquidation" also refers to "administration," "winding up," and "insolvency proceedings." The terminology differs across countries and sometimes across financial sectors.
[3] As, for example, with the purchases of Bear Stearns and Washington Mutual by JP Morgan Chase in 2008.

- Providing information and advice to the resolution authority for its construction of resolution plans
- Establishing requirements for loss-absorbing capacity, and setting, monitoring, and enforcing any limits imposed on holdings of subordinated debt issued by other financial institutions and on the issuance of debt instruments to retail customers
- Coordinating the use of intervention powers
- Helping the resolution authority work with other authorities, in particular cross-border

Triggering resolution

- Informing the resolution authority that the financial condition of an institution is deteriorating
- Making a formal or informal assessment of the viability of an institution, and determining whether there is a reasonable prospect that alternative actions could prevent failure within a reasonable timeframe

Facilitating resolution and restructuring

- Approving new owners, directors and senior managers, and bridge institutions, and the sale or transfer of assets and liabilities to other institutions
- Providing an assessment of solvency to a central bank considering the provision of liquidity assistance to a financial institution in resolution

What is resolution?

For many supervisors, "resolution" typically has a broad meaning, covering the resolution of problems in financial institutions and the use of any powers or tools to deal with failed institutions.

The FSB's approach adopts a much narrower meaning of "resolution," namely the use of a specific set of powers as an alternative to liquidation or government support to deal with a failed or failing financial institution.

The FSB's resolution framework was intended to be applicable to all financial sectors, not just to banks. Indeed, a revision to the framework (FSB 2014) included sector-specific guidance for insurers, investment managers, and financial market infrastructures. However, most countries have to date introduced resolution regimes only for banks, and in some cases for central clearing counterparties.

The FSB also viewed its resolution approach as being applicable primarily to SIFIs. It recommended that failed smaller, non-systemic financial institutions should either be (a) put into liquidation, with protection funds used to pay out to insured retail depositors or policyholders, or (b) dealt with by a protection agency that has the powers and resources to take over a failed institution and then restructure it as necessary ahead of a sale of all or part of its assets and liabilities to a larger private sector third-party purchaser (for example using purchase and assumption powers).

Resolution objectives

In designing its resolution framework, the FSB sought to achieve three sets of objectives:

Ensure the continuity of critical functions – one reason for designating financial institutions to be of systemic importance is that they are large-scale providers of critical functions, for example payment, clearing, settlement, and custody services; retail deposit taking and retail lending; specialist lending (for example to SMEs, industry sectors or regions); market-making in securities such as government bonds; property, motor, and health insurance; employer liability insurance; life insurance; and national pension schemes. The FSB resolution framework is intended to preserve the continuity of these critical functions, while at the same time facilitating an orderly restructuring of a failing SIFI (the medium-term objective is to restructure a failing financial institution, not to resurrect it), and minimizing contagion and the impact of interconnectedness.

Reduce the potential cost to taxpayers – someone must meet any losses arising from a failed financial institution, and in some cases recapitalize a failing institution. The FSB resolution framework seeks to impose these costs on the shareholders and the unsecured and uninsured creditors of the failing or failed institution. This is also intended to reduce moral hazard arising from the expectation that public support will be available.

Ensure speed, transparency, and predictability – although the failure of a SIFI is always likely to be messy, legal and procedural clarity and advanced planning can enable a more orderly resolution, avoid the unnecessary destruction of value, and provide incentives for market-based solutions as part of the restructuring process.

Resolution authority

Each country needs to designate a resolution authority with the requisite powers (see below), protections (operational independence, adequate resources, legal protection for staff, and access to information from firms), and clear roles and responsibilities to undertake resolution planning, to trigger a resolution, to use the powers available, and to operate the resolution of a failing financial institution.

Countries have taken different approaches to creating resolution authorities. Some have designated an existing authority – a supervisory authority, central bank, or deposit protection scheme, each of which has relevant expertise – to be the resolution authority, while in other cases a new, stand-alone resolution authority has been created (for example the Single Resolution Board for the banking area within the euro zone in Europe). Resolution powers and responsibilities may also be split or shared between authorities.[4] In each case, this brings both opportunities and constraints:

Supervisory authority – resolution planning (see below) may overlap quite closely with supervision, while putting a financial institution into resolution usually equates to the final stage of supervisory intervention.[5] However, there may be potential conflicts of interest here arising from the different objectives of a supervisory authority and a resolution authority, both in choosing whether and when to put an institution into resolution and in running the remains of an institution post-resolution.

[4] For example, between the Federal Reserve and the FDIC in the US.
[5] See, for example, the stages of supervisory intervention set out on page 17 of Toronto Centre (2019).

Central bank – a central bank may be strongest placed in terms of independence and resourcing, while there is an overlap with its roles of providing liquidity (a financial institution in resolution may need to draw on liquidity from the central bank) and in assessing financial stability. However, there is a concern that some central banks may be becoming over-burdened with multiple responsibilities and mandates, for example where they are already responsible for monetary policy, payment systems, financial stability, banking (and insurance) supervision, and macro-prudential policy.

Deposit insurance agency (or policyholder protection agency, if a resolution authority covers insurers as well as banks) – a deposit insurance agency may have experience in dealing with failing banks, including the use of some powers (transfers of assets and liabilities to third parties, and bridge banks) specified in the FSB's resolution framework.

New authority – a new resolution authority may struggle to establish the necessary independence, expertise, resourcing, and cooperation with other authorities.

Whichever option is chosen here, the resolution authority will need to cooperate and coordinate with other authorities, both nationally and internationally, including the sharing of information and participation in crisis management groups. It will also need to have powers to recognize, and to implement locally, actions taken by relevant foreign resolution authorities, and to resolve a local branch or subsidiary if the home resolution authority fails to act.

Supervisory implications

Wherever the resolution authority is established, supervisors will need to:

- Understand the objectives, powers, and responsibilities of the resolution authority and how these differ from a supervisory authority
- Ensure close cooperation and coordination with the resolution authority

Resolution planning and resolvability assessment

Resolution plan

Resolution is at least as much about planning as about the use of resolution powers. One key element of this is for the resolution authority to construct a detailed resolution plan for each financial institution that might be subject to a resolution strategy if it were to fail (so, following the FSB recommendation, this would apply to SIFIs and to any smaller institution that was a material provider of a critical function). A resolution plan is owned by the resolution authority (unlike a recovery plan, which is owned by the financial institution itself), because if it is activated, the resolution authority will be in the lead.

A resolution plan is a detailed plan for implementing the preferred resolution strategy for a specific institution (different institutions may be subject to different strategies), plus fall-back alternatives. The plan should identify and map each critical function, key legal entity, and key business line of the institution; identify financial and operational linkages and dependencies across legal entities; specify how the continuity of the identified critical functions could be preserved through the use of resolution tools; and assess the operational continuity of the critical services and funding on which the critical functions depend. The plan will be based on a large-scale information set from each relevant financial institution and will require regular updating.

Operational continuity in resolution

Much of the early emphasis of resolution planning focused on identifying the critical functions supplied by financial institutions, and on planning to use resolution powers to preserve the continuity of these critical functions. However, it became clear from this initial analysis that preserving the supply of critical functions – at the point of resolution, during any stabilization period, and during the restructuring of an institution in resolution – depended on preserving the continuity of the various services on which this supply was based.[6]

The discontinuation of any critical services could lead to an inability of a financial institution to perform its critical functions. The operational continuity of critical services has therefore become a key aspect of resolution planning, with a particular emphasis on the "resolution-proofing" of the contractual provisions relating to rights of use and access, pricing structures, operational resilience, and financial resourcing of third-party (or intra-group) providers of critical services.

Resolvability assessment

The resolution authority must then evaluate whether each institution (which will probably be a financial group, or even a conglomerate) could be credibly and practically resolved if it failed. Would there be a way, using the resolution powers available, to preserve the critical functions of the firm or group? Would the services that support the critical functions continue to operate? Would the institution continue to have access to financial market infrastructures? Would the institution need liquidity support, and where would this come from?

Under the FSB resolution framework, a resolution authority should have powers to require a financial institution to change its business or organizational structure – while it is still viable – to improve its resolvability. These changes could, for example, be to the institution's business model; legal, organizational, or operational structure; existing or proposed activities, products, or services; exposures within or outside the group; or the liability structure of its balance sheet. Consistent with the overall approach to 'too big to fail' financial institutions, this might also disincentivize or constrain SIFIs from becoming too large or too complex.

Resolution strategies for groups and the legal framework for cross-border cooperation

Resolution strategies

When dealing with a group rather than a single entity, the resolution authority will need to plan in advance for whether resolution might be applied to all entities in the group simultaneously (multiple point of entry resolution) or only to a non-operational holding company that holds the loss-absorbing capacity of the group and down-streams it to the operating entities (single point of entry – only the holding company is put into resolution).

[6] For example, the EBA (2015) set out a core list of operational and finance-related services and facilities supporting banks' critical functions, including human resources, IT, transaction processing, real estate and facility provision or management, legal services and compliance functions, treasury related services, trading and asset management, risk management, valuation, accounting, and cash handling.

Under a multiple point of entry (MPE) resolution, each entity in a failing group would be resolved separately. Each entity that might be subject to resolution would need to hold its own loss-absorbing capacity (see below), while entities that are not of systemic importance might be put into liquidation. This approach makes most sense when a group comprises relatively stand-alone subsidiaries, with limited intra-group transactions and limited group-wide provision of critical services from a single provider. In resolution, the activation of bail-in is likely to result in a break-up of the ownership of the group if the subordinated debt issued by each separate entity is converted into new equity owned by different, new shareholders.

Under a single point of entry (SPE) resolution – which is the preferred approach in countries such as Switzerland, the UK, and the US – the focus is on the top holding company, which issues equity and subordinated debt and down-streams this to its operating subsidiaries. A failure of the group would trigger only the resolution of the top holding company. The writing off of equity issued by the holding company and the writing down or conversion of debt issued by the holding company would then be used to meet losses (wherever they have occurred across the group) and, if necessary, to recapitalize one or more operating subsidiaries. Meanwhile, the subsidiaries should continue to operate normally. The group can then be restructured as necessary, or continue under new management and new ownership.

It should be noted, however, that an SPE approach can only work successfully if there is sufficient equity and debt in the holding company for its resolution to be sufficient to meet losses and if necessary to recapitalize the operating subsidiaries where the losses have been made. Beyond this, an SPE approach would have to collapse into an MPE approach where individual subsidiaries are put into resolution. Also, regardless of the SPE designation, any necessary central bank liquidity assistance is likely to be provided at the national level.

Cross-border cooperation and coordination

The FSB resolution framework sets out four areas for cross-border cooperation and coordination among resolution authorities. First, it recommends clarifying home and host country resolution authority roles and responsibilities, and the establishment of information sharing – conditional on adequate confidentiality safeguards, there should be no legal barriers to cooperation with foreign resolution authorities.

Second, each host country should give legal recognition to the home country's resolution actions, and implement mechanisms for these actions to have legal effect in the host country. Home and host countries should also support each other during a resolution and should aim to achieve an equitable treatment of creditors located in different countries. Host country resolution authorities should also be able to take resolution actions to deal with a failing local subsidiary even if the home country resolution authority fails to act.

Third, crisis management groups should be established for major cross-border financial groups that are potentially subject to resolution to prepare for and facilitate the management and resolution of a failing or failed cross-border financial group. The FSB recommends that crisis management groups should include the supervisory authorities, central banks, resolution authorities, finance ministries, and the public authorities responsible for guarantee schemes of home and host countries that are material to the resolution of a cross-border group, or where the group has a systemic presence.

Fourth, loss-absorbing capacity should be spread across a group through a requirement on subsidiaries to hold loss-absorbing capacity locally, either through raising external debt or equity (as part of an MPE resolution strategy), or through the down-streaming of debt or equity from a parent or group holding company (as part of an SPE resolution strategy). This is intended to provide host resolution authorities with confidence that there is sufficient loss-absorbing and recapitalization capacity available to subsidiaries in their jurisdictions with legal certainty at the point of entry into resolution.

Despite these recommendations, a cross-border resolution may represent one of the greatest remaining challenges of the post-crisis reform agenda. It may not be possible to reach agreement across resolution authorities in all relevant countries on a resolution plan for a cross-border group that is credible both for the group as whole and for each of its subsidiaries. There may be inconsistent (or non-existent) powers and different approaches to resolution planning across jurisdictions. And there is always the "global in life, but national in death" nature of an international financial group – so whatever degree of apparent cooperation and agreement is reached during normal times, once the group is failing each national resolution authority may act independently to protect local creditor interests and to preserve national host country financial stability. National interests are always likely to emerge in practice, despite whatever is agreed in advance.

Supervisory implications

Supervision and resolution authorities should work closely together in:

- Using information that may already be available to supervisors as an input to the resolution plan for each institution
- Cooperating in the resolvability assessment – supervisors should have a good understanding of how major institutions operate and where some of the barriers to effective resolution might arise
- Use of powers – some of the intervention powers that should be available to a resolution authority to enable a credible resolution plan to be constructed overlap quite closely with the powers available to supervisors to improve the safety, soundness, and conduct of institutions. They should therefore be used in a coordinated manner, while recognizing that the resolution and supervisory authorities are pursuing different objectives in their use of these powers
- Cross-border cooperation – supervisory authorities may be well placed to assist resolution authorities in establishing effective cross-border cooperation and coordination, drawing on the long and extensive experience of supervisory authorities in information sharing, memoranda of understanding (MoUs), supervisory colleges, and communication with international financial institutions
- Cooperation between colleges of supervisors and colleges of resolution authorities

Triggering resolution

Under the FSB's resolution framework, the criteria for putting a financial institution into resolution are that:

- The financial institution is "failing, or likely to fail," or at the "point of non-viability." This is not defined with any precision by the FSB, leaving resolution authorities with discretion to determine when this point is reached. However, some countries have introduced more specific versions of this criterion, for example by specifying that it would be reached if an institution's regulatory capital ratio fell below a specific level (for example a 5% ratio, or 50% of the minimum regulatory requirement).

- There is no reasonable prospect that alternative actions (the institution's own recovery plan, an immediate sale to a third party, or any remaining supervisory interventions) could prevent failure within a reasonable timeframe – recourse to these alternatives should not become a means to delay triggering resolution for an unnecessarily long period of time.
- Resolution is in the public interest – so, for example, it can be demonstrated that it would be better to use resolution powers than to put a failing institution into liquidation.

These criteria mean that the resolution option does not have to be applied to a failing institution, although it will probably be the best option for a failing SIFI; and that even if resolution is triggered, the resolution authority still needs to decide which mix of specific resolution powers and tools to use.

Countries have taken different approaches to the question of how a resolution would be triggered. Some have given this decision solely to the resolution authority; some have made this a joint decision involving also the supervisory authority, central bank, or deposit protection agency; and some have made it a decision for the resolution authority dependent on input, advice, or a formal notification from another authority (for example a supervisory authority stating formally that an institution has failed or is failing).

Resolution authorities should recognize circumstances where a court order may be required to take certain resolution actions, for example to put a financial institution into resolution or liquidation, and build this into their planning processes. Meanwhile, although resolution authorities cannot avoid the possibility that their actions may be challenged through the legal system,[7] it is important that the legislative framework for implementing resolution should not allow judicial actions to delay or reverse resolution actions taken in good faith.

Supervisory implications

Supervisory authorities may have formal or informal roles in triggering resolution, such as:

- Informing the resolution authority that the financial condition of an institution is deteriorating, so that the resolution authority can step up its planning in case the position deteriorates further to the point where resolution could be triggered
- Making a formal or informal assessment of the viability of an institution, as an input to the decision-making process
- Determining whether there is a reasonable prospect that alternative actions (the institution's own recovery plan, an immediate sale to a third party, or any remaining supervisory interventions) could prevent failure within a reasonable timeframe
- Being a joint decision-maker in triggering resolution

[7] For example, resolution authorities should expect aggrieved creditors that have been subject to bail in to appeal against this through the legal system.

Remove/replace directors and managers

The FSB recommends that resolution authorities should have the power to remove and replace the directors and senior managers of an institution as soon as it is put into resolution and to appoint a new team to run the institution (if it is recapitalized), or to run a bridge institution to which all or some of the failing institution's assets and liabilities are transferred.

This may need to be undertaken very quickly, so the resolution authority may not be able to use the powers under the "fit and proper persons" regimes operated by supervisors, since those supervisory powers usually take time to implement and may be subject to review or appeal procedures.

Supervisory implications

Even if a resolution authority is not relying on supervisory powers to replace or remove directors and senior managers, supervisors may be able to assist the resolution authority in:

- Identifying in advance potential candidates for running an institution (or bridge institution) in resolution – for example, retired senior managers of successful institutions
- Fast-tracking the supervisory approval of the new directors and senior managers, at least on a provisional basis

Override rights of shareholders

To avoid other resolution actions becoming subject to shareholder approval and to facilitate a speedy resolution process that does not become delayed by court actions, the FSB recommends that the resolution authority should have the power to cancel the controlling and economic rights of the shareholders of an institution as soon as it is put into resolution.

This is a radical approach, which is likely to require a legislative amendment to the usual company law protections of shareholder rights.

Transfer/sale of assets and liabilities

The resolution authority should have the power to transfer selected assets and liabilities of an institution in resolution to a third party or to a bridge institution without requiring the consent of any interested party or creditor to be valid, and without this constituting a default or termination event.

Such a transfer may be particularly useful as a means of preserving the continuity of critical functions (for example by transferring the deposit-taking activities of a failing bank to a different bank, or transferring insurance business to another insurer). This also provides considerable optionality in the restructuring of a failing institution, whether the transfer(s) are undertaken immediately or later during the restructuring process (for example, selling all or part of the business of a failed institution out of a bridge institution).

Temporary bridge institution

The resolution authority should have the power to establish one or more bridge institutions, controlled by the resolution authority, to take over and continue operating certain critical functions and viable operations of a failing financial institution. This requires the ability to enter into legally-enforceable agreements by which the resolution authority transfers, and the bridge institution receives, some assets and liabilities of the failed institution. It also requires advance planning on the terms under which the bridge institution will operate, including the applicability of regulatory requirements (both prudential and conduct), and the selection and approval of directors and senior management.

The objective here is for the resolution authority to run the bridge institution as a viable entity, returning the critical functions to private ownership when conditions are appropriate, or alternatively to wind down (all or part of) the operations if they are not viable – but only once the critical functions can be substituted by the activities of other financial institutions.

A bridge institution may require access to central bank liquidity support (see below), which may also require the supervisory authority to provide an assessment that the bridge institution is solvent.

Supervisory implications

Some supervisory authorities, and some deposit and policyholder protection schemes, already have powers to transfer assets and liabilities and to establish bridge institutions. But the mandate and objectives of a resolution authority may be different, particularly the emphasis on preserving critical functions. Supervisory authorities may play an important role here in:

- Approving the changes to a third-party financial institution to which some or all of the assets and liabilities of the failed institution are transferred
- Setting the regulatory requirements (for example, minimum capital and liquidity ratios, corporate governance, and internal controls) that a bridge institution has to meet
- Approving a bridge institution to open for business
- Assessing the solvency of a bridge institution to meet one of the criteria for the provision of central bank liquidity support

Asset management company

The resolution authority should have the power to transfer non-performing loans or difficult-to-value assets of a failing institution in resolution to an asset management company.[8] This may be helpful in allowing a bridge institution (or any other successor institution) to focus on running the critical functions of the failed institution and in seeking a medium-term private sector solution, or in deriving greater value from a managed run-down of an asset portfolio rather than a fire sale.

[8] Again, this is not a new power. For example, it was used extensively in Ireland in 2009 to transfer bad loans from failed or failing banks to the National Asset Management Agency.

Where the asset management company is owned by the public sector, the resolution authority should only transfer assets to it at a conservatively low valuation, since if the asset management company bought bad assets at a high price it would make a loss, which would have to be met by taxpayers rather than by the creditors of the failing institution.

Bail-in of some creditors

Perhaps the most radical power in the FSB's resolution framework is for the resolution authority to have the power to write down the value of equity and certain other liabilities of an institution in resolution to meet losses in the failing institution, and also the power to convert unsecured and uninsured creditor claims into (new) equity to recapitalize the failing institution, or to capitalize a bridge institution to which all or part of the assets and liabilities of the failed institution are transferred. This writing down or enforced conversion is termed the "bail-in" of these liabilities – as opposed to the "bail-out" of a failing institution using public funds.

A resolution authority (or the legislation governing its activities) would have to decide which liabilities could be subject to bail-in, and the order in which this would take place. For any financial institution, this might begin with its tier 1 capital instruments (equity and equity-like instruments), its tier 2 capital instruments (subordinated debt with at least five years' remaining maturity), and then any other subordinated debt. Beyond this, the focus should be on uninsured and unsecured liabilities – so for a bank or a securities company, its unsecured wholesale deposits (interbank and corporate) and uninsured retail and SME deposits; and for an insurance company or pension fund, its general creditors other than policyholders and members, and then some categories of policyholder or beneficiary where these are deemed to be less worthy of protection than other categories of policyholder or beneficiary.[9]

This ordering in which creditors would potentially be subject to bail-in should, if possible, be determined and announced by the resolution authority in advance of any use of the bail-in power, so that investors, depositors, policyholders, and other creditors know in advance where they would stand in a resolution.

The FSB also recommends that countries should follow the "no creditor worse off than in liquidation" (NCWOL) principle, according to which the resolution authority should undertake (at a reasonable interval after putting a financial institution into resolution) an analysis of whether any creditors would have been better off if the institution had been put into liquidation. If so, then such creditors should be compensated accordingly. Overall, creditors should not be worse off under resolution because it preserves value in the failing institution. However, this may not be true for some classes of creditor – for example, where a creditor is subject to bail-in under a resolution ahead of other creditors with whom the bailed-in creditor would have ranked equally in a liquidation.[10]

The use of these bail-in powers relates directly to all three of the objectives of resolution: to ensure the continuity of critical functions by enabling these to continue in a recapitalized

[9] The usual approach to dealing with the failure of an insurance company through a transfer of assets and liabilities or an orderly run-off of business would not be sufficient where the losses and any need for recapitalization exceed the resources available from the bail-in of equity and subordinated debt. The failure of HIH in Australia in 2001 is a graphic example of this problem.

[10] This problem of the ordering in which creditors are subject to bail-in being different to the ordering set by the creditor hierarchy in a liquidation can be avoided – as for example as in the UK – by amending the hierarchy of creditors in liquidation so that it mirrors the order in which creditors would be subject to bail-in under a resolution.

successor institution, and to provide time for the successor institution to be restructured; to place the costs of absorbing losses and of recapitalization on the creditors of the failing institution, not on taxpayers; and to provide certainty by specifying in advance the order in which creditors of the failing institution would be bailed-in. There is also the potential benefit that creditors facing the prospect of being bailed-in might impose greater market discipline on financial institutions.

Although in the FSB resolution framework the intention is that all the costs of resolution fall on the creditors of the failing institution, the bail-in power could also be used to share these costs in some way between the creditors and the public sector. This may be necessary where the losses are too large to be absorbed by the institution's equity, debt, and uninsured and unsecured deposits – which may be a particular issue where an institution's liabilities comprise mostly equity and insured deposits. The bail-in power could then be used to impose losses and the cost of recapitalization on creditors up to a certain point, and then for the government to meet the costs beyond this. Alternatively, or additionally, some of these costs could also be imposed on a pre-funded resolution fund or through a government loan to such a fund which is subsequently repaid by levies imposed on surviving financial institutions.

Loss-absorbing capacity

To make effective use of the bail-in power without having to bail in depositors (of a bank) and policyholders (of an insurance company), and to avoid, or at least minimize, the use of government support, the resolution authority needs financial institutions that might be subject to a resolution strategy to have issued sufficient equity and subordinated debt to provide a reasonable chance of absorbing losses and recapitalizing the institution in a resolution.[11] It is also important to avoid, as far as possible, investor uncertainty and incentives to run from an institution when difficulties emerge.

Reflecting this consideration, the FSB issued standards in November 2015 for global systemically important banks[12] (G-SIBs) to issue a minimum amount of total loss-absorbing capacity (TLAC) in the form of regulatory capital (tier 1 and tier 2) and other subordinated debt with more than one year residual maturity. G-SIBs were required to have issued TLAC equal to at least 16 percent of risk-weighted assets and 6 percent of the Basel framework leverage ratio denominator from 1 January 2019, and 18 percent and 6.75 percent respectively from 1 January 2022. Capital buffer requirements (such as the capital conservation buffer and the counter-cyclical capital buffer) are then applied over and above the minimum TLAC requirement.

The FSB also set standards for "internal TLAC," namely for material sub-groups within a G-SIB to hold TLAC (equivalent to 75-90% of what they would have been required to hold as a stand-alone group) through the down-streaming of TLAC eligible liabilities from a parent resolution entity to such subgroups. The resolution of the parent entity would trigger the writing-down or conversion of this internal TLAC into new equity of the down-streamed instruments, to meet losses and to recapitalize material sub-groups. The FSB standards

[11] It cannot be guaranteed that equity and subordinated debt will be sufficient to meet losses and, if necessary, to recapitalize a failing institution. However, the requirement to hold loss-absorbing capacity can be set at a level that would have been sufficient in most of the failures of SIFIs in the GFC.

[12] Nothing similar has been introduced by the FSB as a requirement for insurance companies.

were supplemented by Basel Committee standards (2016 and 2017) limiting the holdings of TLAC by other banks, and Pillar 3 disclosure requirements.

Some countries have set standards that are higher than the FSB minimum standards for their major banks. For example, in Europe the Single Resolution Board (SRB 2020) and some national resolution authorities[13] have set TLAC[14] requirements equivalent to twice a major bank's Pillar 1 and Pillar 2 capital requirements, plus its combined buffer requirements as well as (in the case of the SRB) an additional market confidence charge. This results in major banks (D-SIBs, not just G-SIBs) generally facing a minimum TLAC requirement in the region of 25-30% of risk-weighted assets.

A further consideration here is for a resolution authority to take into account the identity of the holders of subordinated debt that might be subject to bail-in. For example, if the holders are other financial institutions, then there is a risk that the bail-in of this debt would lead to contagion effects. Another example would be where subordinated debt has been sold to the retail depositors of a bank, without them realizing that this debt could be subject to bail-in, and without this debt being covered by any deposit guarantee scheme.[15] Resolution authorities could seek to limit these circumstances by imposing restrictions on holdings of debt issued by other financial institutions; by restricting the sale of debt to less sophisticated individuals; and by taking account of problematic holders of debt in the setting of a financial institution's TLAC requirement.

Supervisory implications

As with the setting of additional capital buffers for banks by macro-prudential authorities, supervisory authorities should try to ensure that the overall levels and positioning of regulatory capital, macro-prudential buffers, and TLAC requirements are well coordinated, consistent, and clearly explained

Supervisors should also recognize that any assessment of the impact of regulatory capital requirements on financial institutions and on the economy more generally cannot sensibly be undertaken in isolation from the impact of the related buffers and TLAC requirements set by macro-prudential and resolution authorities

Supervisors also need to coordinate closely with resolution authorities in the setting, monitoring, and enforcement of any limits imposed on holdings of subordinated debt issued by other financial institutions and on the issuance of debt instruments to retail customers. Such limits and other restrictions have generally been imposed by supervisory authorities, not resolution authorities (see for example Basel Committee, 2016, and Financial Conduct Authority, 2015)

Ownership and control

When existing (pre-resolution) shareholders are wiped out and some debt is converted into new equity, these former creditors become the new owners of the institution. This may cause "change of control" problems for supervisors. This can be avoided by converting debt into

[13] See, for example, Bank of England (2018).
[14] In the European Union, TLAC is referred to as Minimum Requirement for Own Funds and Eligible Liabilities (MREL).
[15] This became a major problem in Italy, where some failing banks were found to have issued half of their subordinated debt to their retail depositors.

instruments (for example, tradable certificates of entitlement) that give the new shareholders rights to an economic interest, but not control or voting rights. Control remains with the resolution authority while any restructuring is undertaken and for as long as any bridge institution exists. When a new owner is granted supervisory approval, these instruments can be converted into ordinary equity instruments, which give the shareholder both an economic and a controlling interest. If a new owner of equity does not gain supervisory approval, they can either continue to hold the limited instruments or sell them to another investor.

Supervisory implications

Supervision and resolution authorities should determine in advance how change of control issues would be handled in a resolution, and what minimum requirements a bridge institution would have to meet in order to operate as a financial institution

Use of resolution powers

FSB-style resolution powers and tools including bail-in have already been used to resolve failing banks in Europe, in some cases avoiding entirely the use of government support, and in some cases used to create burden-sharing between bank creditors and government support (with at least all equity and subordinated debt being written off or converted into new equity ahead of any government support being provided).[16] Some of these examples are summarized in Annex A.

A neat example of the use of some resolution powers is the case of Banco Popular Espanol, the sixth largest banking group in Spain, which was the first resolution action taken (in June 2017) by the SRB. Resolution was triggered because (i) the European Central Bank (the banking supervisor for Banco Popular) concluded that Banco Popular was failing or likely to fail, in particular because of the rapid deterioration in its liquidity; (ii) the SRB decided that there was no reasonable prospect that a private sale of the bank could be completed in sufficient time (and any recovery plans the bank had in place had not restored the bank's financial health); and (iii) the SRB concluded that resolution action was in the public interest (rather than putting the bank into liquidation) to ensure the continuity of the bank's critical functions (deposit taking, lending to SMEs, and payment and cash services) and to preserve financial stability.

The SRB used the bail-in and the sale of business resolution tools in order to write off the bank's equity and additional Tier 1 capital instruments; to convert the bank's Tier 2 subordinated debt into new equity; and to sell Banco Popular in its entirety to Banco Santander for the price of €1. Banco Santander then recapitalized Banco Popular by injecting around €7 billion of capital.

This was a relatively straightforward resolution. Resolution was used to wipe out the claims of the holders of equity and subordinated bonds (thereby absorbing the losses) to create an entity that was attractive for purchase by a larger bank at a nominal price. There was no need to bail in any creditors beyond those holding regulatory capital, for the authorities to restructure the bank, to establish a bridge bank, or for public support.

[16] See World Bank (2016).

Contractual rights and other safeguards

The FSB resolution framework recommends that resolution authorities should look closely at the legal framework governing financial contracts, and the wording of financial contracts themselves, to ensure that they support the use of resolution tools. There are three main dimensions to this:

Clarity – the legal framework and the wording of financial contracts should provide clarity on the treatment of arrangements such as secured assets, set-off rights, contractual netting, collateralization agreements, and the segregation of client assets when a financial institution is put into resolution.

Avoidance of early termination – the use of any resolution tool, including bail-in, should not trigger a default or the early termination of a financial contract (nor, indeed, of non-financial contracts such as the provision of critical services by a third-party provider).

Stay of termination – some resolution regimes include powers for a resolution authority to delay the settlement or termination of financial contracts. This freezing of the position of a financial institution could provide valuable time to strengthen and restructure the financial institution, and could be used to prevent a depositor run. However, such powers should be used with caution, not least because they run counter to the objectives of preserving the continuity of critical functions, and they may make it even more difficult to restore confidence in an institution in resolution.

Funding of firms in resolution

Resolution powers (in particular, bail-in and bridge institutions) can be used with the intention of re-opening all or part of a financial institution, thereby preserving the continuity of critical functions while also allowing time to restructure the institution over the medium term. But in this case, there is the possibility that depositors of a bank, or customers and clients of other types of financial institution, may take their business elsewhere in response to concerns about the initial failure of the institution and uncertainty about the consequences of putting the institution into resolution.

To some extent, financial institutions potentially subject to resolution strategies should be expected by the resolution authority to pre-position themselves to be able to cope with funding pressures in resolution. So, for example, institutions should be expected in normal times to:

- estimate possible funding needs in resolution;
- have the capacity to report liquidity information at a material operating entity level on a timely basis;
- assess the likely availability and size of private sources of funding, and the key steps necessary to mobilize such sources of funding; and
- identify and measure sources and positioning of liquidity that may be of particular importance following resolution, such as the availability and location of unencumbered assets, the ability to mobilize assets that could be used as collateral, and the operational, legal, and regulatory feasibility of mobilizing such assets, including on a cross-border intra-group basis.[17]

[17] See, for example, Bank of England (2019).

The resolution authority should reflect these considerations in its resolution plan for each relevant institution. Its resolvability assessment should consider this pre-positioning and, if necessary, the resolution authority should require the institution to improve its capabilities in this area.

However, this internal pre-positioning may not be sufficient. If market confidence is not established post-resolution, the liquidity of the institution itself will need to be backed up by other sources of liquidity. Financial institutions that re-open following resolution may require official sources of liquidity support in the event of disruptive behaviour by their customers and other counterparties. The resolution authority should therefore have a legal basis for the provision of temporary financing to support its resolution actions. This needs to be planned for in advance[18] and could take various forms, including:

- borrowing from a pre-funded (through levies on financial institutions) resolution fund, or pre-funded depositor or policyholder protection fund;
- emergency liquidity assistance from a central bank (once the losses made by a failing institution have been met, and the institution has been recapitalized, then it should meet the requirement that central bank liquidity is only provided to solvent institutions); and
- government funding, or government-guaranteed funding (either directly to the institution in resolution, or through a resolution or protection fund), with any costs recovered after the event from financial institutions.

Supervisory implications

The supervisory authority may be best placed to set requirements, monitor, and enforce financial institutions' funding and liquidity in normal times, in cooperation with the resolution authority, including the positioning of funding and liquidity ahead of any use of resolution powers by the resolution authority

The supervisory authority should also provide an assessment of solvency to a central bank considering the provision of liquidity assistance to a financial institution in resolution

Continued access to financial market infrastructures (FMIs)

A resolution authority should ensure that financial institutions subject to resolution strategies take all reasonable steps available to maintain continued access to FMIs (including payment systems, central securities depositories, securities settlement systems, central counterparties, and custody services) in order to keep functioning in resolution.[19]

These financial institutions should identify their reliance on different FMIs and map this to critical functions; have in place a contingency plan for dealing with FMIs during resolution; engage with FMIs to understand how they might react in the event of resolution and what the conditions would be for the continued participation of a financial institution in resolution in

[18] The FSB (2018) has issued guidance on how a resolution authority should develop a funding plan for a bank entering resolution.
[19] Financial Stability Board (2017).

FMI services; and share regular information on their communications with FMIs with the resolution authority.

However, the resolution authority will be responsible for post-resolution interactions with FMIs, and should, for example, prepare for the possible transfer of FMI access to a bridge institution.

Supervisory implications

The supervisory authority may be well placed to assist the resolution authority in determining how effectively financial institutions are safeguarding their access to FMIs in the event of the institution being put into resolution, and to engage with FMIs to determine how they might respond to a participant financial institution being put into resolution

Valuation issues

There is likely to be considerable uncertainty over the value of a failing financial institution. This is of particular importance at three critical stages in a resolution.[20]

First, before triggering resolution, a resolution authority (or supervisory authority if it is providing an assessment of whether an institution has failed or is failing) will need a fast and accurate valuation of whether the institution is viable on a going concern basis. This valuation should follow normal accounting and prudential rules applying to the preparation of financial statements and the calculation of regulatory capital ratios, to assess whether the institution meets the conditions for continuing authorization.

Second, if a resolution is triggered, and the resolution authority decides to use the bail-in power, it will need to decide what amount of liabilities to bail in to meet losses and to recapitalize the failing institution, and to determine (where relevant) the rate at which non-equity liabilities should be converted into new equity. This valuation should be based on prudent and realistic assumptions, using economic values (the present value of future cash flows), in particular where the resolution strategy is based on the sale of businesses or assets within a defined disposal period. It should also include a conservative buffer to reflect potential further losses, to avoid situations where the eventual losses are not covered by the initial bail in amount.

Third, if a bail-in is undertaken, the resolution authority will need a valuation in the future to determine whether any creditor should be compensated under the "no creditor worse off than under liquidation" principle. This valuation should be undertaken on a gone concern basis, estimating the discounted value of cash flows that could reasonably have been expected to arise under the relevant national liquidation procedures for banks. This counterfactual outcome then needs to be compared with the treatment of creditors and shareholders in resolution.

As with other practical issues, the resolution authority should expect financial institutions potentially subject to a resolution strategy to be sufficiently prepared for a valuation to enable a third-party valuer to carry out sufficiently timely and robust valuations to support effective resolution. The focus here should be on the completeness, accuracy, and availability of data

[20] See European Banking Authority (2017).

and information; valuation models and methodologies; valuation assumptions, processes and procedures, and transparency.[21]

Supervisory implications

Where a supervisory authority is determining (or advising on) whether a financial institution is viable as a going concern it – rather than the resolution authority, or jointly with the resolution authority – may commission a valuation of the financial institution from an independent third-party valuer prior to resolution being triggered

The supervisory authority may also be best placed to monitor and enforce the valuation preparedness of financial institutions

Remaining challenges

Each year, the FSB issues a progress report on resolution,[22] highlighting areas where further progress needs to be made.

Even for G-SIBs, where the most progress has been made, the FSB continues to highlight the need for:

- adequate resolution plans that are capable of being implemented effectively;
- full and consistent implementation of TLAC (and internal TLAC) requirements;
- identification of sources of temporary liquidity provision;
- potential gaps in financial institutions' own operational capabilities;
- continuity of access to financial market infrastructures for banks in resolution; and
- the effectiveness of cross-border arrangements.

In addition, the FSB calls for the full implementation of resolution regimes for CCPs and the introduction of insurance resolution regimes (which are currently under development in only a limited number of countries).

For many emerging economies, the challenges begin at an earlier stage in the implementation process. They fall into five main areas:

Resolution powers – the powers recommended in the FSB resolution framework need to be implemented, mostly through legislation. A resolution authority needs to be created with the necessary resources and protections (even if this is within an existing authority). Considerable planning also needs to be undertaken by the resolution authority – not only the construction of credible resolution plans for systemically important financial institutions, but also the detailed planning and testing (for example, through simulation exercises and "fire drills") of the use of each resolution power.

Use of the bail-in power – in many emerging economies, there is only a limited capital market, which may constrain the ability of financial institutions to issue debt instruments. For example, bank liabilities may comprise equity and deposits from retail and small corporate customers. And even if debt can be issued, it may be held mostly by a narrow range of other financial institutions. There may therefore be limited capacity to operate a bail-in of creditors that would not involve retail and corporate customers.

[21] See, for example, the Bank of England's (2018) valuation preparedness principles.
[22] See, for example, Financial Stability Board (2019).

Burden sharing – it may be necessary to share the burden of meeting losses and recapitalizing a failing major financial institution between the creditors of the institution and the government. If so, the resolution authority needs to discuss in advance with the Ministry of Finance how this burden sharing will operate. This possibility also needs to be considered within the legal framework for resolution. For example, some countries have made government support an automatic trigger for the use of resolution powers to enable a resolution authority to write off at least the equity and debt of the failing institution and to activate an initial restructuring of the institution; it is important to avoid a situation in which government support prevents an institution from failing and therefore prevents the triggering of a resolution.[23]

Multiple failures – resolution authorities need to consider whether they would be able to cope with multiple failures of SIFIs, including of one or more FMIs, at the same time. This might be considered through simulation exercises ("fire drills") with a scenario involving multiple failures of SIFIs, to test whether the powers and resources of a resolution authority would be able to cope with such a scenario.

Cross-border financial groups and conglomerates – cooperation and coordination with other authorities need to be in place to deal with the resolution of cross-border groups and of financial conglomerates. Resolution authorities need to work hard to establish the necessary communication channels and information sharing arrangements here, and to construct resolution plans that take account of group structures.

[23] There were examples during the global financial crisis of government support being given to financial institutions that avoided these institutions having to be put into liquidation. But in the absence of liquidation, subordinated debt holders in these institutions were protected from loss rather than being required to meet the costs of absorbing losses and recapitalizing the institution.

References

Basel Committee on Banking Supervision. *TLAC holdings*. October 2016. https://www.bis.org/bcbs/publ/d387.pdf

Basel Committee on Banking Supervision. *Pillar 3 disclosure requirements – consolidated and enhanced framework.* March 2017. https://www.bis.org/bcbs/publ/d400.pdf

Bank of England. *The Bank of England's approach to setting a minimum requirement for own funds and eligible liabilities (MREL)*. June 2018. https://www.bankofengland.co.uk/-/media/boe/files/paper/2018/statement-of-policy-boes-approach-to-setting-mrel-2018.pdf

Bank of England. *The Bank of England's policy on valuation capabilities to support resolvability*. June 2018. https://www.bankofengland.co.uk/-/media/boe/files/paper/2018/the-bank-of-englands-policy-on-valuation-capabilities-to-support-resolvability.pdf

Bank of England. *The Bank of England's approach to assessing resolvability*. July 2019. https://www.bankofengland.co.uk/-/media/boe/files/paper/2019/bank-of-englands-approach-to-assessing-resolvability-ps.pdf

European Banking Authority. *Final Draft Guidelines on the minimum list of services or facilities that are necessary to enable a recipient to operate a business transferred to it*. May 2015. https://eba.europa.eu/sites/default/documents/files/documents/10180/1080790/e840a987-eade-4796-8a26-31fcc6884358/EBA-GL-2015-06%20Guidelines%20on%20the%20minimum%20list%20of%20services.pdf

European Banking Authority. *Regulatory Technical Standards on valuation for the purposes of resolution*. May 2017. https://eba.europa.eu/sites/default/documents/files/documents/10180/1853532/88566587-ff6f-4116-a08e-282eb4ea2f78/Final%20draft%20RTSs%20on%20valuation%20in%20resolution%20(EBA-RTS-2017-05%20&%20EBA-RTS-2017-06).pdf

Financial Conduct Authority. *Restrictions on the retail distribution of regulatory capital instruments.* June 2015. https://www.fca.org.uk/publication/policy/ps15-14.pdf

Financial Stability Board. *Key Attributes of Effective Resolution Regimes for Financial Institutions*. November 2011. https://www.fsb.org/wp-content/uploads/r_111104cc.pdf

Financial Stability Board. *Key Attributes of Effective Resolution Regimes for Financial Institutions*. October 2014. http://www.fsb.org/wp-content/uploads/r_141015.pdf

Financial Stability Board. *Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution. Total Loss-absorbing Capacity (TLAC) Term Sheet*. November 2015. http://www.fsb.org/wp-content/uploads/TLAC-Principles-and-Term-Sheet-for-publication-final.pdf

Financial Stability Board. *Guidance on Continuity of Access to Financial Market Infrastructures (FMIs) for a Firm in Resolution*. July 2017. https://www.fsb.org/wp-content/uploads/P060717-2.pdf

Financial Stability Board. *Guiding Principles on the Internal Total Loss-Absorbing Capacity of G-SIBs ('Internal TLAC').* July 2017. https://www.fsb.org/wp-content/uploads/P060717-1.pdf

Financial Stability Board. *Funding Strategy Elements of an Implementable Resolution Plan*. June 2018. https://www.fsb.org/wp-content/uploads/P210618-3.pdf

Financial Stability Board. *2019 Resolution Report: "Mind the Gap."* November 2019. https://www.fsb.org/wp-content/uploads/P141119-3.pdf

Single Resolution Board. *Minimum Requirements for Own Funds and Eligible Liabilities (MREL) Policy under the Banking Package*. May 2020. https://srb.europa.eu/sites/srbsite/files/srb_mrel_policy_2020.pdf

Toronto Centre. *Turning risk assessments into supervisory actions*. August 2019. https://res.torontocentre.org/guidedocs/Turning%20Risk%20Assessments%20Into%20Supervisory%20Actions%20FINAL.pdf

World Bank. *Bank resolution and bail-in in the EU: selected case studies*. December 2016. http://pubdocs.worldbank.org/en/120651482806846750/FinSAC-BRRD-and-Bail-In-CaseStudies.pdf

Annex A: Examples of the use of resolution powers in Europe

Country	Bank	Systemic importance	Burden sharing between public sector and creditors?	Board/ senior managers replaced?	Other tools	Restructuring?	Other issues?
Cyprus	Bank of Cyprus (BoC) Cyprus Popular Bank (Laiki)	Yes – two largest banks	Yes G, EU, IMF E, SD, OB, UD	Yes	Part of Laiki folded into BoC	Yes	Delay Confusion Capital controls
Netherlands	SNS Reaal	Yes – largest financial conglomerate	Yes G, E, SD	Yes	Nationalisation, with expropriation of E and SD	Yes Sold insurance company back to private sector	Inability to bail-in beyond E and SD
Spain	Multiple savings banks	Yes, collectively	Yes G, E, SD	Yes	AMC	Yes AMC and consolidation into a new bank	Retail ownership of preference shares and SD
Spain	Banco Popular	Yes – sixth largest bank	No E, SD	Yes	Sold to Santander	Yes, by new owner	Cleanest example of use of SRB resolution powers
Portugal	Banco Espirito Santo	Yes – third largest bank	Yes G, Resolution Fund, E, SD	Yes	Bridge Bank (Novo Banco)	Yes Not all transferred to bridge bank	Difficult to sell the bridge bank
Italy	Four small banks	No	No Resolution Fund, E, SD	Yes	Bridge bank AMC guaranteed by a group of large banks	Yes	Retail ownership of SD could not work for a large bank

Sources of funds to meet losses and, where applicable, to recapitalise the bank:
G: Government
EU: European Union
E: Shareholders
SD: Subordinated debt
OB: Other bonds
UD: Uninsured depositors
AMC: Asset Management Company

Source: World Bank (2016) and author's own additions.