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June 2014

CROSS-BORDER BANK RESOLUTION: RECENT DEVELOPMENTS

IMF staff regularly produces papers proposing new IMF policies, exploring options for reform, or reviewing existing IMF policies and operations. The following document(s) have been released and are included in this package:

- The Board Paper prepared by IMF staff and completed on June 2, 2014 to brief the Executive Board on June 9, 2014.

The Executive Directors met in an informal session, and no decisions were taken at this meeting.

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CROSS-BORDER BANK RESOLUTION: RECENT DEVELOPMENTS

June 2, 2014

EXECUTIVE SUMMARY

Developing an effective framework for cross-border resolution is a key priority in international regulatory reform. Large bank failures during the global financial crisis brought home the lack of adequate tools for resolving “too-big-to-fail” institutions. In cross-border cases, misaligned incentives and lack of robust mechanisms for resolution and cross-border cooperation left some country authorities with little choice but to take unilateral actions, which contributed to the high fiscal costs of the crisis and resulted in disorderly resolution in some cases.

A key achievement in the reform agenda has been the establishment of an international standard for the resolution of systemically important financial institutions. The Financial Stability Board's *Key Attributes of Effective Resolution Regimes for Financial Institutions* has established an agreed set of principles and best practices. The Key Attributes call for countries to put in place resolution regimes that give the authorities comprehensive resolution powers while establishing effective mechanisms for cross-border cooperation and for the allocation of losses to private stakeholders.

There remains considerable additional work to be done to establish an effective regime for cross-border resolution. Areas in need of attention include:

- **National resolution regimes:** Several jurisdictions have adopted far-reaching legal reforms, but the reforms are complex and progress has been mixed overall. Many countries still lack comprehensive resolution powers for banks and other financial institutions (including the power to “bail in” creditors), and effective mechanisms for the recognition of foreign resolution measures. The absence of these pre-requisites makes effective resolution and cross-border cooperation difficult.
- **Firm-specific operational resolution strategies:** Systemic banks and their supervisors are investing heavily in improving resolvability. However, reaching agreement between home and host supervisors on how such entities would be dealt with in a crisis has proven difficult, in particular because of legal impediments to cross-border cooperation and the complexities of these firms’ operational and financial structures.
- **Loss absorbency:** The Key Attributes call for the burden of bank failure to fall firmly on the private creditors of banks while preserving financial stability. The credibility

of this commitment depends on ensuring that banks have sufficient liabilities that can absorb losses without destabilizing the financial system. This requires agreement on the definition and size of buffers, where they should be located in a bank's structure, and intra-group mechanisms for transferring losses.

- **Greater harmonization of creditor hierarchies.** The lack of a harmonized approach in defining where different creditors stand in a resolution scenario (i.e., “creditor hierarchy”) in different jurisdictions is an important impediment to cooperative approaches to resolving a cross-border bank, since jurisdictions will seek to negotiate outcomes that favor their own stakeholders. Clearer guidance is particularly needed on depositor preference—i.e., the ranking to be followed with respect to bank deposits.
- **The use of public funds:** There will always be the risk that public funds will be needed, even if only temporarily, to preserve financial stability. This creates powerful incentives for unilateral action and can undermine cooperative approaches. Achieving agreement on the location of buffers and loss allocation during resolution, resolution strategies, and group structure will be critical in ensuring that incentives for cooperation are well aligned. If this proves not feasible, consideration should be given to structural changes. These might include the establishment of self-sufficient subsidiaries and/or restrictions on intra-group flows, with a view to ensuring that entities in the group can operate—and be resolved—on a stand-alone basis. Cross-border simulation exercises could provide a forum for discussing alternatives to unilateral actions. And, finally, efforts are needed to ensure ex-post recovery of any potential use of public funds.
- **Smaller jurisdictions/entities:** Many cross-border banks are not globally systemic, but their resolution, if disorderly, could undermine financial stability in home and host countries. This will mean that reforms to resolution frameworks will need to be adaptable enough to account for different degrees of complexity of financial systems and also take into account the potential impacts of cross-border resolution strategies on smaller host jurisdictions.

Political commitment is critical to address these gaps. All FSB members have committed to implement the Key Attributes by the end of 2015—yet this will require much work. For its part, the Fund will continue to work with its members on strengthening resolution regimes. In the context of its surveillance, technical assistance, and program work, the Fund has provided advice to member countries to strengthen resolution and crisis management frameworks in line with the best practices envisaged in the Key Attributes, and will continue to support the international reform agenda.

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INTRODUCTION

1. Cross-border bank resolution is at the forefront of the international regulatory reform agenda. In the wake of the global crisis, a central feature of the international community's efforts to make the global financial system safer has been to end "too-big-to-fail" financial institutions. This effort has focused on identifying global systemically important financial institutions (G-SIFIs), making them more resilient through increased capital and tighter regulation and supervision, and strengthening the resolution regime to minimize risks of financial instability and taxpayer loss should they fail. On this last dimension, the international response has centered on the work of the Financial Stability Board (FSB), in particular, the *Key Attributes of Effective Resolution Regimes for Financial Institutions* (Key Attributes)—a new international standard endorsed by the G-20 leaders in 2011. The IMF has played an active role in the development of the Key Attributes, in particular through the 2010 Board paper on *Resolution of Cross-Border Banks—A Proposed Framework for Enhanced Coordination*.¹

2. Consensus has been reached on a framework, but important details need to be worked out—as yet, orderly resolution of systemic cross-border banks is not a feasible option. Despite ambitious legislative reforms, more needs to be done at the country level to fully implement the Key Attributes. Moreover, international agreement and further guidance is needed in a number of areas. These include the development of mechanisms to facilitate the allocation of losses among private stakeholders, and to manage the residual risks that public funds may be needed. Greater consideration of the applicability of the Key Attributes beyond the G-SIFIs and their main countries of operation is also needed.

3. This paper reviews recent progress in the development of an effective framework for cross-border bank resolution and identifies the key gaps that need to be addressed. As it has been two years since the Executive Board was last given a comprehensive briefing on cross-border resolution, an update on developments is timely.² The paper begins with an examination of the principal lessons learned from the recent financial crisis and the weaknesses in the international framework that the crisis exposed. It then discusses how the Key Attributes seek to address these weaknesses, and countries' progress in implementation. The paper then discusses the gaps that remain to be filled in the design of the international framework and ways to address implementation challenges.

¹ *Resolution of Cross-Border Banks—A Proposed Framework for Enhanced Coordination* (IMF Policy Paper, June 2010).

² *The Key Attributes of Effective Resolution Regimes for Financial Institutions—Progress to Date and Next Steps* (IMF Policy Paper, August 2012).

CROSS-BORDER RESOLUTION IN PRACTICE

4. Cross-border banks have benefits—and costs.³ The experience of the past decade has demonstrated the benefits and potential risks presented by the rapid growth of cross-border banking. By pursuing growth opportunities beyond their borders, successful national banks export capital and banking technologies, and realize economies of scale in managing large, diversified operations. Risk is pooled across economies, and the banks’ “deep pockets” often provide a credible backstop for host authorities. However, in the face of a systemic shock, these entities are also instant transmitters of financial stress. The capacity to safeguard global financial stability and minimize losses through an efficient resolution process then becomes essential.

5. The vast majority of cross-border finance is intermediated by a small, core set of financial institutions that are interconnected. In 2008, 145 banks globally accounted for 85 percent of the assets of the world’s top 1,000 banks. Some of the largest cross-border groups have assets that account for several times their home country GDP. With \$10 trillion of total assets, the top five largest cross-border banking groups account for about 10 percent of global banking industry assets. These five groups, all of which are headquartered in Europe, have over 50 percent of their credit risk exposures and employ roughly 60 percent of their staff outside their “home” country, with subsidiaries in more than 60 countries.

6. Resolving a cross-border bank involves enormous challenges. Financial groups develop complex international structures in order to exploit new business opportunities and maximize profits. These structures are often made up of hundreds of different entities in a web of financial and operational interdependency. When such an institution fails, authorities in different jurisdictions have to confront significant uncertainty and institutional constraints, and potentially misaligned incentives. Without an effective arsenal of resolution tools and cooperative arrangements between key jurisdictions, orderly resolution of a large cross-border financial group will prove impossible.

7. Incentives for cooperation in cross-border resolution are typically weak. Resolution authorities are answerable to domestic constituencies; their first responsibility is often to protect domestic financial stability and minimize any risk to public funds. Although preserving international business lines, financial links, and operational dependencies in resolution may minimize overall economic losses from a bank’s failure, individual country perspectives may differ from globally efficient solutions. Unilateral “ring-fencing” operations may allow protecting systemic operations domestically at a cost or risk known with some margin of error, versus an uncertain gain from an orderly international intervention, with risk of a worse outcome. Where public funds are put at risk, bearing a share of the burden that is later perceived to be “unfair” or disproportionate could carry important political costs. “Home”—where the parent company is located—and “host”—where

³ The rise of cross-border banking is well documented (see e.g., *Global Financial Stability Report*, April 2014, Box 3.1) and the academic literature has examined its benefits and challenges. On resolution aspects, see S. Claessens, R. Herring, and D. Schoenmaker (2010), *A Safer World Financial System: Improving the Resolution of Systemic Institutions*.

international affiliates are located—jurisdictions of cross-border banks can face starkly different incentives to cooperate where affiliates are either systemic for the host, but immaterial for the group; or material for the group, but not systemic for the host. In both cases, one party may have strong incentives to take unilateral action, even if this has a material impact on the group and generates spillovers for other countries.

8. Ex ante agreements on public sector burden sharing may not amount to credible commitments and have had little impact in practice to date. Prior to the recent crisis, even the exchange of information proved difficult, given legal constraints and sometimes conflicting national interests (Box 1). Formal agreements on sharing the public costs of resolution have been difficult to achieve in practice, as incentives to depart from their provisions in the light of actual circumstances are high. Moreover, the existence of formal burden sharing agreements that suggest that public funds will sometimes be available for resolution may increase moral hazard.

Box 1. Why did MoUs Fail to Secure Cooperation in the Global Financial Crisis?

MoUs grew in importance as supervisory cooperation intensified. Cross-border cooperation in banking supervision has existed since the 1970s, with Basel Committee work on consolidated supervision. Through the 1990s, standards focused on information flows between home and host supervisors, with cooperation in crisis times generally deemed unrealistic. Supervisory cooperation intensified in the 2000s, with work on MoUs and cooperation between banking supervisors embodied in Basel II stimulating the development of supervisory colleges. A 2006 Financial Stability Institute (FSI) survey found that 80 percent of bank supervisors worldwide used MoUs and informal contacts to support supervision in normal times.

Much less thought was given to cross-border arrangements on crisis management. The FSI survey found that only 19 percent of supervisors would make use of college arrangements to address financial stress, while 49 percent would resort to ad hoc meetings, and 40 percent had no formal arrangements at all. In 2003, EU national banking supervisors and central banks did agree on a multilateral MoU on high-level principles for cooperation in crisis management, later revised and expanded to include Ministries of Finance. The goal was to enable timely engagement and adequate information for all parties involved in a crisis, committing signatories to: (i) information exchange; (ii) joint public communication; (iii) joint contingency planning; (iv) optionally, forming cross-border stability groups; and (v) voluntary specific cooperation agreements on burden sharing. The agreement was not legally binding.

Supervisory MoUs failed to enable cooperation in the crisis. As MoUs were nonbinding and supervisory colleges were not empowered to make decisions, many MoU commitments—such as timely sharing of information—were quickly abandoned as domestic financial stability concerns became paramount. Supervisory colleges could not restrain unilateral action. MoUs did not provide for specific timelines or escalation procedures and had many exemptions. Differences in the systemic (and political) importance of banks for home and host countries resulted in misaligned incentives—which came to the fore when authorities found themselves negotiating over the distribution of significant financial commitments under intense time pressure and with no agreed process; or took unilateral action, leading in some cases to disorderly resolution and higher overall costs.

9. A key lesson from the 2008 crisis was that national authorities lacked both the legal tools and the cooperative arrangements needed to resolve cross-border financial groups. As is demonstrated by the studies set out in Annex I, national authorities faced huge challenges in responding to bank failures, both of large, systemic financial institutions and smaller ones. Unilateral

responses were the norm, leading in some cases to the breakup of groups into national components and the commitment of large amounts of public funds. In particular,

- **National resolution frameworks were inadequate.** Resolution authorities did not have the legal powers to restructure failing domestic or cross-border institutions or to promptly write down the claims of stakeholders. Many jurisdictions relied upon their general corporate insolvency frameworks where restructuring operations required slow, court-based proceedings and, in some cases, the consent of shareholders and creditors.
- **Arrangements for cross-border cooperation were lacking.** Mechanisms in national legal systems to give effect to foreign resolution measures were inadequate. The cooperative arrangements in place between the competent authorities in key jurisdictions were insufficient.
- **Concerns for domestic financial stability impeded cooperative solutions.** Faced with domestic financial stability concerns and significant uncertainty about risks from international operations, national authorities generally did not pursue cooperative approaches. In many cases, there was no legal authority or appetite to design group-wide resolution strategies.
- **Sovereign financial strength emerged as a key factor in determining national strategies.** Financially strong governments restored stability by bailing out parent banks in their jurisdictions, leaving group structures largely intact. Benefits were transmitted across borders through group access to liquidity support, in particular, jurisdictions. This minimized cross-border spillovers, but exposed authorities to high fiscal cost and political backlash—such a solution will not be feasible in future for some countries.⁴ Where credible sovereign backstops were lacking (such as in Cyprus and Iceland), authorities had to take exceptional steps to restructure banks while stemming depositor runs.

10. In sum, the crisis exposed three major gaps in the international framework for resolution:

- Inadequate resolution powers and tools through which to resolve a failing financial institution or group in an orderly fashion and through a least-cost approach;
- Inadequate frameworks for the enforcement of resolution measures on a cross-border basis and for coordination between authorities in different countries in the event of a cross-border failure;
- Inadequate mechanisms for loss allocation, including the ability to credibly subject bank creditors to loss in a bank failure without endangering financial stability.

⁴ For example, in the United States, the Dodd Frank Act explicitly prohibits the use of taxpayer funds to prevent liquidation of any financial institution. Taxpayers are to bear no losses from the exercise of the orderly liquidation authority (applicable to systemically important financial institutions), and all funds expended in the liquidation of a financial institution under the Act are to be recovered from the disposition of assets of such institutions or through assessments on the financial sector.

IMPROVING RESOLUTION FRAMEWORKS

11. The Key Attributes attempt to address these gaps. They aim to enable orderly resolution while ending the distortions created by the perception that some financial institutions are “too-big-to-fail” and will be bailed out by the state. By making orderly resolution credible for large financial groups, these reforms seek to change incentives for bank creditors and contain moral hazard. Further progress is essential to maintaining the benefits from open financial markets and the efficient allocation of resources and risk-sharing globally.

A. Overview of the Key Attributes

12. The Key Attributes establish a new international standard for the design of resolution regimes for systemically important financial institutions and groups.⁵ They set out the powers and tools necessary to enable effective resolution and call for coordinated approaches to resolving cross-border institutions, and for allocation of losses to private creditors. They are a non-binding standard, and countries will be encouraged to implement their provisions over time.

13. The Key Attributes call for resolution authorities to be given a comprehensive toolkit of powers. These include the power to take control of a failing financial institution, merge ailing banks with stronger institutions, and transfer assets and liabilities to a healthy institution or a so-called “bridge bank.” A key tool is the power to engage in the mandatory debt restructuring or “bail-in” of a financial institution. This is essentially a statutory power to restructure the liabilities of a distressed financial institution by writing down its unsecured debt and/or converting it to equity while the relevant institution remains open. In order to ensure the prompt and effective restructuring of the institution, all of these powers are to be exercised without the need to obtain the consent of shareholders or creditors, subject to appropriate safeguards.

14. The Key Attributes aim to enhance the effectiveness of cross-border resolution. They recognize that cross-border cooperation requires the ability of resolution/supervisory authorities to share information with their foreign counterparts, and mechanisms through which resolution measures taken in one jurisdiction may be enforced in another jurisdiction. To address these obstacles, the Key Attributes call for national resolution regimes to: (i) empower and strongly encourage the resolution authorities, wherever possible, to act to achieve a cooperative solution with foreign resolution authorities; (ii) empower the resolution authorities to share information with their foreign counterparts, provided that arrangements are in place for the protection of confidential information; and (iii) provide for transparent and expedited processes to give effect to foreign resolution measures.

⁵ See http://www.financialstabilityboard.org/publications/r_111104cc.pdf. *The Key Attributes of Effective Resolution Regimes for Financial Institutions—Progress to Date and Next Steps* (IMF Policy Paper, August 2012) presents staff’s assessment of the Key Attributes.

15. The Key Attributes contemplate the establishment of cooperative arrangements between national resolution authorities for the resolution of SIFIs. Jurisdictions are required to put in place *Recovery and Resolution Plans* (RRPs), covering, at a minimum, domestically incorporated firms that could be systemically significant or critical if they fail. RRP enable the preparation of concrete strategies to resolve each failing bank while safeguarding financial stability. Strategies currently under development focus on “single point of entry” (SPE) and “multiple point of entry” (MPE) approaches (Box 2). For G-SIFIs, the Key Attributes further require home and key host authorities to maintain *Crisis Management Groups* to prepare for and facilitate the management of a cross-border failure.⁶ Relevant national authorities are also required to put in place for all G-SIFIs, at a minimum, institution-specific *Cooperation Agreements* that enable the execution of the agreed resolution strategy and ensure information exchange.

B. Implementation of the Key Attributes

16. The Key Attributes have not been fully implemented by many countries and political commitment is necessary to make meaningful progress. A 2013 peer review conducted by the FSB found that implementation within the FSB’s membership was at an early stage.⁷ Resolution regimes were generally more developed for banks than for other types of financial institutions, but, even for banks, lacked important powers such as bail-in or the ability to temporarily suspend early termination rights under financial contracts. The range of powers available for non-banks (e.g., insurance companies) was, in many cases, very limited. With respect to cross-border cooperation, only a few jurisdictions had established robust mechanisms to give effect to foreign resolution measures, or gave their resolution authorities clear statutory mandates to cooperate with or to share information with foreign resolution authorities. The peer review report called for more action on the part of national authorities and the FSB to promote implementation of the Key Attributes.

17. Some progress in the implementation of the Key Attributes has been made since 2013. A major step was recently taken by the European Union with the adoption in May 2014 of the Bank Recovery and Resolution Directive by the European Parliament (Annex II). The Directive was explicitly intended to bring national resolution frameworks in line with the Key Attributes.

18. Achieving progress with recovery and resolution planning for individual cross-border groups has proven challenging. As contemplated under the Key Attributes, firm-specific Crisis Management Groups have been put in place for all global systemically important banks designated as such by the FSB, and preferred resolution strategies (SPE, MPE, or hybrid) are being discussed within those Groups and made operational. Firm-specific Cooperation Agreements are at various stages of development—their coverage remains limited to procedural aspects of cooperation, such as exchange of information, and does not include details on resolution strategies to be pursued.

⁶ CMGs should include the supervisory authorities, central banks, resolution authorities, finance ministries, and deposit insurance schemes of jurisdictions that are home or host to entities of the group that are material to its resolution, and should cooperate closely with authorities in other jurisdictions where firms have a systemic presence.

⁷ FSB Thematic Review on Resolution Regimes, 2013 (www.financialstabilityboard.org/publications/r_130411a.pdf).

Box 2. Institution-Specific Resolution Strategies

Progress in developing operational strategies for the resolution of G-SIFIs has focused on two approaches: single and multiple points of entry. These strategies apply to financial groups in their entirety, which may consist of hundreds of different legal entities located in multiple jurisdictions, and give the lead in resolution to the home authority under SPE, and to individual home and host authorities under MPE. Losses of the institution in resolution will accrue and be managed at the parent level under SPE, or at the parent and subsidiary levels under MPE. Both approaches can imply the use of a range of resolution powers, including bail-in, which plays a central role, particularly in SPE approaches.

- Under SPE strategies, resolution occurs at the very top of the financial group while operating parts of the group are preserved. The home resolution authority intervenes and restructures the holding company that sits at the top of the financial group without the need for host authorities to resolve operating subsidiaries under their respective control. Shareholders and creditors of the apex institution absorb losses of the entire group through a write-down or restructuring of their equity and/or debt claims against the apex entity. Capital freed up from this exercise is “passed down” to loss-making operating subsidiaries and used to recapitalize and provide liquidity for such subsidiaries. SPE requires the ability to downstream loss-absorbing capacity to other parts of the group; and the capacity and willingness to provide liquidity support in resolution—both of which require a high level of cooperation and trust among authorities during resolution.

- Under MPE strategies, operating affiliates are resolved separately in different jurisdictions by the respective resolution authorities. Individual parts of the group are resolved in separate proceedings and losses are dealt with at the subsidiary level. Given the risks of disruption and inadequately coordinated actions, MPE requires extensive preparation and coordination to facilitate orderly resolution and preserve essential services and financial functions.

- *Hybrid strategies are possible*—for example, core operations in key jurisdictions where the G-SIFI is active might be resolved under SPE, while stand-alone operations in other countries are resolved following an MPE approach, or closely linked regional operations might be resolved as a group in an overall MPE strategy.

The choice of resolution strategy and the structure of cross-border banks must be consistent. MPE approaches can work well where operating entities can operate on a stand-alone basis. Arrangements need to be made in order to ensure critical financial and operational services provided by other parts of the group can be reproduced, and that adequate loss-absorbing capacity exists locally. Where intra-group operations are more intensively inter-linked, or operations benefit from the size and liquidity provided by a “global” balance sheet (some capital market activity, for example), an SPE approach may be warranted. RRP can help develop a picture of where losses might fall or liquidity needs arise in a crisis, providing input for cross-border dialogue on burden sharing and appropriate resolution strategies.

19. Political commitment is needed to promote implementation. All FSB members have committed to fully implement the Key Attributes by the end of 2015—yet this will require much work. The FSB will support the process through guidance, regular monitoring,⁸ and peer reviews.

20. The Fund works with its members on strengthening resolution regimes. In the context of program support, surveillance, and technical assistance (including the Financial Sector Assessment Program, FSAP), the Fund has recommended enhancing resolution and crisis management frameworks in line with the *Key Attributes* (Box 3). Moreover, it is expected that the

⁸ See http://www.financialstabilityboard.org/implementation_monitoring/reform.htm.

Fund will play an important role in assessing members' implementation of the Key Attributes: they will be presented to the Fund and Bank Executive Boards for endorsement as a standard under the Report on the Observance of Standards and Codes (ROSC) program, once the associated assessment methodology is finalized.

Box 3. Examples of Fund Advice to Member Countries on Resolution Frameworks

The Fund provides policy advice to strengthen resolution frameworks in the context of Fund-supported programs, surveillance, and technical assistance (including the FSAP). Fund advice typically addresses some of the following issues:

- *Resolution Authority:* Providing for a dedicated and autonomous resolution authority with a mandate to preserve financial stability and ensure continuity of systemically important services;
- *Early Intervention:* Strengthening powers for intervention before a firm is balance-sheet insolvent;
- *Resolution Powers and Tools:* Giving the resolution authorities a broad range of restructuring powers, including transferring a bank's assets and liabilities to another institution without shareholder or creditor approvals;
- *Safeguards:* Introducing safeguards for creditors to ensure that the hierarchy of claims is respected and creditors would be no worse off under restructuring than under liquidation;
- *Legal Protection:* Providing for legal protection for officers, staff, and agents of resolution authorities for good-faith actions in resolution;
- *Resolution Funding:* Providing explicitly for emergency liquidity assistance with appropriate safeguards to protect the central bank's balance sheet, and the use of deposit insurance funds to facilitate resolution;
- *Judicial Review:* Ensuring that the legal framework does not endanger the effective implementation of resolution measures and legal certainty through appeals processes in court; and
- *Information Sharing and Cooperation:* Providing adequate legal authority for information sharing with foreign authorities and providing clear legal mandates for cross-border resolution cooperation.

ENHANCING MECHANISMS FOR LOSS ALLOCATION

21. Beyond the need for countries to implement the Key Attributes, much more work is needed to achieve a feasible framework for cross-border resolution. Remaining gaps pertain to how losses will be allocated to private sector stakeholders in a resolution, and managing residual risks that public funds will be needed in resolution. Both issues could undermine orderly cross-border resolution by leaving resolution authorities with incentives to act unilaterally in a crisis.

A. Shifting the Burden to the Private Sector

22. In determining how to allocate losses among private stakeholders, two particular questions require further work by the international community. These concern the development of requirements for loss-absorbing claims and the need for greater international harmonization of creditor hierarchies.

Making bail-in a credible option

23. Holders of claims targeted for bail-in must be able to absorb potential losses without generating systemic risk themselves as a consequence of their financial losses. Financial groups need to carry sufficient buffers of such claims to ensure that bail-in is not only legally feasible but also credible as a policy option. Further work at the international level is needed to ensure that this is the case and also to promote uniformity as to which claims may be bail-inable. Doubts about whether losses can, in fact, be absorbed across a financial group, as specified in a resolution strategy, could increase incentives to ring-fence to minimize risks from the strategy failing, particularly with respect to SPE strategies, where losses are passed back to one entity.

24. The FSB is working on a proposal to develop “gone-concern loss-absorbing capacity” (GLAC). The purpose of GLAC is to ensure a credible buffer of liabilities beyond equity that can be subject to mandatory restructuring in a resolution and to promote a uniform international approach to this issue. A set of principles on GLAC will be presented at the G20 summit in November 2014, which is expected to cover the following issues:

- *Definition of claims that would be regarded as GLAC:* While any unsecured liability could, theoretically, be bailed in, the risks that may arise with imposing losses on uninsured deposits, interbank loans, or selected other liabilities in specific cases imply that the most likely liabilities to be eligible as GLAC are subordinated debt, senior unsecured bonds, and intra-group loans. To the extent that investors perceive the bail-in of such claims to be credible, funding costs from these sources may rise to reflect actual risks.⁹ At the same time, the funding costs could fall for liabilities that are significantly less likely to suffer loss.
- *Amount of GLAC.* Enough “bail-inable” liabilities are needed to help ensure that a mandatory debt restructuring would be sufficient to resolve distressed institutions in an orderly manner, potentially forestalling runs by short-term creditors concerned about counterparty solvency. This will depend partly on past experience with bank losses, which suggests that fiscal costs of crises averaged 13 percent of financial system assets;¹⁰ as well as other considerations, such as the target capital ratio after resolution to foster market confidence, and any additional GLAC requirement (or discount) to reflect the degree of resolvability. Issuing GLAC on a significant scale may prove challenging, given the historical size of markets in unsecured debt instruments.
- *Location of GLAC:* Any difference between the place where losses are generated and the location of loss-absorbing liabilities within a group’s structure can complicate the resolution of cross-border banks. This may well be the case, as financial depth and tax considerations are critical

⁹ Recent analysis shows that the implicit funding subsidies enjoyed by G-SIFIs have declined from their crisis peaks, but remain substantial, especially in Europe. See *Global Financial Stability Report*, Chapter 3, April 2014.

¹⁰ In a survey of 147 systemic crises over three decades, Laeven and Valencia (“Systemic Banking Crises Database: An Update,” IMF Working Paper 12/163, June 2012) found average fiscal costs—direct fiscal outlays due to financial sector rescue packages—of close to 13 percent of financial system assets for all countries (2 percent for advanced countries and 21 percent for emerging market countries). This data does not fully reflect the recent crisis.

factors in deciding on where marketable bank liabilities are issued. If GLAC is not located in the jurisdictions (and within a jurisdiction, the entity) where losses are most likely to arise in distress, there must be a mechanism to move losses to where GLAC exists, or vice versa (see Box 2). The choice of jurisdictions where GLAC is located depends on the structure of the bank and the resolution strategy to be pursued.

- *Appropriate investor base:* Ensuring GLAC is held by the “right” creditors—capable of absorbing losses without socially undesirable consequences—may be critical for the credibility of bail-in. A particular example could be measures to mitigate contagion risks to other financial institutions by limiting their cross-holdings of senior unsecured debt. Additionally, as claims are traded in secondary markets, there is a risk they might quickly migrate to investors that are perceived to need protection from bail-in. Another consideration is bank governance after resolution, as conversion of GLAC into equity may create new controlling shareholders (or a more dispersed shareholding structure), that may or may not meet regulatory suitability requirements.
- *A uniform approach:* Some jurisdictions have limited the application of mandatory debt restructuring and GLAC requirements to systemic banks (e.g., the United States), while other countries plan on applying requirements more broadly (e.g., the European Union)—a common approach would better ensure a level playing field. Any GLAC framework should not discriminate on the basis of the nationality of investors when making decisions on triggering bail-in.
- *Disclosure:* Publication by banks of how much GLAC they have issued and how it would be used could help enhance fair market pricing and creditor discipline.

25. The amount and location of GLAC determine *ex ante* how losses accrue in resolution, aligning incentives of home and host authorities with respect to private burden sharing. This includes intra-group GLAC, such as debt of subsidiaries held by the parent. Resolution authorities must also understand how losses will be absorbed and transmitted within financial groups. In MPE approaches, each point of entry will need to issue sufficient GLAC to allow for orderly resolution. In SPE approaches, all parties must be clear on exactly how losses will be imposed on the entities within the group that issue GLAC, which will require intra-group loss-transfer agreements. These may provide for the conversion of loans from the parent company to the subsidiary into equity, or collateralized guarantees provided by the parent on borrowing by the subsidiaries. How, when, and by whom such mechanisms will be activated will need to be addressed in loss-transfer agreements.

Creditor hierarchy

26. The lack of harmonization of creditor hierarchies between jurisdictions is a key obstacle to the allocation of losses to private stakeholders. Creditor hierarchies determine the ranking/order in which losses will be allocated against the claims of various stakeholders in the liquidation of a firm. Losses are first allocated against shareholders, before subordinated debt holders and other types of creditors in ascending order. Claims falling in the same class rank “*pari passu*” with each other and are treated in the same way in a liquidation (i.e., it is generally not possible for the liquidator to pay one but not the other).

27. The creditor hierarchy is an important instrument for securing the appropriate allocation of losses amongst stakeholders in both the liquidation and resolution of a bank.

The creditor hierarchy for the liquidation of a bank will generally resemble that applicable in ordinary corporate insolvency proceedings, except that it will need to address creditors specific to banks, such as small depositors, the deposit insurance scheme, and the public sector providing liquidity or solvency support. In the restructuring of a bank as a going concern, the restructuring of the bank's claims will generally take into account the order of priorities applicable in liquidation, and treat all of the claims that fall into a particular class in the same manner. However, there may be instances where the resolution authority must depart from those general principles. This may be achieved by exempting certain claims *ex ante* from the imposition of losses in the going-concern resolution, even though those claims would be likely to suffer losses under the creditor hierarchy for liquidation. Another way is to empower the resolution authorities, in the resolution of a specific institution, to treat equally ranking claims in an unequal manner.¹¹ Unequal treatment of creditors or deviation from the established creditor hierarchy in liquidation raises the risk of litigation by affected creditors who may challenge a restructuring on the basis that their interests have been harmed. Adequate safeguards, such as a "no creditor worse off" requirement, can mitigate this risk.

28. Significant differences in the design of creditor hierarchies between jurisdictions can be an obstacle to cross-border resolution of branches of an international bank.

If the ranking in the home country differs considerably from the ranking in the host country, the host authorities may decline to cooperate. For instance, if uninsured depositors are preferred to other senior creditors in the host country but not under home country law, the host authorities may have an incentive to ring-fence instead of contributing all local assets and liabilities to a resolution per home country law.¹² Incentives for cross-border cooperation will also be undermined if the home country's creditor hierarchy discriminates against foreign or nonresident creditors or creditors of foreign branches.

29. Further guidance at the international level on creditor hierarchies is needed, particularly in the treatment of deposits.

The Key Attributes provide some useful guidance on the hierarchy to be employed in the context of a bank resolution: Key Attribute 5.1 requires that "resolution powers should be exercised in a way that respects the hierarchy of claims," in particular, that "equity should absorb losses first, and no loss should be imposed on senior debt holders until subordinated debt has been written off entirely." The Key Attributes also permit departures from the *pari passu* treatment of claims in order to contain systemic risk or to maximize the value for creditors. With respect to cross-border cooperation, Key Attribute 7.4 provides that national resolution frameworks should not discriminate on the basis of the nationality of creditors, the location of their claim, or the jurisdiction in which it is payable. However, the Key Attributes leave important questions unanswered—in particular, on the treatment of insured and uninsured deposits

¹¹ Key Attribute 5.1 allows flexibility to depart from *pari passu* treatment only if necessary to contain the systemic impact of a firm's failure or to maximize value for all creditors, and advocates transparency in this regard.

¹² This is not relevant for subsidiaries—due to their separate legal personality, the creditor hierarchy is that of the country of incorporation (the host country).

in the creditor hierarchy. Greater specificity on this question would facilitate the resolution of banks, particularly on a cross-border basis.

30. The crisis has shown that giving preference to depositors is a useful element to mitigate the likelihood of contagion (Box 4). Depositor preference can mitigate the likelihood of contagion by providing depositors with a higher probability of recovering their claims in a bank failure. Where a deposit insurance scheme is in place, a framework that gives a preference to insured deposits mitigates the risk that the deposit insurance scheme will suffer losses; extending preference to all deposits (including uninsured) decreases the likelihood that depositors might need to be bailed in, or otherwise suffer losses. A significant number of jurisdictions already have some form of depositor preference. In providing advice on bank resolution frameworks, Fund staff typically addresses the issue of creditor hierarchy explicitly, and advocates providing depositor preference, although the exact form will depend on country circumstances, including whether or not a deposit insurance scheme is in place.

B. Minimizing the Potential Burden for the Public Sector

31. International regulatory reform holds out the prospect of reduced probabilities of bank failure and lower fiscal costs, should failures occur. Following the recent crisis, there is both less capacity and little appetite for any future fiscal resources to be put at risk to stem the consequences of a large financial institution's failure. Both increased capital and GLAC requirements will help impose market discipline and create better incentives for managers. Should a bank become distressed, thicker buffers of equity capital will bolster confidence and give more time for remedial action and recovery plans to work, while GLAC—should resolution ultimately be needed—can absorb losses before public funds may be needed, at least with respect to solvency support.

32. Nonetheless, there will always be a residual risk that public funds will be needed to preserve financial stability, at least temporarily. Emergency liquidity assistance may have to be offered on terms or against collateral that leave the central bank with some risk of loss. In some cases, state guarantees of bank liabilities (or capping losses on specific asset portfolios) may be needed to ensure continued market access. Finally, should it become apparent that GLAC cannot cover potential losses (or do so without causing fresh contagion) solvency support for systemic institutions may be needed—even if this is to be recovered later from the industry.¹³ Once GLAC is exhausted, it is unlikely that private sector funding can be mobilized in the very short time periods in which a bank resolution will need to be implemented—in particular, because many legal frameworks do not enable private-sector “debtor in possession” financing for a bank resolution (whereby post-insolvency liquidity providers gain priority in the creditor hierarchy over pre-insolvency creditors).

33. Both liquidity and solvency support raise challenges for cross-border resolution. Liquidity support can entail significant “risk transfer” while the potential need for solvency support will create incentives to ring-fence to minimize uncertainty and fiscal risks.

¹³ A (partially) pre-funded “orderly resolution fund” (or a deposit insurance fund) may contribute to such funding.

Box 4. The Role of Depositor Preference in Bank Resolution

Depositor preference (DP) gives depositors a preferential claim on the assets of a failed bank. It is reflected in the hierarchy of claims in the liquidation of a bank, and is also of relevance for the treatment of creditors in the resolution of banks. DP has attracted renewed interest in the context of international regulatory reform, as it affects loss allocation among various private sector stakeholders.

Existing and proposed forms of DP vary across countries, but three specific approaches are common:

- *Insured depositor preference* provides preferential treatment for insured deposits (and the deposit insurance scheme (DIS) through subrogation), and ranks uninsured deposits *pari passu* with the senior unsecured creditors.
- *General depositor preference* gives preference to all deposits, including balances above the deposit insurance limit, over senior unsecured creditors. The DIS is subrogated for insured deposits and, thus, ranks *pari passu* with uninsured deposits;
- *Tiered depositor preference* prefers insured deposits (and the DIS through subrogation) over uninsured deposits, and prefers both over senior unsecured creditors.

Different Types of Depositor Preference

Pari Passu	Insured DP	General DP	Tiered DP
All deposits (and subrogated DIS) and other senior unsecured creditors rank <i>pari passu</i>	DIS (subrogated for insured deposits)	All deposits (with DIS subrogated for insured deposits)	DIS (subrogated for insured deposits)
	Other senior unsecured (including uninsured depositors)		Eligible deposits over deposit insurance limit
	Other senior unsecured	Other senior unsecured	Other senior unsecured

Note: A higher position in the table and darker shading (within the same column) indicates a higher creditor claim.

DP can mitigate the likelihood of contagion by providing depositors with a higher probability of recovering their claims in a bank failure. For countries with a DIS that is subrogated for insured deposits, *insured* or *tiered* DP mitigates the risk of the DIS suffering losses, thereby also contributing to shifting the burden of resolution to the private sector. By creating clear legal grounds for the preferential treatment of all deposits over other unsecured senior creditors, and signaling transparently which bank liabilities will be protected in resolution, *general* or *tiered* DP may help reduce legal challenges in case of a transfer of all deposits to another institution or the bail-in of non-deposit creditors only.

Potential benefits of changing the creditor hierarchy under all forms of DP need to be weighed against the potential impact on bank funding costs, or the availability of unsecured wholesale funding.

A significant number of jurisdictions already have some form of depositor preference. For example, Argentina, Australia, China, India, Hong Kong SAR, Indonesia, Mexico, Russia, Singapore, Switzerland, Turkey, the United States, and several European countries afford preferential treatment to at least some depositors, and similar reforms were recently introduced in the United Kingdom and the European Union.

- *Liquidity support:* Central banks can provide unlimited support only in their own currency—where other currencies are needed, swap arrangements have to be put in place. While the central bank that provides the other needed currency retains the risk for repayment of the swap, the counterpart central bank is exposed to foreign exchange risk. Additionally, central banks

may need to consider accepting foreign collateral, leaving them exposed, should that jurisdiction ring-fence or take other unilateral action.

- *Solvency support*: A realistic possibility of having to put public funds at risk may create incentives to ring-fence to minimize the uncertainty arising from lower visibility on foreign operations, and the prospect that foreign creditors will be the main beneficiaries of taxpayer funds.

34. Ex-ante agreements defining how public support would be committed to resolve a weak or failing institution are difficult to achieve in practice.¹⁴ The *ex-ante* burden sharing framework among the Nordic-Baltic countries is an important example of a non-binding agreement for public sector burden sharing in a resolution.¹⁵ Beyond such tightly knit countries, however, the development of criteria that would guide public sector burden sharing remain elusive, and national authorities have been reluctant to make binding commitments for the use of public funds. As a consequence, the regulatory reform agenda has been directed toward the avoidance of public solvency support.

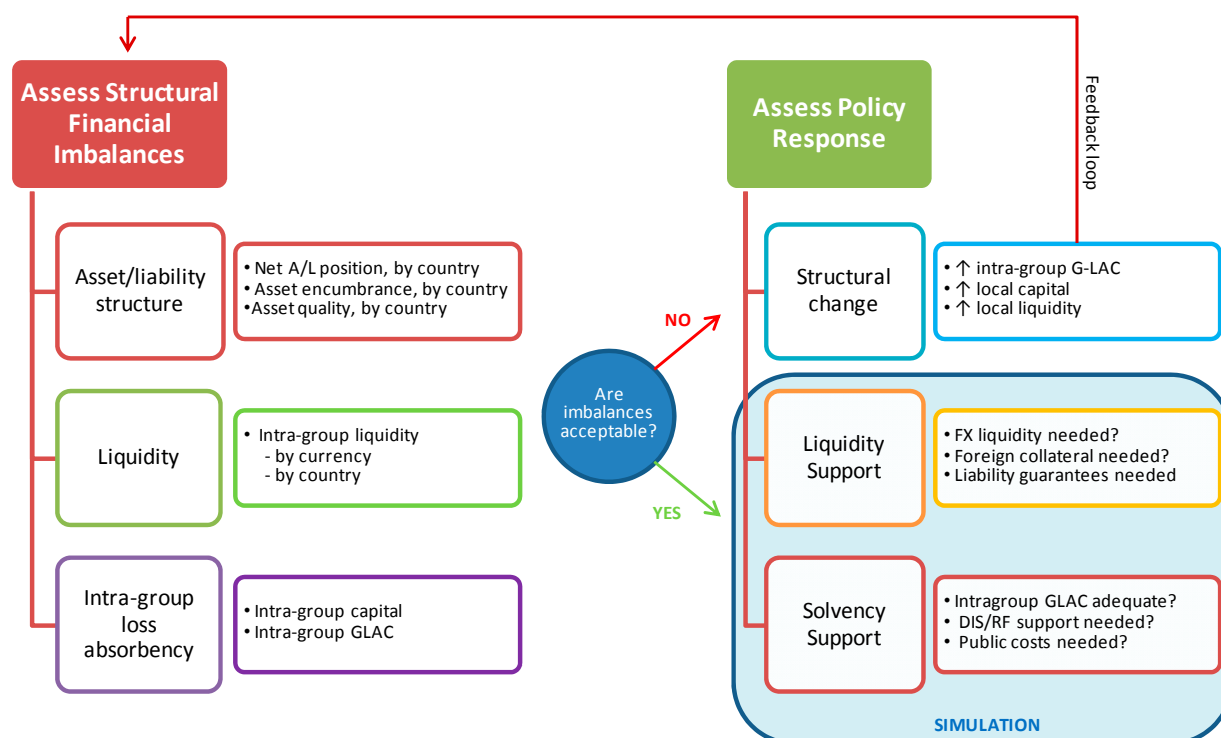
35. Shifting decisions and actions to the pre-crisis phase can reduce the risks that public funding for resolution may be needed. Recovery and resolution planning can help develop a picture of structural imbalances in the distribution of assets and liabilities in a financial group from a national perspective. Information exchange alone will not change incentives for unilateral action in a crisis, and this information will be highly incomplete and risk exposures can change very quickly. Nonetheless, knowledge about where liquid and other assets are concentrated within cross-border groups, the existence of internal guarantees, and how and where losses can be absorbed with GLAC can help generate a common understanding of the implications of the group's failure for each party. This knowledge can be used in an incremental process to require financial groups to adjust their structure, regulate the placement of some assets and liabilities (as with GLAC), or put in place prudential limits on specific exposures.¹⁶ Such a procedure can also help individual hosts to manage potential risks up to acceptable levels, considering also the benefits that accrue from hosting cross-border banks. In this manner, incentives will be better aligned to ensure resolution plans will be executed in practice as agreed. An effective framework that meets these objectives would include the following elements (see Figure):

¹⁴ This issue is explored in greater detail in D. Schoemaker (2010), "Burden Sharing: From Theory to Practice," DSF Policy Paper 6; and I. Van Lelyveld, and M Spaltro (2011), "Coordinating Bank Failure Costs and Financial Stability," De Nederlandsche Bank Working Paper 306.

¹⁵ It allocates public costs on the basis of the share of the bank's asset in each country and supervisory responsibility (with equal weight), and recognizes other factors—such as the share of problem assets, excessive fiscal consequences and proven early action—that may be used to alter the outcome of the model.

¹⁶ The Key Attributes include scope for *firm-specific* structural measures to facilitate effective resolution. These measures interact with structural *system-wide* banking reforms aimed to separate or prohibit lines of businesses deemed too risky. See J. Viñals, C. Pazarbasioglu, J. Surti, A. Narain, M. Erbenova, and J. Chow, 2013, *Creating a Safer Financial System: Will the Volcker, Vickers, and Liikanen Structural Measures Help?*, IMF Staff Discussion Note 13/4.

- Assessing structural financial imbalances between countries embedded in cross-border financial groups' balance sheets; this process can help generate a common understanding of the implications of the bank's failure for each party;
- Determining if structural changes to cross-border financial groups are needed such that each country is satisfied with the balance between advantages of cross-border activities and the downside of potential spillover risks; and
- Assessing the potential for cross-border sovereign risk transfer or outright public costs arising from policy responses in the event of failure.



36. Through this process, the costs and benefits of different bank structures or resolution strategies can be assessed. The perspective of potential costs if a cross-border bank fails can help inform a "risk-based" assessment of the benefits of hosting institutions, and in what form (e.g., as a subsidiary or branch), or what risks need to be addressed by the bank, the supervisor, or in recovery and resolution planning. Three questions will help determine whether a particular configuration for a bank and resolution strategy makes sense for any one country:

- To what extent can the burden of a bank's failure be contained within the private sector?
- What burden could remain with the public sector and how can this be minimized or eliminated?
- What type of coordinated policies can be put in place to minimize ex-post ring-fencing or unilateral decisions?

37. With a clearer picture of the risks, countries can assess whether the imbalances are acceptable. Key factors will be the willingness and capacity to cope with the risks of providing support in case of failure, including the fiscal and monetary capacity of each country to implement resolution strategies for failing banks. The assessment will also be guided by broader policy considerations taking into account the benefits attributed to cross-border banking, and the credibility of cooperation pledges by other countries.¹⁷ Ex-ante measures may be taken to ensure that imbalances are at a mutually acceptable level. Potential measures include:

- *Reducing upfront exposure by limiting cross-border risk transfer.* Measures could include requiring banks to adjust their structure, regulating placement of assets and liabilities or prudential limits on specific exposures (e.g., foreign exchange risk, liquidity) or financial flows.
- *Increasing acceptability of imbalances through agreement.* Agreement could be sought on the provision of emergency liquidity at the group level or any residual solvency support.

38. A system-wide perspective is important. There are gains to be derived from looking beyond individual banks where there are multiple channels of contagion between financial systems. For example, the joint support expressed by U.K. and U.S. authorities for resolution of SIFIs based in their jurisdictions using SPE-type strategies is predicated on the likely high costs across both financial systems of a failure to cooperate, as both countries are home and host of systemically relevant banks active in both jurisdictions.¹⁸

39. Cross-border simulation exercises can provide a forum for discussing alternatives to unilateral actions. Important elements include: (i) Would an ailing bank be allowed to keep up cross-border capital and funding flows? (ii) Which sources of funding could be made available in crisis? Under what conditions? (iii) Which claims would a country accept to be bailed in? (iv) What size of imbalances would a country be comfortable accepting, and under what circumstances?

40. Several outcomes of cooperation strategies are possible. Considering asset and liability positions in isolation, full ex ante ring-fencing and maximum resolvability will always be an equilibrium strategy. However, this ignores the efficiencies that may accrue from sharing critical functions. Where efficiencies appear small (for example, where locally funded operations undertake mainly basic banking functions of taking deposits and lending), the benefit of ease of resolution may weigh highly. Where the loss of shared platforms or a global operation has higher costs, mechanisms to offset imbalances with prior commitments to burden sharing actions could be explored (Box 5). For example, country A may be willing to accept a liability overhang in the local operations of a cross-border bank, if B is willing to provide counterbalancing resolution funding.

¹⁷ Local capital or liquidity requirements have a multilateral dimension, as they can impede free movement of funds, but ring-fencing in crisis is also costly, as consolidated group capital is not the relevant buffer from the national perspective. Cerutti, E. and C. Schmieder (Ring fencing and Consolidated Banks' Stress Tests," *Journal of Financial Stability*, Vol. 11, pp.1–12, 2014) provide an argument from a stress-testing perspective, and an empirical assessment.

¹⁸ *Resolving Globally Active, Systemically Important, Financial Institutions*, A joint paper by the Federal Deposit Insurance Corporation and the Bank of England, December 2012.

Box 5. Incentives to Cooperate and Subsidiarization

Cross-border resolution can be helped or impeded depending on group structures—particularly banks' preference for subsidiaries versus branches. From the perspective of financial stability, a branch structure unequivocally puts responsibility for soundness on the parent institution, while a subsidiary structure can limit losses at the host level, should the parent come under stress (given local capital and liquidity requirements). The subsidiary approach may also limit the overall cost of resolution in the event of a failure, because spinning off the relatively healthy parts of the group may be easier when the group is structured as a network of independent subsidiaries rather than a fully integrated branch network.

Subsidiarization ex ante is likely to be a superior strategy to ring-fencing ex post when cross-border cooperation is unlikely to emerge. Ring fencing during a crisis has significant operational, financial, and legal risks and can of itself worsen the situation. However, if cooperative strategies are not credible and countries fear that their counterparts will act unilaterally in crisis, the host authorities may choose to protect their interests through requiring cross-border banks to hold local capital and liquidity ex ante. While subsidiarization does not preclude ring-fencing in a crisis, stand-alone-subsidiarization can reduce incentives for hosts to take such action, as they have a more complete understanding and control of local assets and liabilities, and transparently requiring capital and liquidity beforehand can reduce negative effects of unilaterally impeding moving funds during a crisis.

Isolating pools of capital and liquidity could have efficiency costs and impede cross-border financial intermediation (although the extent of these costs versus the benefits of increased "resolvability" has not been established). Where operations are locally funded and assets consist of relatively straightforward loans to local counterparts, the net costs of insisting on locally resolvable structures may be low. Costs may rise if branch structures are very integrated with other parts of the group, or as the foreign banks play a more active role in intermediating international financial flows (e.g., providing significant funding to a host economy on a long-term basis). In these cases, host authorities will have to weigh the advantages of intermediation through integrated branches against a greater need for cooperation in resolution.

For heavily interconnected markets with systemic players, formal cooperation may be a better strategy. In these cases, contagion risk and the greater reciprocal damage from severing financial flows makes it less likely that unilateral action will pay off. As an example, in December 2012 the United States and the United Kingdom stated their preference for a cooperative SPE strategy for their systemic banks. With significant interconnectedness between these financial markets, the failure of a systemic bank in either country would have a severe impact on both countries, whether the bank has a subsidiary or branch structure, so that cooperative support appears to be the least-cost solution for both.

Subsidiarization might reduce risks, but could hamper financial integration, for example, where cross-border banks provide substantial foreign funding to the economy and local sources of alternative funding are not well developed. Equally, the benefits of cross-border banking in good times need to be carefully weighed against the benefits of being able to resolve institutions at low risk and low cost in a crisis. Increased cooperation would help countries find a better balance between constraints on cross-border capital transformation and mitigating resolution risks. Having effective dialogue, information sharing, and cooperation agreements for resolution in place would make authorities indifferent about specific bank structures. This would allow financial groups to take advantage of structures that best fit their business models without limiting their ability to manage risks during normal times and support affiliates in stressful times.

See J. Fiechter, I. Ötoker-Robe, A. Ilyina, M. Hsu, A. Santos, and J. Surti, *Subsidiaries or Branches: Does One Size Fit All?* IMF Staff Discussion Note 11/04, March 2011; and D'Hulster, K. and I. Ötoker-Robe, *Ring-fencing cross-border banks: An effective supervisory response?* Forthcoming in *Journal of Banking Regulation*.

CROSS-BORDER RESOLUTION BEYOND GLOBALLY SYSTEMIC INSTITUTIONS

41. Many cross-border banks are not globally systemically important. The Key Attributes were designed primarily with G-SIFIs and advanced financial systems in mind, and set a high standard in terms of the powers and infrastructures that countries should introduce. While they, nonetheless, have broad application beyond G-SIFIs, embodying best practice and lessons from experience from a range of countries and circumstances, not all elements may be relevant to all countries. In addition, many home and host countries to cross-border banks are not FSB members or party to the fora advancing work on G-SIFI resolution. In some cases, there may be a significant asymmetry of power in interactions between G-SIFI home jurisdictions and smaller host jurisdictions where the operations are not material to the institution's overall health. This section looks at the resolution reform agenda from the perspective of small host countries and emerging and developing economies.

A. The Key Attributes in Proportion

42. Reforms to enhance resolution regimes should be tailored to the complexity of financial systems in different jurisdictions (Box 6). While the Key Attributes embody best practice in resolution on many core issues that are relevant for all jurisdictions, local circumstances may justify tailoring the adoption of reforms—an approach explicitly recognized in the introduction to the Key Attributes. Elements addressing some capital market functions, or the complex structures and multiple business lines of the largest institutions may not be relevant to countries with less sophisticated financial systems. In many countries insurance companies or securities firms may not present a systemic threat. In some countries it may be sufficient to replicate the economic effects of statutory bail-in powers using other resolution tools (e.g., a bridge bank). While sound resolution planning and cross-border coordination are of equal importance for regionally systemic firms (e.g., a pan-African bank), the detail required in a recovery and resolution plan would be significantly less than for a large, complex G-SIFI.

43. Further consideration will need to be given to loss-absorbing requirements in banking systems that are primarily deposit funded. As is the case with respect to GLAC for G-SIFIs, banks of regional or domestic systemic importance should have adequate loss-absorbing capacity (LAC) to reduce the risks to the deposit insurance scheme and/or the public sector arising from their potential failure. Further consideration will need to be given as to what form LAC requirements should take in jurisdictions with less developed capital markets, where authorities may be reluctant to allow uninsured deposits to incur losses. In such regimes, it may be appropriate to allow for the substitution of extra capital in a way that recognizes the relative cost and loss-absorbing characteristics of different liabilities. For instance, equity will absorb losses under a wider set of scenarios than bond debt, so that less may be required to substitute for GLAC, while it typically will be more expensive. While retail deposits may be more stable than wholesale deposits, they will not be suitable for absorbing losses.

Box 6. Key Attributes Beyond G-SIFIs

Many of the Key Attributes could apply to any financial institution, including those that could be systemically important in the jurisdiction concerned. However, Key Attributes 8 to 11, which set out best practice for resolution planning and cross-border cooperation, are only required *per se* for G-SIFIs,¹ while the majority of Fund members are neither key host nor home jurisdictions for G-SIFIs.

The impact of the failure of a bank of systemic regional importance will likely be severe for those countries directly affected, even if not felt globally. Further guidance is needed as to what best practice resolution planning and cooperation arrangements should be implemented by the resolution authorities of those countries in which such an institution is systemic. Fund and Bank staff have proposed the following approach:

- *RRPs and resolvability assessments* (Key Attributes 11 and 10) should, as a minimum, be required for all those firms designated as domestic SIFIs in the jurisdiction concerned, using relevant sector-specific methodologies. For banks, for example, this would mean domestically systemically important banks identified using the Basel Committee for Banking Supervision criteria, which include the impact that the failure of the bank will have on the domestic economy.² RRP and resolvability assessments should be tailored to the complexity of the firm and its operations.

- *Crisis management groups* (Key Attribute 8) or comparable arrangements such as “resolution colleges” should be required for firms that are systemic in more than one jurisdiction and where resolution of entities in more than one jurisdiction is material for resolution of the firm. Comparable arrangements could include less formal structures that provide a framework for the cooperation and coordination necessary to support resolution planning and resolvability assessments for the firm in question. For example, if the firm is systemic and its resolution is material in only two jurisdictions, existing arrangements for cooperation between the resolution authorities in those jurisdictions could be sufficient without the need to formally establish a separate *crisis management group*.

- *Cooperation Agreements* (Key Attribute 9) should be required for any firm for which a *crisis management group* or comparable arrangement is required under Key Attribute 8. There would also be significant benefits in further work to define best practice *cooperation agreements* for regional SIFIs.

¹ While some of these Key Attributes leave open the possibility of extending to other institutions, no further guidance on which firms and what type of arrangements are specified.

² Comparable frameworks may be developed for other sectors in due course.

B. The “Small Host” Perspective

44. For cooperative solutions to cross-border resolution to be credible, incentives need to be aligned between countries. When the operations of a cross-border institution are of systemic importance in a host country, but immaterial to the G-SIFI as a whole, it may not be realistic to expect an alignment of interests between jurisdictions. While legal, business, and reputational concerns can be an important factor in inducing G-SIFIs and their home authorities to assist in finding solutions to problems in host countries, this concern will be in the background if the whole institution’s stability is in question. Furthermore, these small hosts often are not party to crisis management groups or core supervisory colleges where, for practical reasons, participation is limited to countries in which the G-SIFI is most exposed. Therefore, and particularly in a crisis where attention is focused on the most significant exposures and concerns, the authorities of smaller host

countries may not have timely access to information that is critical for their domestic financial stability, or to a forum where their perspectives on resolution will be considered.

45. In these circumstances, the resolution strategies of small hosts may have to prioritize domestic financial stability. For small hosts and home jurisdictions of G-SIFIs alike, the authorities' first priority in a bank failure will be to ensure contagion is contained, critical financial services continue to function, and that economic costs are minimized. Where small hosts cannot ensure their capacity to achieve these outcomes through ex ante agreements on cooperative resolution strategies and burden sharing, measures ensuring local operations are resolvable through structural requirements, such as requiring local capital and liquidity via subsidiarization or asset maintenance requirements for branches, may be appropriate.¹⁹ This approach would be consistent with MPE (or hybrid) resolution strategies, and small hosts should work with home countries to ensure this fits into the comprehensive resolution plan for the bank. While this approach may potentially have costs from a global perspective—inefficiencies from requiring local pools of capital and funding, or limitations on the scope for international bank financing of structural external deficits—these costs may be low where operations are “plain vanilla,” collecting local deposits to fund lending, and also bring benefits in reducing prudential risks and increasing resolvability. Cooperation with the home jurisdiction will still have important payoffs with respect to deciding on the location and magnitude of GLAC, how critical services will be maintained, and in building trust to enable smooth resolution, should a crisis eventually occur.

CONCLUSIONS

46. Recent initiatives in international regulatory reform have made progress toward achieving an effective cross-border resolution framework. Widespread implementation of the Key Attributes will provide resolution authorities involved in cross-border bank failures with a broad set of tools for executing resolution strategies, minimizing risks to financial stability, and placing the costs of failure on shareholders and private creditors.

47. However, orderly cross-border resolution is still far from assured. Should a large cross-border bank fail today, it appears unlikely that the pitfalls and misaligned incentives that undermined cooperation in the global financial crisis could be avoided. Progress in the implementation of national legal and institutional reforms consistent with the Key Attributes has been mixed. More fundamentally, implementation of the Key Attributes would only partially align divergent national interests and incentives that work against cooperative cross-border resolution strategies. Additional work is required at the international level on remaining gaps including:

- Defining specific proposals for GLAC (amount, eligible claims, location, and investor base; and

¹⁹ For a full treatment of the financial stability implications of group structures, see J. Fiechter, I. Ötcher-Robe, A. Ilyina, M. Hsu, A. Santos, and J. Surti, *Subsidiaries or Branches: Does One Size Fit All?* IMF Staff Discussion Note 11/04, March 2011,

- Better aligning creditor hierarchies and depositor preference between countries.

48. Progress on minimizing residual risks that public funds will be needed to preserve financial stability is necessary to ensure that resolution strategies are credible. While a credible bail-in option would reduce the contingent need for public financial support, a residual risk remains, creating scope for misaligned incentives to undermine cooperation in resolution. Moving up decisions and actions to the pre-crisis phase could ensure incentives are aligned and authorities can credibly commit to carry through agreed resolution strategies. Such arrangements could cover (i) identifying structural imbalances on banks' balance sheets in various countries; (ii) assessing costs and benefits of different bank structures and resolution strategies, and taking action to make these consistent with country authorities' objectives; and (iii) assessing and monitoring the potential for cross-border sovereign risk transfer or outright public costs arising from policy responses in the event of failure, and updating resolution strategies accordingly.

49. A great deal of work remains to be done, and the Fund will continue to support the international reform agenda. Fund staff will continue to promote the adoption of the *Key Attributes* in its engagement with Fund members. Staff will also continue to participate in various FSB work streams to help address current gaps in the international regulatory agenda, and will keep the Executive Board apprised of future developments.

- Do Directors agree that progress has been made toward a framework for an effective cross-border resolution regime? Do they agree with the gaps identified in the paper and the key areas that need to be worked on to avoid potential repeats of the misaligned incentives and unilateral actions seen during the global financial crisis?
- Do Directors agree that greater harmonization of creditor hierarchies, including with respect to depositor preference, is desirable/necessary?
- Do Directors agree that progress in agreeing on standards for GLAC would help remove important obstacles to effective cross-border resolution? What are the challenges to reaching agreement?
- Do Directors agree that the approach outlined in paragraphs 35–40 to move up decisions to the pre-crisis phase, including possible consideration of ex-ante changes to bank business models and structure, would help support resolvability and minimize the likelihood of non-cooperative outcomes in a cross-border resolution?
- How relevant are recent advances for "small host" economies? Do Directors agree that further work to tailor the Key Attributes to the complexity of financial systems in different jurisdictions would benefit the broader Fund membership?

Annex I. Public Interventions in Cross-Border Banks during the Global Crisis

A. Citigroup

Background: Citigroup is a leading U.S. global bank, with assets of around \$2 trillion, some 200 million customer accounts, and businesses in more than 160 countries and jurisdictions.²⁰ By 2008, about 70 percent of the group’s revenue was derived from foreign assets. Citigroup is a major supplier of credit in the U.S. and abroad. When the crisis hit, it was the second largest bank holding company in the U.S., the largest consumer finance lender in the world, the third largest mortgage servicer, the fourth largest student lender, and the world’s largest credit card lender.

Sources of distress: In 2008, Citigroup suffered losses of about \$28 billion and its stock price dropped precipitously. Heavy exposure to troubled subprime mortgages and related credit instruments led to a severe deterioration in the group’s condition.

Stabilization strategy: On October 28, 2008, the U.S. Treasury invested \$25 billion in Citigroup by purchasing senior preferred stock with warrants through the Troubled Assets Relief Program (TARP). The support failed to prevent a significant outflow of deposits.²¹ On November 23, 2008, Treasury, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation announced a broader support package for Citigroup, including a guarantee covering potential losses on more than \$300 billion of assets in exchange for \$7 billion of preferred stock, and an additional \$20 billion investment of TARP funds in exchange for preferred stock. The group’s situation gradually stabilized and by December 2010, Treasury had sold its investment in Citigroup at a profit of \$12 billion.

At the peak of the crisis in 2009, Citi was reorganized into two main segments—Citicorp (containing two core businesses: global consumer banking and an institutional clients group) and Citi Holdings (non-core businesses, i.e., brokerage and asset management, global consumer finance, and Citi’s special asset portfolios). Risk management practices were overhauled. The rescue of Citibank did not have significant destabilizing effects internationally.

B. Dexia²²

Background: Dexia was one of the largest European financial conglomerates before the crisis, with total assets of about €650 billion. The group was created in 1996 through the merger of Credit Communal de Belgique (a universal bank) and Credit Local de France (financing bank for the French

²⁰ Company’s website, www.citigroup.com.

²¹ “Extraordinary Financial Assistance provided to Citigroup Inc.,” Report by the Special Inspector General for the TARP, January 2011.

²² “Examination of the Circumstances Leading to the Dismantling of Dexia,” Report of the Belgian Parliament, March 23, 2012 (DOC 53 1862/002).

municipalities). The group expanded rapidly during the pre-crisis period (balance sheet growth of about 150 percent during 2000–08), with a business model relying on synergies between deposit-taking activities (mainly in Belgium and Luxembourg) and municipal funding (through Dexia Credit Local—DCL, which accounted for two-thirds of group assets).

Sources of distress: Substantial investments in structured securities (including through the U.S. monoline insurance subsidiary of DCL) and strong reliance on short-term wholesale funding to fuel the pre-crisis expansion (into largely long-term assets) left the group vulnerable when the crisis hit. In the third quarter of 2008, the group suffered over €2 billion in losses and lost access to wholesale funding markets (with a short-term liquidity gap estimated at €260 billion in October 2008). Substantial liquidity assistance was provided by various central banks in countries where the group operated.

Initial stabilization strategy: It became clear in late 2008 that the group needed state support to avoid collapse. Given strong financial and operational ties among the three main subsidiaries, the states of Belgium, France, and Luxembourg jointly recapitalized the group for a total amount of €3 billion, with an equivalent contribution by private shareholders. The three governments also provided funding guarantees (of up to €150 billion),²³ while Belgium and France guaranteed an asset portfolio of \$12.5 billion in DCL’s U.S. subsidiary FSA (sold in 2011). The burden sharing key for the three governments’ capital and guarantees was based on the proportion of the national ownership into the non-floating capital of the group before the capital injection. The situation stabilized with the group regaining market access and the stock price rising. The group also engaged in a major program of divestments of international operations approved by the European Commission.

Interim actions: The Belgian parliamentary report on Dexia shows that various discussions took place between Belgian and French authorities on a potential split of the bank into a ‘bad bank’ and a ‘good bank’ following the rescue in 2008. The strategic interests of the Belgian state (to preserve financial stability and ensure the soundness of one of its largest banks) and of the French state (to preserve a key mechanism for municipal funding) differed, and both authorities aimed to minimize costs related to the resolution of the group. Various proposals for a split were rejected by the Belgian or the French authorities. Belgium passed in 2010 a law allowing the emergency expropriation of shareholders of financial institutions when necessary to preserve financial stability.

Challenges to the initial strategy: The Euro Area sovereign crisis took a heavy toll on Dexia. The group registered further losses and lost market access. Renewed market turmoil in 2011 led to renewed discussions on possible solutions for the group. The orderly dismantling of the group, with a gradual decoupling of national operations and a runoff of the legacy portfolio, emerged as an acceptable strategy.

²³ “Dexia—First Demand Guarantee Agreement,” December 2008, (http://www.dexia.com/EN/shareholder_investor/dexia_debt/state_guarantee/Pages/default.aspx)

Changes to the strategy: The second intervention in Dexia in October 2011 follows a complex long-term restructuring plan including: (i) the orderly runoff of the group’s assets supported by sovereign backing and national central banks funding of the holding company (Dexia SA) and DCL; (ii) the gradual sale of international operations; and (iii) the acquisition of the Belgian bank by the Belgian state for €4 billion, rebranded in 2012 as Belfius. Financial ties (secured and unsecured lending) between the Belgian bank and the rest of the group are being gradually extinguished, with the three governments continuing to guarantee obligations of Dexia SA and DCL to enable their long-term financing. The new burden sharing key for each governments’ contribution to the guarantee (of up to €90 billion) was 51.4 percent for Belgium (down from 60.5 percent) and 45.6 percent for France (up from 36.5 percent), reflecting the nationalization of the Belgian subsidiary. In 2012, new public capital injections of €5.5 billion were made in Dexia SA by Belgium (€2.9 billion) and France (€2.5 billion) to enable the orderly resolution of the group, and ensure that Dexia meets minimum capital requirements under Basel III over the medium term, and in a number of stress scenarios. The Luxembourg subsidiary (DBL) was sold in October 2012, and no capital injection from Luxembourg was required; the government of Luxembourg continued to contribute to the guarantee (3 percent). Following the European Commission’s decision in December 2012 on the resolution of Dexia, the Société de Financement Local (Sfil), a new bank responsible for lending to French public sector entities, was created through purchase of the capital and assets of Dexia Municipal Agency. A new ceiling for the States’ guarantee was set at €85 billion.

Supervisory issues: Belgium was the consolidated supervisor of the group and the core supervisory college (which included France and Luxembourg) was backed by an MoU.²⁴ The parliamentary report cited above outlines that the supervisory reach of the then Belgian supervisor (CBFA) on certain foreign non-regulated entities of the group (FSA) was relatively weak and the corrective actions of the supervisors involved proved inconclusive. Prudential supervision of banks was transferred to the National Bank of Belgium (NBB) in early 2011, and this institution became the leading counterpart in the subsequent negotiations on the restructuring of the group.

C. Fortis

Background: Fortis group was a *bancassurance* financial conglomerate with substantial presence in Belgium (where it held the largest universal bank), the Netherlands (third largest bank), and Luxembourg. The group was organized around a complex bi-national holding structure consisting of a Belgian and a Dutch parent company. Fortis acquired the Dutch operations of ABN AMRO in 2007 as part of a joint takeover of this bank by a consortium, also consisting of RBS and Santander. By end-2007, total assets of Fortis amounted to approximately €870 billion.²⁵

Sources of distress: Fortis had substantial exposure to U.S. subprime assets. In the aftermath of the Lehman failure, investors lost confidence in the group due to uncertainties on its subprime exposure

²⁴ MOU concerning the control on a consolidated basis of the Dexia Group of September 2000.

²⁵ Fortis Annual Report 2007.

and the financial consequences of the take-over of ABN AMRO.²⁶ As wholesale creditors started withdrawing credit lines, the bank-insurer increasingly had to rely on central bank liquidity assistance from the three countries.

Initial stabilization strategy: After intense negotiations, the three governments agreed to provide a total capital injection of €11.2 billion (September 28, 2008). The agreement entailed an investment of €4.7 billion by the Belgian government in exchange for a 49 percent share of Fortis Bank Belgium, and investment of €4 billion by the Dutch government in exchange for a 49 percent share of Fortis Bank Nederland (Dutch subsidiary of Fortis Bank Belgium, which did not include the Dutch parts of ABN AMRO owned by Fortis), and a €2.5 billion loan provided by the government of Luxembourg, convertible to a 49 percent share of Fortis Banque Luxembourg. The strategy also envisaged a private sector acquisition of the Dutch operations of ABN AMRO within two weeks.

Challenges to the initial strategy: The Dutch authorities considered ING the only suitable candidate to take over the Fortis-owned parts of ABN AMRO.²⁷ But ING was experiencing a steep decline in its stock price and publicly announced it would not make an offer for ABN AMRO Netherlands on the day after the Fortis rescue package was agreed.²⁸

Changes to the strategy: The separation of Fortis was agreed on October 3, 2008, five days after the agreement on the first package. Netherlands fully nationalized all of the Dutch operations of Fortis, including ABN AMRO Netherlands and insurance activities, at a cost of €16.8 billion. Belgium acquired full ownership of Fortis Bank Belgium for €4.7 billion and immediately sold 75 percent of the shares to BNP Paribas. The structured credit portfolio of Fortis Bank Belgium, valued at €11.8 billion, was transferred to a ‘bad bank’ under joint ownership of Ageas (45 percent), the Belgian government (43 percent), and BNP Paribas (12 percent).

The dismantling of Fortis was a complex and protracted process. The Belgian and Dutch operations of Fortis Bank were interconnected in many areas (treasury, risk management, IT). In The Netherlands, full separation of Fortis Bank Nederland required the Dutch government to take over both short-term funding (€34 billion) and long-term subordinated debt (€16 billion) provided to the Dutch subsidiary by the holding company. The Dutch government became a shareholder in the consortium that controlled ABN AMRO, with RBS and Santander, thereby assuming additional risks stemming from cross-guarantees between partners in the consortium. One month after the breakup of Fortis, the Dutch government decided to merge Fortis Bank Nederland and ABN AMRO Nederland into one bank. In the following year, Netherlands had to provide the institution with an additional capital relief of €6.5 billion through write-down of long-term debt and new capital amounting to €5 billion. The total cost for Netherlands of the nationalization of the Dutch parts of

²⁶ The Netherlands House of Representatives, “The Committee of Parliamentary Inquiry into the Financial System: Credit Lost II – Taking Stock,” 2012 (Only Chapter 1, “Conclusions and Recommendations”).

²⁷ Ibid.

²⁸ ING, “ING not to make offer for ABN AMRO Netherlands,” Press Release, September 29, 2008.

Fortis is currently valued at €32 billion.²⁹ Due to the state aid received, the European Commission imposed an acquisition ban and a price leadership ban on the restructured bank.³⁰

In Belgium, the shareholders of Fortis challenged in court the sale of Fortis Bank Belgium (including the sale of Fortis Insurance Belgium, which was part of the agreement of October 2008) to BNP Paribas. An adjusted agreement was approved by the shareholders in early-2009. In 2013, the “bad bank” was sold for €6.7 billion to Credit Suisse and Lone Star, and Belgium sold its remaining 25 percent stake in BNP Paribas Fortis for €3.25 billion.

D. ING

Background: ING Group was one of the world’s largest financial institutions with total assets of some €1.3 trillion as of end-2007. ING was created in 1991 through the merger of NMB Postbank and insurance company Nationale-Nederlanden and evolved as an integrated Dutch bancassurance group. In the mid-1990s, ING embarked on a strategy of overseas expansion through worldwide acquisition of banks (e.g., U.K.-based Barings Bank in 1995) and insurance companies (e.g., U.S.-based ReliaStar and Aetna in 2000). Starting in 1997, the group launched branchless banking services (ING Direct) in numerous countries, significantly increasing its deposit base. By the end of 2007, client deposits were almost €200 billion in ING Direct labels in Australia, Austria, Canada, France, Germany, Italy, Spain, U.K., and the U.S.³¹

Sources of distress: ING built a substantial portfolio of U.S. Alt-A mortgage-backed securities (€27.5 billion at end-2007), which lost substantial value during the crisis. In late 2008, market conditions deteriorated rapidly and credit rating agencies downgraded structured debt products, leading to increases in ING’s revaluation reserves, while a share buy-back (under a €5 billion commitment made in 2007), and regular payments of (interim) dividends also weakened solvability. This, together with mounting doubts about the future value of the Alt-A portfolio, led to a loss of market confidence in ING. News of ING’s possible involvement in a private sector solution for ABN AMRO Nederland resulted in a steep decline of ING’s stock price, forcing it to announce that it would not be part of a take-over (see Fortis case study).

Stabilization strategy:³² A few days after the break-up of Fortis, the Dutch authorities provided ING with a public capital injection of €10 billion in the form of Core Tier-1 Securities (mix of equity and subordinated debt, which did not dilute existing shareholders). After initially restoring confidence, market concerns about ING’s exposure to the Alt-A portfolio reemerged. New write-downs undermined the effectiveness of the initial recapitalization. In early 2009, the Ministry of Finance set

²⁹ Dutch Court of Auditors, <http://kredietcrisis.rekenkamer.nl/en>.

³⁰ European Commission, “State Aid: Commission Approves Restructuring of ABN AMRO Group, Subject to Conditions,” Press Release, April 5, 2011.

³¹ ING Group Annual Report 2007.

³² The Netherlands House of Representatives, “The Committee of Parliamentary Inquiry into the Financial System: Credit Lost II – Taking Stock,” 2012 (Only Chapter 1, “Conclusions and Recommendations”).

up an 'Illiquid Asset Back-Up Facility' that transferred 80 percent of the economic ownership of ING's Alt-A mortgage-backed securities portfolio to the government in exchange for a fee, while legal ownership remained with ING.

Cross-border spillovers: Under state aid rules, the European Commission required a significant restructuring of ING, consisting of full separation of banking and insurance activities, sale of a domestic banking unit, and divestment of the U.S. subsidiary ING Direct. ING was also temporarily banned from acquiring other firms and exercising price leadership.³³ The Dutch authorities completed unwinding the Illiquid Asset Back-Up Facility in early-2014, resulting in a cash profit for the government of €1.4 billion. Repayment of the €10 billion in capital support has been completed for more than 90 percent, with the remainder expected in 2015.

Supervisory issues: A Dutch Parliamentary Committee concluded that insufficient attention was paid to the vulnerabilities inherent in ING's balance sheet prior to October 2008. The initial choice to only recapitalize the institution allowed the source of instability to persist.

E. Icelandic Banks

Background: The Icelandic banks came late to the global banking expansion. Between 1999 and 2003, privatization and consolidation in the Icelandic banking sector gave rise to three large groups: Kaupthing, Glitnir, and Landsbanki had a combined balance sheet of €16 billion (slightly higher than the Icelandic GDP) in 2003.³⁴ The banks expanded aggressively between 2003 and 2007, financed first through bond issuance in international capital markets and, subsequently, through international deposit taking (i.e., internet "Icesave" retail deposits offered by Landsbanki and, to a lesser extent, "Edge" retail deposits offered by Kaupthing) and short-term repurchase agreements. At the onset of the crisis, the banks' assets were 10 times Icelandic GDP.

Sources of distress: Heavy reliance on foreign funding (mostly short-term, and a multiple of Iceland's international reserves) made the banks vulnerable to reversal in investor sentiment. Lending in foreign currency to domestic borrowers also posed substantial credit exposures to currency depreciation. After the Lehman collapse in September 2008, Glitnir was the first Icelandic bank to lose access to international markets.

Initial stabilization strategy: Glitnir's request for emergency liquidity assistance (about a quarter of international reserves at the time) was rejected. The authorities proposed to write down existing equity by 75 percent and recapitalize the bank with public funds for €600 million (which never in fact occurred). The official announcement was followed by a downgrade of the sovereign rating.

³³ European Commission, "Commission approves ING restructuring plan and illiquid asset back-up facility," Press Release, November 18, 2009; and European Commission, "Commission approves amendments to the restructuring plan of ING," Press Release, November 19, 2012.

³⁴ Fridrik Mar Baldursson and Richard Portes, *Gambling for Resurrection in Iceland: The Rise and Fall of the Banks*, Centre for Economic Policy Research Discussion Paper no. 9664, September 2013.

Significant margin calls and a run on all three banks' by wholesale creditors and depositors followed.

International spillovers: The Icelandic banks had significant retail deposit-taking activities in the U.K. and, to a lesser extent, in other European countries (notably Netherlands, Denmark, and Sweden). The U.K. authorities reacted to the deterioration in the London-based Kaupthing subsidiary (KSF) by reassessing what assets could count against the requirement to hold the equivalent of 95 percent of "Edge" deposits in liquid funds, and imposing other restrictions on KFS. As part of a broader domestic stabilization package, Denmark extended government guarantees to Kaupthing's Danish subsidiary (FIH), but this could not stem the pressure, and Kaupthing was unable to meet obligations toward FIH (about €2 billion). The immediate funding needs in Kaupthing, Glitnir (a margin call from the ECB), and Landsbanki (a margin call from the ECB and additional reserves to be held at the Bank of England against "Icesave" deposits) reached €5 billion, against international reserves at the Central Bank of Iceland of €2.6 billion. The foreign currency liquidity gap was considered likely to increase due to a risk of accelerated outflows of international deposits (€15 billion), repurchase agreement financing, and substantial banks' obligations due in 2009. The ECB postponed the margin calls on Glitnir and Landsbanki, but this relief was insufficient given other foreign obligations falling due.

Changes to the strategy: With the situation deteriorating rapidly, the Icelandic parliament passed emergency legislation (Act 125/2008), enabling the supervisory authority to take over the banks in order to preserve financial stability; and giving priority to claims of depositors over those of bondholders and other creditors. The authorities also announced publicly that the banks would not be supported by the government. "Icesave" began to suffer large deposit outflows. Eventually, Landsbanki was closed; existing shareholders were written down; the domestic operations (assets and deposits) were placed under a new entity (New Landsbanki); and international operations (including "Icesave" deposits in the U.K. and the Netherlands) were placed in runoff entities ("old bank"). In response, the British authorities seized the U.K. subsidiary of Landsbanki (Heritable Bank) and the Landsbanki London branch; and issued a freezing order on assets of Landsbanki, using powers under the Anti-terrorism, Crime and Security Act, 2001. With little room for maneuver, the Icelandic authorities closed Kaupthing and Glitnir under the same emergency legislation (i.e., "new banks"/ "old banks" separation). In October 2008, Iceland imposed capital controls to halt outflows from all banks until a solution consistent with external stability could be found.

Supervisory issues: Several reports outline weaknesses in Icelandic banking supervision before the crisis. In particular, the supervisory approach and capacity were not commensurate with the risks and international activities of the groups.

F. KBC

Background: KBC is a large *bancassurance* conglomerate created in 1998 through the merger of two Belgian banks (Kredietbank and CERA Bank) and a Belgian insurance company (ABB). The group

expanded rapidly between 1999 and 2007, mainly in Central and Eastern Europe.³⁵ KBC also established a presence in Russia, several Western European countries, including Ireland, and, to a lesser extent, in the U.S. and Southeast Asia. Before the crisis, half of group revenues came from international operations.

Source of distress: In the third quarter of 2008, KBC reported losses of €0.9 billion, mainly related to the revaluation of collateralized debt obligations (CDO),³⁶ but also to impairments on exposures to Lehman Brothers and Washington Mutual. In addition, KBC had a substantial exposure to Ireland and Hungary through a subsidiary.

Stabilization strategy: KBC received a capital injection of €7 billion in 2008 from the Belgian federal government and the Flemish government (completed in 2009); further asset relief guarantees on a CDO portfolio of €20 billion were provided in 2009. Federal capital injections were repaid in full with a first tranche of €0.5 billion in 2011 and a second one of €3 billion in 2012. The group also reimbursed a first tranche of €1.166 billion to the Flemish government in 2013 and a second tranche of €333 million in 2014. The group successfully raised private capital in the form of new equity (€1.25 billion) in December 2012, contingent capital instruments (€0.75 billion) in January 2013, and Additional Tier 1 instruments of €1.4 billion in March 2014.

Cross-border spillovers: On September 30, 2009, the Belgian authorities submitted a restructuring plan for KBC. Under the plan, KBC retained its integrated banking and insurance model, while divesting from noncore markets in Central and Eastern Europe and noncore activities in Belgium (Fidea and Centea). The CDO portfolio was put into runoff. In 2010–2013, important asset disposals took place, including the sale of the private banking subsidiary KBL, of the Polish subsidiaries (Kredyt Bank, Zagieli, and Warta), and of the Russian (Absolut Bank) and Slovenian (NLB) operations.

G. Hypo Alpe Adria

Background: The Hypo Group Alpe Adria (HAA) was founded as a regional *Landes- und Hypothekbankanstalt* in the Austrian state of Carinthia. The bank expanded rapidly after 2000 into banking and leasing activities outside Austria, taking advantage of rapid growth in Central and Eastern Europe (CEE), developing a substantial market shares in 12 countries.³⁷ A liability guarantee from the state of Carinthia helped HAA fund the expansion on favorable terms. Liabilities under this guarantee were issued until 2007 and reached about €20 billion, with total assets reaching €38 billion that year.³⁸ In 2007, BayernLB acquired a majority stake in HAA; the buyer was one of

³⁵ Company website, www.kbc.com.

³⁶ Collateralized debt obligations ("CDOs") are a type of asset-backed security and structured credit product. CDOs are constructed from a portfolio of fixed-income assets.

³⁷ European Commission, "Communication on the Aid Measures Provided to BayernLB and Hypo Group Alpe Adria (document C(2009) 10672 final), December 23, 2009.

³⁸ Hypo Group Alpe Adria, Annual Financial Report 2007, and document above: European Commission (2009).

Germany's largest banks, with total assets of €416 billion in 2007, owned by the state of Bavaria and the Bavarian savings banks in equal parts.³⁹ After the takeover, 26 percent of HAA shares remained in the hands of an Austrian financial group, while Carinthia retained a 20 percent stake.⁴⁰

Sources of distress: HAA engaged in high-risk project financing and offered foreign currency loans to (mostly unhedged) clients at its CEE-subidiaries, often with inadequate collateral. As highlighted in several on-site inspections of the Austrian National Bank, it also suffered from inadequate internal controls and risk management, and was vulnerable to fraud.⁴¹ These problems were complicated by distress at the parent bank—BayernLB—which registered losses from its portfolio of asset-backed securities (ABSs), leading to a substantial decline in its solvency ratios.⁴²

Initial stabilization strategy: In December 2008, HAA received €700 million in capital from BayernLB. Austria provided the bank with €900 million in capital support and guarantees for €1.35 billion of bond issues. The same month, BayernLB received a public capital injection from the German authorities of €10 billion and a guarantee of up to €4.8 billion on its ABS portfolio. In return, ownership of the bank almost completely shifted to the state of Bavaria.

Challenges to the initial strategy: In 2009, a comprehensive external asset screening report noted significant problems regarding risk management and the valuation of loan collateral. Additional losses were reported as a result, and HAA was expected to breach minimum solvency requirements by end-2009. BayernLB announced that it would not provide further capital support.⁴³

Changes to the strategy: The Austrian National Bank considered HAA to be a systemically important bank, and insolvency would have led to substantial negative impact on the Austrian economy given the statutory guarantee provided by the State of Carinthia. In addition there were also fears (among others by the ECB) about negative effects on the whole region. In December 2009, BayernLB transferred all its shares in HAA to the Austrian government without compensation; took a loss on Tier-2 capital and loans to HAA, effectively recapitalizing the bank by almost €1 billion; and committed to keep in place remaining loans to HAA until 2013–15, callable and repayable by the Austrian state in case of significant changes in ownership or a split of the bank. The Austrian state provided €450 million in capital in 2010.

³⁹ European Commission, Communication on the aid measures provided to BayernLB (document K(2008) 8839 final), December 18, 2008.

⁴⁰ Hypo Group Alpe Adria, Annual Financial Report 2007.

⁴¹ European Commission, "Decision on Restructuring Aid for Hypo Group Alpe Adria (document C(2013) 5648 final), September 3, 2013. In recent years, the bank became involved in several criminal investigations. See Austrian National Bank homepage <http://oenb.at/Finanzmarktstabilitaet/eckpunkte-der-aufsichtstaetigkeit-in-bezug-auf-die-hypo-alpe-adria.html>

⁴² See document above: European Commission (2008).

⁴³ See document above: European Commission (2009).

Austria provided €200 million in additional guarantee to the bank in January 2011. By end-2011, non-performing loans had risen to 27 percent of total loans. In the meantime, a restructuring plan was developed entailing a significant reduction of leasing activities, divestment of the Austrian and Italian subsidiaries, and a focus on the CEE bank network with the aim of re-privatizing it. Additional capital support (€500 million) and guarantees on Tier-2 instruments (€1 billion) were provided at end-2012 to cover additional losses.⁴⁴ The Austrian subsidiary of the group has since been sold and the CEE subsidiaries will need to be sold by mid-2015, while the rest of the bank will be transferred into a defeasance structure.

H. Laiki Bank

Background: Laiki Bank (also known as Cyprus Popular Bank and before that Marfin Popular Bank) was the second largest bank in Cyprus with total assets of €43 billion at the end of 2010 (about 250 percent of Cypriot GDP). In the years leading up to the Cypriot banking crisis, Laiki grew by establishing a large international branch network, consisting of 470 branches in nine countries, including the United Kingdom, Russia, and Romania. The bank was acquired in 2006 by a Greek investment group that subsequently integrated the Greek activities of Laiki with two Greek banks it owned. A new banking group was formed (Marfin Egnatia Bank) as a subsidiary owned by a Cypriot parent company (Marfin Popular Bank). A cross-border merger between the Greek and Cypriot entities was announced in 2009. The head office of the integrated Marfin Popular Bank remained in Cyprus, even though the Greek operations made up a slightly larger share of the balance sheet.⁴⁵ The Greek subsidiary was formally transformed into a branch in early-2011.⁴⁶

Sources of distress: Laiki had built large exposures to both public and private counterparts in Greece. The Greek crisis resulted in large losses on the loan book and on holdings of government bonds—with losses of €2.3 billion in 2011, due to the Greek sovereign debt restructuring.⁴⁷ In the same year, the European Banking Authority (EBA) capital exercise exposed a substantial capital shortfall for Laiki that the bank was unable to cover in the private market.⁴⁸

Initial stabilization strategy: Laiki needed to raise €1.8 billion in capital in order to reach the Core Tier-1 Ratio of 9 percent by end-June 2012 required by EBA. This capital was provided in 2012 by the Cypriot government through the issuance of an unfunded bond in exchange for equity. Effectively, this resulted in Laiki's nationalization, with the government acquiring an 84 percent stake in the bank.⁴⁹

⁴⁵ Presentation by Marfin Popular Bank on the Full Year 2009 Preliminary Results, February 25, 2010.

⁴⁶ Central Bank of Cyprus, Annual Report 2011.

⁴⁷ European Commission, "State Aid Decision on Rescue Recapitalisation of Cyprus Popular Bank," (document C(2012) 6368 final), September 13, 2012.

⁴⁸ EBA, "Final Report on the Implementation of Capital Plans Following the EBA's 2011 Recommendation on the Creation of Temporary Capital Buffers to Restore Market Confidence," EBA BS 2012 188, October 3, 2012.

⁴⁹ Central Bank of Cyprus, "Rescue Programme for Laiki Bank," Press Release, March 30, 2013.

Challenges to the strategy: Pressure intensified in 2012 due to concerns about the viability of Laiki and uncertainty on the timing and scope of official financial assistance to Cyprus. Over 2012, Laiki lost a third of domestically raised deposits and €2 billion of deposits in its Greek branch. This increased Laiki's reliance first on ECB liquidity, and then on emergency liquidity assistance from the Central Bank of Cyprus. An independent loan-level due diligence assessment of the Cypriot banking system identified in February 2013 additional significant capital shortfalls in Laiki.⁵⁰

Changes to the strategy: Proposals to impose a one-off tax on deposits in the Cypriot banking system to raise funds for the recapitalization of Laiki were rejected by the Cypriot parliament on March 19, 2013. A week later, a new strategy emerged under the financial assistance program. First, all Greek-related assets and liabilities were transferred to Piraeus Bank in Greece. Second, insured deposits, central bank funding, and almost all assets of Laiki were taken over by Bank of Cyprus, the country's largest bank, through a purchase and assumption transaction. Remaining liabilities (uninsured deposits, unsecured claims) stayed in the legacy entity (insolvency estate) together with a compensating 18 percent equity stake in Bank of Cyprus. Bank of Cyprus, also affected by the crisis, was recapitalized with the participation of shareholders, bank debt holders, and partial conversion of uninsured deposits into equity. These resolution measures were possible due to the adoption of new resolution powers and the introduction of depositor preference, a few days prior to resolution. Deposits within the U.K. branch of Laiki were transferred to the U.K. subsidiary of Bank of Cyprus, thereby avoiding loss on uninsured deposits.

I. RBS

Background: RBS is a major global financial services group operating in the U.K. (where it is the largest SME lender and a major residential and commercial mortgage provider), Europe, the Americas, and Asia, with over 30 million customers across the globe. RBS's balance sheet and leverage increased rapidly in the years leading up to the financial crisis. In mid-2006, a strategic decision was taken to expand RBS' structured credit business aggressively, and by early-2007, RBS had accumulated significant credit risk exposures in its trading book.

Sources of distress: According to the FSA, RBS' distress stemmed from over-reliance on short-term wholesale funding; concerns and uncertainties about underlying asset quality; substantial losses in credit trading activities; the ABN AMRO acquisition; and the overall systemic crisis.⁵¹ Significant shortcomings in RBS's regulatory capital calculations and planning were also identified.

Initial stabilization strategy: In the weeks following Lehman Brothers' collapse, RBS suffered a loss of confidence and a creditor run, mainly due to its heavy reliance on short-term wholesale funding. Extensive recourse to emergency liquidity assistance from the Bank of England was required. To restore capital to adequate levels, RBS launched a £20 billion capital raising in 2008, which failed to

⁵⁰ IMF, "Cyprus: Letter of Intent, Memorandum of Economic and Financial Policies, and Technical Memorandum of Understanding," April 29, 2013.

⁵¹ www.fsa.gov.uk/pubs/other/rbs.pdf.

attract investor interest. At the end of the year, RBS posted a £34 billion loss. Between October 2008 and December 2009, the U.K. Treasury bought RBS shares in three rounds for a total of £45.5 billion; RBS also benefited until 2012 from an asset protection scheme covering £282 billion of its risky assets. As of February 2014, the U.K. government retained a 79 percent stake through U.K. Financial Investments, with a plan to return RBS to private ownership.

In line with European Commission state aid rules, RBS began to divest nonstrategic businesses (branches and business lines) in the U.K. and abroad. RBS's activities were separated into core and non-core (the latter placed under a new non-core division in charge of divesting or running them down), with the objective of reducing assets by £251 billion from end-2008 levels. RBS refocused on U.K. retail, SME, and corporate banking business while retaining a leaner global operation. It exited retail and commercial banking markets outside the U.K., Ireland, and the U.S.

Supervisory issues: According to the FSA report, "the FSA's overall pre-crisis supervisory approach was inadequate, with, in retrospect, an overly reactive approach and insufficient data available to supervisors to assess prudential risks fully. The prevailing FSA approach to supervising firms' capital adequacy under the Basel I framework was mainly reactive and driven by alerts and exception reporting generated by the central analysis of regulatory returns. No peer analysis was routinely performed on capital returns. And only during the later part of the Review Period did the FSA focus on the quality of capital." The supervisor did not identify the full scale of RBS's vulnerability, which only became apparent after Lehman Brothers' collapse.

J. UBS

Background: UBS is a Swiss global bank with important business lines in wealth management and investment banking. Prior to the financial crisis, total assets were almost \$2 trillion. As part of its growth strategy, UBS aimed to become a market leader in investment banking, and the bank built a substantial portfolio of ABSs for proprietary trading and treasury purposes. This increased the group's exposure to U.S. subprime debt. In 2005, UBS set up a Wall Street-based internal hedge fund (DRCM), further increasing exposure to ABS.

Sources of distress: The collapse of the subprime debt market realized significant losses for UBS. According to a report by the Swiss Federal Banking Commission, "UBS was not aware of the extent and the nature of its risk exposure to the subprime mortgage and related markets until the beginning of August 2007, and was thus unable to take appropriate measures in a timely manner." DRCM, the internal hedge fund, was closed in May 2007 and its assets reintegrated into UBS, with significant losses. By mid-2008, UBS's write downs totaled €43 billion, of which 22 percent was attributable to investments made by DRCM.⁵²

Stabilization strategy: UBS was able to cover initial losses on ABS and safeguard its capital position by raising \$11.5 billion in new capital in late 2007 from a few institutional investors. As losses

⁵² Swiss Federal Banking Commission, "SFBC – UBS Subprime Report," September 30, 2008.

increased, an additional capital raising of \$15 billion was announced in April 2008 and completed over the following weeks. By late 2008, losses were continuing to accumulate. The deteriorating environment after Lehman's failure hampered further capital raising efforts; the deterioration in funding conditions was reflected in a sharp increase of UBS's credit spread.

The Swiss authorities supported UBS through capital injection and the establishment of a bad bank for UBS' illiquid and troubled assets. The recapitalization amounted to SwF 6 billion in mandatory convertible notes. The Swiss National Bank (SNB) created and held a special-purpose vehicle (*StabFund*) to take over up to \$60 billion of certain troubled asset classes. UBS provided the *StabFund* with capital equal to 10 percent of the asset value, while SNB financed 90 percent of the asset value through a secured loan with a maximum duration of 12 years. The transaction removed the risk of the troubled assets from UBS and stabilized the bank, although the effective transfer was completed months later following a thorough due diligence and valuation process.

The U.S. authorities were involved in the provision of liquidity to *StabFund*. To provide the necessary U.S. dollars for the bad bank, the SNB initially made use of a currency swap line with the U.S. Federal Reserve.⁵³ UBS also benefitted from the Commercial Paper Funding Facility (CPFF) set up by the Federal Reserve, which served as backstop to U.S. issuers of commercial paper, including branches of foreign banks.

Subsequent developments: UBS transferred \$39 billion in assets to the bad bank, based on the market value as at September 30, 2008, in three tranches between December 2008 and April 2009. During the same period, UBS was the biggest borrower under the CPFF with a total cumulative amount of \$75 billion.

UBS raised new capital in the second half of 2009, and the Swiss Treasury sold its \$6 billion investment in the bank. UBS was not officially required to undergo any operational restructuring. The bank announced in 2012 that it would scale down its investment banking activities, refocus its business model on global wealth management and universal banking services in Switzerland, and continue to deleverage its balance sheet.⁵⁴

The wind-up of the bad bank for UBS' illiquid and troubled assets was finished sooner than expected in late 2013. The resulting profit was shared between UBS and SNB, as agreed at the establishment of the *StabFund*, with proceeds amounting \$3.8 billion for SNB and \$2.8 billion for UBS. According to the SNB, factors for success were the strong market recovery of U.S. securities, the disciplined but not hasty management and liquidation of assets, and the good collaboration between SNB and UBS.⁵⁵

⁵³ SNB, "Steps to strengthen the Swiss financial system," Press Release, October 16, 2008.

⁵⁴ UBS Annual Report 2012.

⁵⁵ SNB, "UBS purchases StabFund from the SNB," Press Release, November 8, 2013.

Annex II. European Banking Union and the Bank Recovery and Resolution Directive

Banking Union. The Banking Union for the Euro area, while work in progress, provides for a consistent framework with many of the elements needed for the sound, efficient provision of international financial services in a highly integrated region, including a monetary union. Underpinned by a strong EU-wide legal framework, including the recently-approved Bank Recovery and Resolution Directive (BRRD); key elements of the reform include a single supervisory mechanism (SSM), a single resolution mechanism (SRM), including a single resolution fund; and a harmonized legal framework for deposit insurance. The earlier EU Credit Institutions (Reorganisation and Winding Up) Directive 2001 (“Winding-Up Directive”) among other things provided for principles and procedures for cooperation among national authorities in the reorganization or winding up of credit institutions, but lacked effective resolution authority and tools. The reforms will help strengthen coordination, information sharing, and decision-making in relation to cross-border banks. Implementation is at an early stage, and gaps include the lack of a common fiscal backstop, in case additional funds are needed to facilitate resolution of systemic financial institutions.

The European Stability Mechanism (ESM). The ESM provides for a formalized inter-governmental framework for helping to strengthen Euro area financial stability. The ESM provides official loans to Euro area member states in financial difficulty and can, theoretically, also be used to recapitalize systemic banks in resolution through direct equity injections jointly with the applying member state. To minimize moral hazard and the risk of the ESM suffering losses, direct recapitalization can only be considered after a bank’s balance sheet has been restructured through bail-in; recapitalization from private sources is not feasible, and the bank already meets a minimum capitalization requirement (common equity tier 1 equal to 4.5 percent of risk-weighted assets). The total amount of ESM funds available for direct recapitalization is capped at €60 billion.

Bank Recovery and Resolution Directive (BRRD). The BRRD approved by the European Parliament in April 2014 establishes requirements for national resolution frameworks for all EU member states and members of the European Free Trade Area. This harmonization aims to ensure institutions can be resolved speedily, with minimal risk to financial stability, and with losses borne by shareholders and creditors.

- *Entities covered*—The Directive covers credit institutions established in EU member states, parent companies, (mixed), financial holding companies, investment firms, or other financial institutions established in the EU and subject to consolidated banking supervision.
- *Resolution powers*—The Directive provides for resolution powers and tools for the sale of an institution’s business; transfer of assets and liabilities to a bridge institution; separation of assets for transfer to an asset management vehicle; and bail-in. In particular, the bail-in tool can be used to recapitalize a failing institution, convert debt into equity, or to reduce principal amounts on claims or debt instruments with the exception of specific such as insured deposits and

liabilities with a maturity of less than seven days. Other resolution powers allow resolution authorities to replace senior management, and to impose temporary stays on payment of financial claims.

- *Recovery and Resolution Plans*—Institutions are required to prepare plans for recovery from financial distress, while authorities will take the lead in preparing plans setting out modalities for resolving failed banks in a way that preserves their most critical functions and avoids bail out by taxpayers. Resolution authorities will also have powers to require an organization to restructure in order to facilitate its resolvability.
- *Creditor Hierarchy*—The BRRD introduces tiered depositor preference. The waterfall of creditor claims established under the BRRD is as follows: (i) covered deposits, and the deposit insurance scheme by virtue of subrogation to the rights of covered depositors; (ii) eligible deposits of natural persons and micro and SMEs exceeding the deposit insurance coverage level; (iii) deposits in foreign branches of EU banks; (iv) claims of ordinary unsecured, non-preferred creditors; and (v) shareholders.
- *Recognition of third country resolution proceedings*—In the absence of agreement between an EU member state and a non-EU resolution authority, decisions regarding the recognition of the non-EU authority's resolution proceedings may be taken either (i) jointly by the European resolution college (if established); or, in its absence, (ii) by each resolution authority. This provides more flexibility to EU authorities than under the Winding-Up Directive under which EU home authorities have exclusive competence in reorganization or winding-up measures relating to EU banks and their EU branches, with full recognition and legal effectiveness of such actions within the European Union.
- *Funding* – Additional funding needs for resolution after bail-in will generally be provided through national resolution funds with contributions from banks. For euro area member states, national resolution funds will be pooled into the proposed €55 billion Single Resolution Fund to be operational by 2016. Contributions from banks are expected to be made over an eight-year period.