

Article:  
**Safe to fail**

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# Executive summaries

## **Safe to fail**

by **Thomas F. Huertas**, Partner, EY LLP

Banks cannot be made fail-safe. But they can be made safe to fail, so that the failure of a bank need not disrupt the economy at large nor pose cost to the taxpayer. In other words, banks can be made resolvable, and “too big to fail” can come to an end. To do so, the authorities, banks and financial market infrastructures need to prepare in advance for what amounts to a pre-pack reorganization of the bank that the resolution authority can implement over a weekend, if the bank reaches the point of non-viability in private markets (fails to meet threshold conditions). This pre-pack consists of two principal elements: (i) a recapitalization of the bank through the bail-in of investor instruments and (ii) the provision of liquidity to the bank-in-resolution. Creating such a pre-pack solution should form the core of the resolution plans that authorities are developing for global systemically important financial institutions. This paper sets out the conditions that must be met for a bank to be resolvable, the “safe-to-fail” test and the banking structures required in order to meet this test. How banks are organized matters less than what banks, authorities and financial market infrastructures do to prepare for the possibility that resolution may be required. The paper concludes with an agenda for action to ensure that too big to fail is not too tough to solve.

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# Safe to fail

**Thomas F. Huertas**

Partner, EY LLP<sup>1</sup>

## Abstract

Banks cannot be made fail-safe. But they can be made safe to fail, so that the failure of a bank need not disrupt the economy at large nor pose cost to the taxpayer. In other words, banks can be made resolvable, and “too big to fail” can come to an end. To do so, the authorities, banks and financial market infrastructures need to prepare in advance for what amounts to a pre-pack reorganization of the bank that the resolution authority can implement over a weekend, if the bank reaches the point of non-viability in private markets (fails to meet threshold conditions). This pre-pack consists of two principal elements: (i) a recapitalization of the bank through the bail-in of investor instruments, and (ii) the provision of liquidity to the bank-in-resolution. Creating such a pre-pack solution should form the core of the resolution plans that authorities are developing for global systemically important financial institutions (G-SIFIs).

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<sup>1</sup> The paper draws extensively on the analysis presented in [Huertas (2013)] and has benefited from comments by Stefan Walter, Eva Huepkens, Maria Nieto, Markus Ronner, Wilson Erwin, John Whittaker, and David Schraa, as well as from a discussion at a seminar organized by the Financial Markets Group at the London School of Economics. The opinions expressed here are the author's personal views and do not in any way represent the views of EY LLP, its partners, or any associated organization. Any remaining errors are the author's responsibility.

Banks cannot be made fail-safe. But they can be made safe to fail, so that the failure of a bank need not disrupt the economy at large nor pose cost to the taxpayer. In other words, banks can be made resolvable, and “too big to fail” can come to an end. To do so, the authorities, banks and financial market infrastructures (FMIs) need to prepare in advance for what amounts to a pre-pack reorganization of the bank that the resolution authority can implement over a weekend, if the bank reaches the point of non-viability in private markets/fails to meet threshold conditions. Creating such a pre-pack solution should form the core of the resolution plans that authorities are developing for global systemically important financial institutions (G-SIFIs).

We start off by setting out the conditions that must be met for a bank to be resolvable. This paper then outlines that this “safe-to-fail” test can be met under a variety of banking structures under a so-called Single Point of Entry approach, where the home country resolution authority acts as what amounts to a manager of a global resolution syndicate (Annex A deals with the Multiple Point of Entry approach).<sup>2</sup> How banks are organized matters less than what banks, authorities, and financial market infrastructures do to prepare for the possibility that resolution may be required. That agenda for action concludes the paper.

### Resolvability

Resolution reform aims to make feasible the resolution of financial institutions without severe systemic disruption and without exposing taxpayers to loss, while protecting vital economic functions through mechanisms that make it possible for shareholders and unsecured and uninsured creditors to absorb losses in a manner that respects the hierarchy of claims in liquidation [FSB (2011)].

An institution is, therefore, resolvable, if three conditions are met: (1) it can be readily recapitalized without recourse to taxpayer money; (2) in resolution it can continue to conduct normal<sup>3</sup> transactions with customers, ideally from the opening of business on the business day following the initiation of the resolution; and (3) the resolution process itself does not significantly disrupt financial markets or the economy at large.

<sup>2</sup> For a description of the Single and Multiple Point of Entry approaches see FSB (2012).

<sup>3</sup> Normal transactions would include payments and settlement of securities trades and various other ‘non-investment’ transactions with both individual and institutional customers. In contrast, investment obligations would be subject to a stay (e.g., on the payment of interest and dividends or the repayment of capital instruments), as outlined below.

### The resolution timeline

Resolution falls into three phases: pulling the trigger, stabilizing the institution and restructuring the institution (Figure 1).

**Pulling the trigger initiates resolution:** for the purpose of this discussion, we assume that the trigger is pulled upon a finding (usually by the bank’s supervisor) that the bank has reached the point of non-viability (it no longer meets threshold conditions). We also assume that the trigger is pulled at the end of the business day,<sup>4</sup> ideally on a Friday, so that the resolution process takes place over a weekend, when markets are closed.<sup>5</sup> As a practical matter, for a G-SIFI, the end of the business day is in all likelihood the end of the business day in the U.S., for it is when the U.S. market closes that there is a period of hours before the next market opens in Asia.<sup>6</sup>

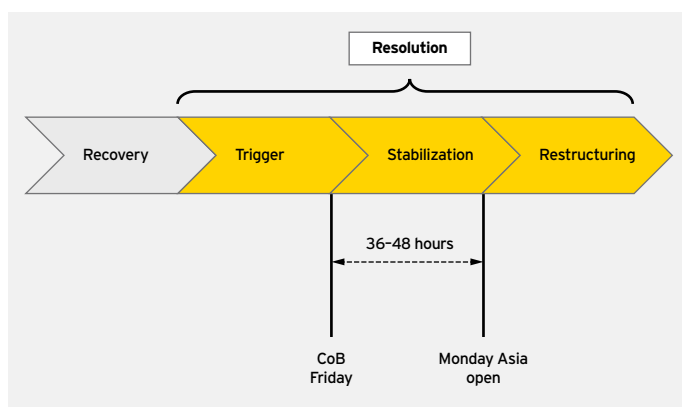
Once the trigger has been pulled, resolution begins. In line with the requirements set out by the FSB in its Key Attributes paper [FSB (2011)], we assume that the resolution regime has designated a resolution authority for the jurisdiction and empowered such an authority to make decisions with respect to the bank-in-resolution without prior judicial review.

The work of the resolution authority falls into two distinct phases: stabilization and restructuring. The stabilization phase covers the period between the point at which the trigger is pulled (e.g., close of business Friday) and the opening of the next business day.

<sup>4</sup> The importance of this assumption cannot be overstated. Pulling the trigger during the course of the business day greatly compounds the potential disruption to financial markets that the bank’s failure could cause. Although much has been done to improve the robustness of financial market infrastructures (e.g., introduction of real time gross settlement in payment systems and introduction of delivery versus payment in securities settlement systems), allowing a major bank to fail during the course of a business day could still cause significant disruption, a phenomenon known as Herstatt risk, in reference to the disruption caused by the failure of Herstatt Bank in 1974 while markets were still open.

<sup>5</sup> The phrase ‘when markets are closed’ requires some qualification. It is common for banks to offer customers (especially consumers) 24-hour access to their accounts seven days a week via internet banking and/or automated teller machines. Such access may need to be temporarily halted over the resolution weekend in order to effect the stabilization of the failed bank. Thought also needs to be given to how so-called ‘in-flight’ transactions are to be handled, particularly if the resolution does not provide for continuity.

<sup>6</sup> This timing factor gives the U.S. a disproportionate influence in determining when the trigger should be pulled to put a G-SIFI into resolution. In particular, if the U.S. were to decide to put the U.S. operations of a G-SIFI into resolution on the grounds that the U.S. operations did not meet U.S. standards for capital and liquidity, it is highly likely that the rest of the group would quickly follow into resolution. The recent U.S. proposal [FRB (2012)] for the regulation of foreign banking organizations (FBOs) in the U.S. further heightens such concerns, as the U.S. proposes to impose requirements on the U.S. operations of FBOs that are higher than those imposed in the Basel Accord and makes no reference to cooperation with the host country authorities.



**Figure 1: Resolution: tight timeframes dictate advance planning**

In practical terms, this means that the stabilization phase for a G-SIFI lasts no more than 36 to 48 hours, from close of business in North America on a Friday to opening of business in Asia on Monday. If the stabilization succeeds, customers will continue to be able to transact with the bank-in-resolution<sup>7</sup>, much the same as airline passengers who are able to continue flying on airlines that are in bankruptcy.

The restructuring phase is open-ended. It can take months, or even years, but the objective will be to return the bank to the private sector as soon as possible. The resolution authority will act in the same capacity as an administrator in a bankruptcy proceeding and may take decisions to sell assets (including subsidiaries, lines of business and individual assets), reconfigure businesses or discontinue them entirely.

This paper focuses on the stabilization phase.<sup>8</sup> It makes the assumption that the supervisor pulls the trigger when the bank reaches “the point of non-viability,” i.e., the point at which the bank is no longer able to finance itself in private markets, and that this point corresponds to the point at which the bank no longer meets threshold conditions. In other words, the authorities do not exercise forbearance.

<sup>7</sup> The term “bank-in-resolution” also includes successor institutions, such as bridge banks, that may be created during the course of resolution by the resolution authority.

<sup>8</sup> A second paper [Huertas (forthcoming)] will focus on the restructuring phase.

**Meeting condition 1: the institution can be readily recapitalized without recourse to taxpayer money**

Bail-in can enable banks to meet condition 1. This effectively creates what amounts to reserve capital and allows the resolution authority to utilize instruments other than common equity to absorb loss. This should be done in accordance with strict seniority, so that common equity bears first loss, then non-common equity Tier-1 capital (e.g., preferred stock), then Tier-II capital (e.g., subordinated debt), then other ‘investor’ obligations such as senior debt. Such investor instruments should be subject to mandatory bail-in immediately upon the bank entering resolution.<sup>9</sup>

Four caveats are in order:

1. **The mandatory bail-in must generate enough capacity to absorb loss and recapitalize the bank to at least the minimum required level:** this implies that the total reserve capital, the investor instruments subject to mandatory bail-in (non-core Tier-I capital, Tier-II and senior debt subject to mandatory bail-in), should be at least equal to the required common equity Tier-I capital. If this is the case, the mandatory bail-in would effectively recapitalize the bank, even if the entire amount of common equity Tier-I capital had to be written off. Note that pulling the trigger promptly (i.e., at the point at which the bank fails to meet threshold conditions – reaches the point of non-viability) greatly enhances the probability that the mandatory bail-in of investor instruments will be sufficient to recapitalize the bank, for such intervention will occur at a point where the bank still has positive net worth as it enters resolution.

<sup>9</sup> Note that the “waterfall” described here assumes [see caveat (4)] that senior debt subject to mandatory bail-in is subordinated to deposits. If senior debt is pari passu with deposits, bailing-in senior debt whilst keeping deposits whole will give rise to potential compensation payments from the resolution fund under a “no creditor worse off” criterion [Huertas (2013)]. Note as well that the “waterfall” does not stop as a matter of law (and should not stop) with senior debt. If losses exceed the total amount of investor obligations, then bail-in should extend to more senior obligations, such as deposits. From a policy standpoint, the question then arises as to whether insured deposits should have preference over uninsured deposits (as is proposed for the ring-fenced retail and commercial bank under the UK ICB legislation) or whether all deposits should be pari passu with one another, as well as whether deposits should have preference over other obligations. This has implications for the risk to the deposit guarantee scheme and to the contribution that such schemes could be expected to make to loss absorption in the event of resolution.

2. **The legal and contractual framework should be in place to allow the resolution authority to execute the mandatory bail-in of investor instruments immediately upon the entry of the bank into resolution:** to assure that this will be the case, the relevant law(s) should give the resolution authority the statutory power to implement mandatory bail-in, and the bank should complement this with contractual provisions and information disclosures to investors that make clear that the instrument will be subject to mandatory bail-in, if the bank goes into resolution.<sup>10</sup>
3. **The implementation of mandatory bail-in should not in and of itself trigger cross-default clauses in customer obligations, such as derivatives or repurchase agreements:** the mandatory bail-in of investor obligations should recapitalize the bank and enable the bank to meet its customer obligations. It would be counterproductive to allow mandatory bail-in itself to be an event of default that would allow derivative counterparties to trigger close out and/or allow derivative and repo counterparties to liquidate collateral that such counterparties may have received from the bank at the point at which the bank goes into resolution. If mandatory bail-in effectively recapitalizes the bank, this should provide sufficient immediate protection to counterparties. They should only be allowed to invoke close-out and/or liquidate collateral if the bank-in-resolution defaults on a payment due.<sup>11</sup>
4. **Implementing mandatory bail-in will be easier if such instruments are explicitly subordinated to other obligations of the bank:** this will already be the case for obligations of a parent holding company, as they are structurally subordinated to obligations of the subsidiary bank. This will also be the case for non-core Tier-I and Tier-II capital instruments issued at the bank level. However, this will not be the case for senior debt issued at the bank level. This is pari-passu with customer obligations, such as deposits and derivatives. To the extent that debt senior to Tier-II capital would be counted toward the minimum amount of reserve capital under caveat (1), such “senior” debt should

really be a mezzanine facility, senior to subordinated debt, but junior to customer obligations and to debt pari-passu with such customer obligations.<sup>12</sup>

**Meeting condition 2: the institution in resolution can continue to transact with customers from the opening of business on the business day following the initiation of the resolution**

For the stabilization phase to be successful, the bank-in-resolution needs to be able to continue to meet customer obligations. If the bank enters resolution at the close of business in North America on a Friday evening, it needs to be able to reopen for business as usual in Asia on Monday morning Asia time.<sup>13</sup> In particular, it will need to be able to meet the demand of customers (e.g., holders of current accounts, repo providers, holders of maturing time deposits) who have an immediate claim on the bank.

For the purpose of this discussion, we assume that the bank-in-resolution has met condition 1. Mandatory bail-in has recapitalized the institution without recourse to taxpayer money. As a result, the bank-in-resolution is solvent and can potentially remain in operation while its capital is being restructured. However, this will require:

1. **The bank-in-resolution to continue to be authorized to operate as a bank:** the resolution regime should assure that the bank-in-resolution receives immediate authorization to operate as a bank, and that the resolution authority has the power to continue the operations of the failed bank.
2. **The bank-in-resolution to retain capability to continue to operate:** if the bank-in-resolution is to continue to transact with customers, provision should be made to assure that the entry of the bank into resolution does not cause suppliers of operational and technological support services to cut off provision of these services to the bank-in-resolution. To assure continuity in the event of resolution, the bank should conclude service-level agreements (SLAs) with suppliers (including other affiliates in the banking group) that continue in force even if the bank enters resolution. Note that achieving this objective may require the

<sup>10</sup> In contrast, the resolution authority should have a reserve power to bail-in non-investor instruments, such as deposits and derivatives, upon a finding that losses are likely to exceed the total amount of investor instruments. See comments on valuation below.

<sup>11</sup> The one to two day stay on the ability of counterparties to close out derivative transactions included in some legislation (e.g., U.S. Dodd Frank Act) only partially addresses this caveat, for it does not preclude the counterparty from initiating close out after the stay has expired. There is a presumption that the counterparty will accept an assignment of the contract to the bridge institution (bank-in-resolution), but there is no requirement that it does so. Nor does such a stay apply to contracts that are concluded outside the U.S. under non-U.S. law.

<sup>12</sup> Note that there may be a broader range of instruments subject to bail-in than those subject to mandatory immediate bail-in. Ideally, these would also be subordinated to customer obligations, but that need not be the case.

<sup>13</sup> Some have suggested that it might be acceptable for the bank-in-resolution to reopen after a one to two day stay or suspension of operations [IIF (2011)]. However, such an interruption to continuity could create complications at financial market infrastructures and cause contagion to other financial institutions, financial markets, and to the economy at large.



bank to pay in advance for some services and/or establish an operational subsidiary.

3. **The bank-in-resolution to have access to financial market infrastructures:** if the bank-in-resolution is to continue transacting with customers, it will need access to financial market infrastructures (FMIs), such as payment systems, securities settlement systems and central counterparties. Accordingly, authorities responsible for the regulation of FMIs should take measures to assure that the mere entry of a bank into resolution does not automatically end its access to the FMI. As long as the bank-in-resolution continues to meet its obligations to the FMI, the FMI should continue to allow the bank-in-resolution access to the FMI. This continued access should follow two precepts: (i) no acceleration of obligations due from the failed bank at the point at which it enters resolution, unless the bank-in-resolution fails to meet its obligations to the FMI at the close of business on the day the bank entered resolution (see condition 1), but (ii) freedom of the FMI to insist on risk-limitation measures (such as the provision of collateral or the requirement to make payments to the FMI in central bank money) for new transactions of the bank-in-resolution with the FMI.
4. **The bank-in-resolution to have access to adequate liquidity:** most importantly, the bank-in-resolution will need to have access to adequate liquidity if it is to be able to meet customer obligations from the opening of business on the business day following the entry of the bank into resolution. This is akin to the debtor-in-possession financing that banks provide in connection with restructurings under bankruptcy proceedings for non-financial corporations. In all likelihood, the central bank(s) or resolution authorities will be the only source of such a liquidity facility in the amount and with the speed that a bank-in-resolution is likely to require.<sup>14</sup> According to central bank doctrine, a central bank should lend to a solvent but temporarily illiquid bank secured by sound collateral.<sup>15</sup> The mandatory bail-in of investor

obligations should assure that the bank-in-resolution is solvent and that the door to the central bank and/or resolution authority is open to provide the liquidity facility. The actual facility should be on a super-senior basis and secured by the bank's unencumbered assets. As a practical matter, the provider of such a liquidity facility will want to assure that it can track and take a charge over the bank's unencumbered assets, and banks' resolution plans will need to reflect this. Banks and central banks will also want to assure that the central bank can smoothly take over any collateral released by counterparties, such as repo providers, that demand repayment from the bank-in-resolution. Resolution planning should also give consideration to the contract that central bank(s) might wish to be used for such a facility (but stop short of the central bank actually giving a commitment to a bank that such a facility would actually be granted so as to not fetter the discretion of the central bank). Finally, central bank(s) will want assurances that they will not be ultimately responsible for bearing any losses that might be incurred on the provision of such a liquidity facility to the bank-in-resolution, should it fail to repay the facility and liquidation of the collateral provided by the bank prove insufficient to do so. This assurance should come from a resolution fund, financed by a levy on all banks, that would compensate the central bank for any losses that the central bank might incur through the provision of liquidity to the bank-in-resolution.<sup>16</sup>

**Meeting condition 3: the resolution process itself does not significantly disrupt financial markets or the economy at large.**

Finally, the resolution process should not, in and of itself, significantly disrupt financial markets or the economy at large.

To achieve this result:

1. **The resolution process should not come as a surprise to the market:** the shift from bailout to bail-in should be well advertised to investors, not sprung on them by surprise, as it was arguably done in the case of Lehman Brothers in 2008 [Huertas (2011)]. The revision of resolution regimes, the introduction of resolution planning and the conduct of resolution policy all point in this direction, as does the increased dependence of pricing and

14 In the U.S., under Dodd Frank, the resolution authority (FDIC) is responsible for providing such a liquidity facility to the bank-in-resolution and such a facility is subject to certain quantitative limits. The Federal Reserve is prohibited from extending an institution-specific credit to the bank-in-resolution, but may create a general market facility open to all banks, including the bank-in-resolution. In other jurisdictions (such as the U.K.), the central bank can provide liquidity to the bank-in-resolution under its general powers to act as a lender of last resort.

15 The central bank should certainly charge the bank-in-resolution at least the market rate (the rate at which it would lend to banks not in resolution). If the central bank charges the bank-in-resolution a penalty rate (i.e., adds a spread or premium to the market rate) in order to induce the bank-in-resolution to replace central bank funding with funding from private sources as soon as possible, the central bank should avoid setting that spread at punitive levels that would undermine the ability of the resolution authority to restructure the institution.

16 For details see FSB (2013a). Note that the obligation to be covered by such a resolution fund differs from that to be covered by a deposit guarantee scheme (the coverage of insured deposits up to a limit). This implies that two separate funds and two separate levies may be required, particularly where deposits have preference (and especially where insured deposits have preference).

ratings for instruments subject to mandatory bail-in on a bank's stand-alone risk (and correspondingly reduced reliance on implicit government support).

2. **The resolution process should not accelerate fire sales of assets:** if the resolution process requires the bank-in-resolution to conduct or empowers its counterparties to conduct fire sales of assets, it can have an adverse knock-on effect on the market as a whole. Although such fire sales enable the seller to raise cash, they depress the price at which assets must be valued in mark-to-market portfolios across the entire market. That will generate losses in such portfolios and reduce capital at banks and other financial institutions, possibly causing one or more such institutions to experience liquidity pressures, even if the institution had no direct exposure to the bank-in-resolution. In other words, fire sales are a possible transmission mechanism for contagion. The likelihood of fire sales will be reduced, if the resolution process meets conditions (1) and (2). In particular, if the entry of the bank into resolution does not trigger close-out of derivatives, it will reduce the adverse impact on that market as well as on the market(s) for any collateral that the bank-in-resolution may have posted with derivative counterparties. Similarly, asset markets will be less volatile if repo providers to the bank-in-resolution are not entitled to simply liquidate the collateral that the bank-in-resolution had pledged. In effect, the resolution process outlined in conditions (1) and (2) enables the bank-in-resolution to continue to meet its obligations to derivative counterparties and repo providers, so that they have no need to close out or liquidate collateral pledged by the bank-in-resolution.
3. **The resolution process should not interrupt clients' access to their assets:** once the bank-in-resolution opens for business on Monday, clients should be able to access their accounts and assets as normal. The resolution process should not freeze client assets, restrict client transactions, or limit clients' access to their money.<sup>17</sup>
4. **The resolution process should not trigger the failure of financial market infrastructures (FMIs):** finally, the resolution process should leave FMIs intact and able to continue to fulfil their functions. This will certainly be the case if FMIs are themselves robust, i.e., able to withstand the simultaneous failure of their two largest participants, as called for under the CPSS-IOSCO (2012)

principles. But it may also be the case, if the resolution process for a G-SIFI meets conditions (1) and (2) as outlined above, for the bank-in-resolution would continue to fulfil its obligations to the FMI. As far as the FMI is concerned, there would be no participant failure, and the FMI should remain robust.

In summary, if a bank meets the three conditions outlined above it will be resolvable. In other words, the bank will be safe to fail - its failure will not pose solvency costs to the taxpayer nor will its failure significantly disrupt financial markets or the economy at large.

#### **Which banking structures can meet the safe-to-fail test?**

We now turn to the question of which banking structures can meet the safe-to-fail test outlined above. We consider two cases: (a) where the parent organization for the group is a bank, and (b) where the parent organization is a holding company that owns one or more banks as operating subsidiaries.

#### **Bank as parent company**

We start with the case where the bank itself is the parent company, and this bank operates in a single jurisdiction (A). Here, the conditions outlined above apply directly. If the bank meets those conditions, it will be safe to fail.

As a practical matter, the authorities, banks and financial market infrastructures (FMIs) need to prepare in advance for what amounts to a pre-pack reorganization of the bank that the resolution authority can implement over a weekend, if the bank reaches the point of non-viability in private markets (i.e., fails to meet threshold conditions). This pre-pack consists of two principal elements: a recapitalization of the bank through the mandatory bail-in of investor instruments; and the provision of liquidity to the bank-in-resolution through what amounts to debtor-in-possession financing.

#### **Implementation of bail-in**

For bail-in to operate effectively there has to be enough "reserve capital" (instruments subject to mandatory bail-in) to recapitalize the bank. Law and regulation should assure that the aggregate amount of investor instruments subject to mandatory bail-in would be sufficient to recapitalize the bank, even if all of its common equity Tier-I capital had to be written off. In aggregate, therefore, the bank's non-core Tier-I capital, Tier-II capital and

<sup>17</sup> An exception to this statement might be made in the event that failures to segregate client money and/or client assets caused the bank to reach the point of non-viability (fail to meet threshold conditions), and therefore be put into resolution.

senior debt subject to mandatory bail-in should be in the order of 7% to 10% of the bank's risk-weighted assets.<sup>18</sup>

For mandatory bail-in to operate smoothly and efficiently:

- ▶ The resolution authority should have the statutory authority to impose bail-in. This should be anchored in the resolution regime as a matter of law or regulation, and specify the instruments to which mandatory bail-in would apply. The statute should empower the resolution authority to implement bail-in immediately upon the entry of the bank into resolution without prior judicial review and without the ability of investors in instruments subject to mandatory bail-in to seek injunctive relief.
- ▶ This statutory provision for bail-in should be reinforced by contractual provisions in the instrument itself, especially where the instrument is issued in a jurisdiction other than jurisdiction A (where the bank is headquartered) and/or issued to investors resident outside jurisdiction A.
- ▶ The statutory provision for bail-in should also be reinforced by disclosure. The bank should disclose to investors in instruments subject to mandatory bail-in that they are so subject should the bank enter resolution. This disclosure should be ongoing, including without limitation any prospectus that accompanies new issues of instruments subject to bail-in as well as ongoing communications (e.g., websites, annual reports) with investors and rating agencies.<sup>19</sup>
- ▶ There should be a clear separation between customer obligations and obligations subject to mandatory bail-in immediately after the trigger for resolution is pulled. In particular, investor obligations subject to mandatory bail-in should be subordinated to deposits, the quintessential customer obligation. This will be the case for non-core Tier-I capital and Tier-II capital (subordinated debt), and can be done as a matter of regulation and contract for senior debt subject to mandatory bail-in.<sup>20</sup> Note that depositor preference alone will not assure that there is a sufficient amount of non-deposit liabilities available to bail-in should the bank fail to meet threshold conditions and need to

be recapitalized. There should be an explicit requirement that the bank issues a minimum amount of instruments subject to mandatory bail-in and subordinated to deposits. Without such a minimum requirement, the introduction of depositor preference would induce banks to fund on a collateralized or secured basis, so that wholesale funding is again on a par or even senior to deposits (once the collateral backing the facility is taken into account).

- ▶ The resolution authority should effectively conduct its activities as a trustee for the creditors of the bank-in-resolution, especially for the investors who have been subjected to mandatory bail-in. At a minimum, the resolution regime should assure investors in instruments subject to mandatory bail-in that they will be no worse off than they would have been, had the bank been liquidated.
- ▶ Bail-in should be consistent with the principles of strict seniority. Losses should be apportioned according to a waterfall, with common equity absorbing first loss, then non-core Tier-I capital (e.g., preferred stock), then Tier-II capital (e.g., subordinated debt) and finally senior debt subject to bail-in. Any proceeds from the bank-in-resolution should be paid to investors in reverse order (i.e., senior debt first).<sup>21</sup> Provision should also be made to allow holders of instruments subjected to mandatory bail-in to make an offer to convert such claims into common equity Tier-I capital in the bank, as a means of returning the bank to the private sector. Note that the waterfall does not necessarily end with senior debt subject to mandatory bail-in. It is possible that the losses at the bank-in-resolution may be so great as to burn through all of the "reserve capital" (instruments subject to mandatory bail-in), so that other investor obligations, such as senior debt not subject to mandatory bail-in as well as customer obligations, such as deposits, would also be subject to loss. Unless the deposit guarantee scheme assumes such loss and provides for continued access of depositors to their funds,<sup>22</sup> bailing-in deposits greatly diminishes the likelihood that the bank can be resolved in a manner that assures continuity.

18 This is consistent with the total capital requirements for Swiss headquartered banks under the so-called 'Swiss finish' as well as with the requirements for the U.K. ring-fenced retail and commercial bank to hold primary loss absorbing capacity of 1.7% of risk weighted assets. It is also consistent with the ECOFIN common position on the E.U. Bank Recovery and Resolution Directive [BRR (2013)].

19 For a further discussion of disclosure under bail-in see Huertas (2012).

20 In other words, only senior debt subordinated to deposits would count toward the requirement to keep outstanding a minimum amount of instruments subject to mandatory bail-in.

21 Note that it may be sensible to accept departures from strict seniority (as there are in the bankruptcies of a non-financial corporation) if there is a conversion of obligations into new equity during the restructuring phase. It may also be sensible to allow the junior creditors as a class to buy out the claims of the next most senior class at par plus accumulated interest and to take over the rights of that senior class (including the right to convert such claims into equity in the 'new' bank). For further discussion see Huertas (forthcoming).

22 In the U.S., the FDIC has resolved banks in a manner that protects all deposits, including uninsured deposits. An example is the purchase and assumption transaction used to resolve Washington Mutual (WaMu) in 2008. This assured continuity for WaMu depositors.

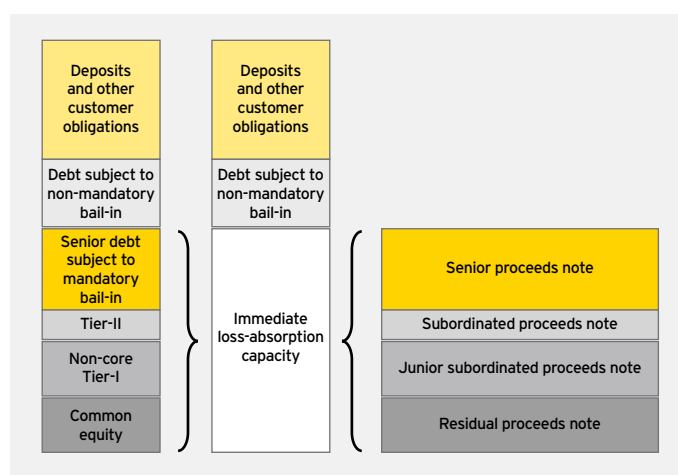
Figure 2 illustrates the way in which bail-in could work. When the bank reaches the point of non-viability, the supervisor declares that the bank fails to meet threshold conditions and puts the bank into resolution. The resolution authority immediately bails-in the non-core Tier-I capital, the Tier-II capital and the senior debt subject to mandatory bail-in. This expands the immediate loss-bearing capacity of the bank and effectively recapitalizes it. In exchange for their original instruments, investors subject to mandatory bail-in obtain receivership certificates that entitle them to the proceeds that the resolution authority may, over time, realize from restructuring the bank-in-resolution. Such proceeds are distributed in accordance with strict seniority. Proceeds go first to holders of certificates (senior proceeds note) representing the claims of holders of senior debt subject to bail-in. Once these claims have been fully satisfied, any remaining proceeds are distributed to more junior creditors, again according to strict seniority. To the extent that a creditor receives less than it would have done had the bank been liquidated, the creditor has a claim for compensation for the difference on the resolution fund [IIF (2011); BRR (2013)].

Note that the issuance of such proceeds notes greatly reduces the need to conduct an immediate valuation of the bank-in-resolution for the purpose of apportioning ultimate loss. Provided the authorities do not engage in forbearance (allow banks that fail to meet threshold conditions to continue in operation), losses should be less than the amount of the bank's primary loss-absorbing capacity (common equity plus instruments subject to mandatory bail-in). Consequently, the valuation immediately required at the point of resolution is: (1) an assessment that the bank has reached the point of non-viability (so that the trigger to resolution is pulled); (2) an assessment that losses will not be greater than the amount of investor capital (primary loss absorbing capacity); and (3) an assessment of the advance rate that the central bank is willing to make on the unencumbered assets that the bank-in-resolution will pledge to the central bank as collateral for the liquidity facility that the central bank provides to the bank-in-resolution.

**Liquidity**

As emphasized above, implementing mandatory bail-in of investor instruments is only the first step in the stabilization process. Successful stabilization requires not only recapitalization of the bank-in-resolution, but also provision of liquidity to the bank-in-resolution. Only the two measures taken together can assure continuity, and therefore minimize any adverse impact on the financial markets and the economy at large.

The framework for such a liquidity facility needs to be put in place well



**Figure 2: Bail-in via stay on investor capital**

in advance of the bank being put into resolution.<sup>23</sup> The framework should cover four factors:

1. The priority of the liquidity facility relative to other liabilities on the bank-in-resolution. As a practical matter, liquidity facilities to the bank-in-resolution will need to be on a super-senior basis so that they would have priority in liquidation over all other unsecured creditors.
2. The pool of collateral backing the facility. As a practical matter this should be a charge over the unencumbered assets of the bank-in-resolution, including without limitation the investments of the parent bank in its subsidiaries. Any proceeds from asset sales should go toward repaying the facility.
3. The allocation of loss should the bank-in-resolution fail to repay the facility and the liquidation of the collateral prove insufficient to repay the facility. As noted above, provision should be made to recoup from the industry any loss that the resolution authority/central bank might suffer.
4. How and where the bank-in-resolution might draw on such a liquidity facility.

<sup>23</sup> Ideally the framework would also be disclosed, certainly to host country central banks and resolution authorities (see international considerations below), to the bank itself, and to investors. Such disclosure would also go some way to surfacing and addressing the political objections that might be made to such a facility, particularly if the facility is a global one.

### International considerations

We now turn to the situation where the bank is active in more than one jurisdiction, and start with the simplest scenario – a bank headquartered in jurisdiction A with a branch in jurisdiction B. Such a bank will be safe to fail if the resolution process follows the same principles as outlined above for a bank that operates solely within a single jurisdiction.

Briefly put, this will be the case if resolution is a unitary process, i.e., there is a single resolution process initiated and implemented by the home country resolution authority (see Figure 3), and such a process follows the principles outlined above for the case of a bank operating in a single jurisdiction. In such a unitary process, the assets and liabilities of the foreign branch are treated as an integral part of the bank as a whole. In such a unitary process the home country resolution authority would initiate and implement bail-in at the bank as outlined above. Importantly, the home country central bank would have to arrange for a liquidity facility that would also cover the bank's foreign branch (indeed, if the foreign branch actually opens before the head office on the day after the bank enters resolution, the first draw on the liquidity facility is likely to be in the foreign jurisdiction).

This will require that the home country central bank make arrangements with the foreign country central bank(s) as to the role that the foreign central bank will play in such a liquidity facility to the bank-in-resolution. Two approaches are possible:

1. The foreign central bank acts as an agent of the home country central bank, so that any losses from extending the facility (if the proceeds from liquidating the collateral are insufficient) would accrue to the home country central bank (before it recouped such losses from assessments on the home country resolution fund). Such an agency approach enables the liquidity facility to be based on a single global collateral pool and for such collateral to support drawings on the facility wherever they might occur.
2. The foreign central bank acts as principal and extends credit solely on the basis of the collateral that the bank-in-resolution pledges to it. This implies that each central bank (the home country and the foreign central bank(s)) has access to a separate pool of collateral and has a separate lending agreement with the bank-in-resolution.

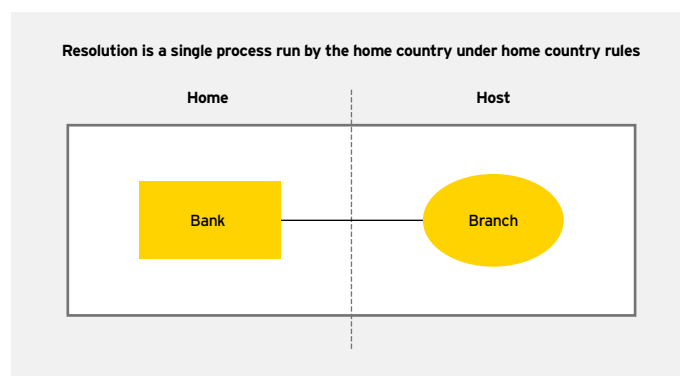


Figure 3: Bank with foreign branch: resolution under unitary approach

Although either of the approaches to liquidity provision is technically possible, the first, a unitary approach to liquidity provision, is more consistent with a unitary approach to resolution.

In contrast, under a territorial approach, resolution occurs separately within each jurisdiction (see Figure 4). In particular, the host country has the right to ring-fence the assets and liabilities of the branch in the host country, and liquidate the assets of the branch and use the proceeds to meet the liabilities of the branch to host country creditors (so that creditors of the host country branch have a preferential claim on the assets of the branch in the host country). Note that under the territorial approach, the host country may also have (take) the right to initiate resolution. Such a case may be envisioned if the bank fails to meet net asset requirements (equivalent to branch capital) and/or fails to meet local (branch) liquidity requirements. In the event that the host country puts the foreign branch into resolution, the home country may have no choice but to put the rest of the bank into resolution.

From the standpoint of investors in instruments subject to mandatory bail-in, the territorial approach creates a class of assets (the assets of the host country branch) that are segregated for the benefit of a specific class of liability holders (in this case the creditors (e.g., depositors) of the branch in the host country). If the host country authorities have the unrestricted right to sell such assets, they may have an incentive to do so at a discount so as to effect a quick sale. Indeed, one of the motives for the host country's imposing a net asset requirement on the host country branch of a foreign bank is precisely to afford the host country resolution

authority the opportunity to realize sufficient proceeds from such a rapid sale to meet the obligations of the creditors of the host country branch in full. Thus, the territorial approach is likely to impose higher losses on instruments subject to mandatory bail-in, than a unitary approach.

More importantly, the territorial approach creates a bias toward liquidation, with a greater loss of value to creditors and a greater possibility of disruption to financial markets and the economy as a whole. The territorial approach breaks the bank into pieces and effectively creates two separate banks in resolution, not one. Indeed, if the host country decides to liquidate separately the host-country branch of the foreign bank-in-resolution, it will be difficult, if not impossible, for the bank-in-resolution to conduct new international transactions and difficult, if not impossible, for the home country bank-in-resolution to avoid the triggering of cross-default clauses in derivative and repo contracts. This will make it difficult, if not impossible, for the home country bank-in-resolution to preserve continuity with respect to its operations. Indeed, losses under the territorial approach are likely to be disproportionately greater for creditors of head office (as they do not benefit from the assets segregated behind the host country's ring fence for the benefit of depositors in/creditors of the branch in the host country).

**Banking organizations with holding company as parent**

We now consider the case where the banking organization is structured as a parent holding company with a bank subsidiary. Can such an organization be safe to fail? Briefly put, the answer is yes, provided certain conditions are fulfilled.

We start with the simplest case, where the banking organization consists solely of a parent holding company and a single bank subsidiary, wholly owned by the parent holding company (see Figure 5), both headquartered in jurisdiction A. Assume, as is likely to be the case, that the loss causing the group to reach the point of non-viability originates in the subsidiary bank. This leads to a write-down of the equity in the subsidiary bank and a reduction in the value of the parent holding company's investment in the subsidiary bank. This may be sufficient to wipe out the equity of the parent holding company.

Bail-in at the parent holding company can recapitalize the holding company, but it will not recapitalize the subsidiary bank. This requires supplemental measures, such as bail-in at the bank

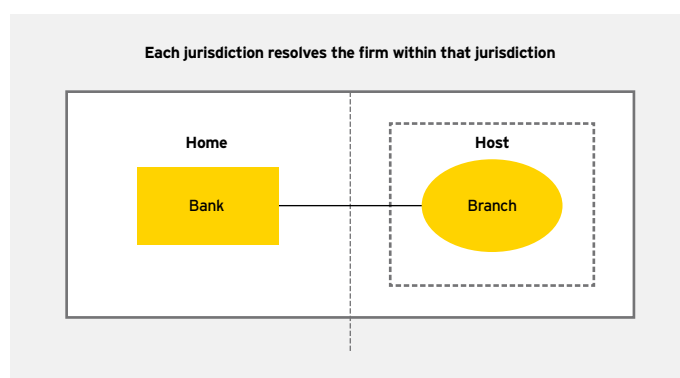


Figure 4: Bank with foreign branch: resolution under a territorial approach

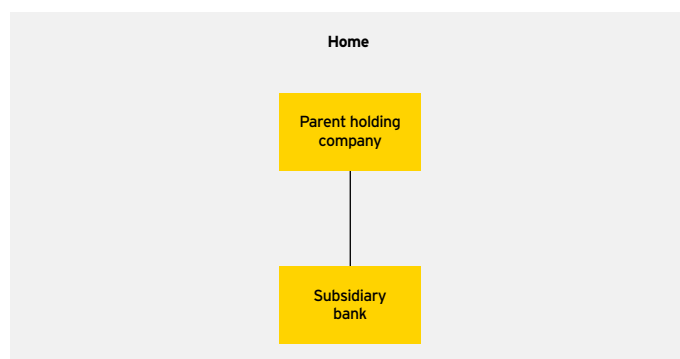


Figure 5: Parent holding company with domestic bank subsidiary

subsidary and/or the issuance of new equity by the bank subsidiary to the parent holding company in exchange for cash from the parent. Liquidity facilities for the bank-in-resolution will also need to be arranged. Without such supplemental measures, stabilization will fail and continuity will not be achieved. Table 1 illustrates how bail-in could work in the situation where a parent holding company owns a domestic bank subsidiary. At the point of intervention, the bank subsidiary writes down its loan portfolio from 700 to 600. This loss of 100 wipes out the bank's common equity of 100. It also causes a write-down of 100 in the value of the parent holding company's asset, "equity in bank subsidiary."

Bail-in should occur at two levels: the subsidiary bank and the parent holding company. The former is actually more important. In the example, bail-in at the parent converts preferred stock,

subordinated debt, and senior debt issued by the parent to third-party investors into primary loss absorbing capacity (in a manner similar to that depicted in Figure 2). Following bail-in at the parent level, PLAC is 200, corresponding to assets of 100 in marketable securities, 50 in senior debt issued by the subsidiary bank, 25 of subordinated debt, and 25 of preferred stock.

Without bail-in at the bank level, nothing changes at the bank level. The write-down in the loan portfolio has wiped out the equity of the bank. If the bank is to be stabilized, the bank must be recapitalized. This can occur either through the issuance of new equity by the bank to the parent (e.g., the parent would exchange its 100 of marketable securities for 100 of new equity in the bank subsidiary) or through a bail-in of instruments at the bank level. Such a bail-in process will work most smoothly where the parent holding company owns all of the instruments that are subject to mandatory bail-in at the bank level.<sup>24</sup> If this is not the case, some simplicity may be preserved, if the parent holding company agrees as a matter of contract to subordinate its holdings of an instrument subject to bail-in to those held by third parties. This is arguably consistent with the fact that the parent will, or should have, greater and/or timelier information about the state of the bank subsidiary than the third-party investor, as well as by the fact that such subordination facilitates the retention of control of the bank subsidiary by the investors in the parent holding company. This concept is illustrated in Table 1. The parent holding company owns the entire amount of preferred stock (25) and subordinated debt (25), but only a portion (50) of the senior debt (200) issued by the bank subsidiary. The rest (150) is held by third-party investors. If such debt held by third-party investors is bailed in, control over the bank subsidiary will effectively pass to such investors. In the example, the senior debt of the bank issued to the parent holding company is assumed to be contractually subordinated to the senior debt issued by the bank to third parties. The senior debt issued to the parent holding company is subjected to bail-in; that issued to third parties is not.

### International considerations

We now look at the case where the banking organization consists of a parent holding company headquartered in the home country with subsidiary banks in both the home and the host country

<sup>24</sup> The assumption that the parent holding company wholly owns the bank subsidiary also simplifies matters. It abstracts from any rights that minority shareholders may have.

(Figure 6). In such a situation, the banking organization will be safe to fail if the home country resolution authority takes a unitary approach to resolution and treats foreign subsidiaries the same way as it would treat domestic subsidiaries. This implies that the home country resolution authority would take measures to assure that the foreign bank subsidiary could and would be as promptly recapitalized as a domestic bank subsidiary, in the event that the banking organization required resolution.

As a practical matter, this is only likely to be the case if the subsidiary bank in the host country has issued to the parent holding company instruments subject to bail-in in an amount sufficient to recapitalize the host-country bank, should losses at the host-country bank wipe out its common equity Tier-I capital. Such an arrangement would provide to the host country resolution authority the up-front assurance that the parent holding company will, in fact, have acted as a source of strength to the host-country bank, should the host country bank experience severe losses.<sup>25</sup>

Without such up-front assurance, the host country authorities would have to be concerned that either the parent holding company or the home country resolution authority would exercise their option to walk away from a failed subsidiary in the host country. With such up-front assurance, the host country resolution authority could be reasonably confident that the home country resolution authority would have an incentive to take the interests of the host country into account in formulating resolution plans for the group as a whole.

Two further matters require consideration. The first is what might be called a self-denying ordinance, namely a limitation on the ability of the host-country resolution authority to seize or sell the host-country subsidiary to a third party without the approval of the parent holding company or home country authorities, if the home country puts the home country bank and/or parent holding company into resolution. Without such a constraint on the host country resolution authority, the host country authority could potentially sell the (healthy) host country subsidiary to a third party for a nominal amount. This would

<sup>25</sup> For smaller subsidiaries that are non-material to the group and non-systemic to the host country authority the host country authority may be satisfied with a parental guarantee, particularly if this is a legally binding, first demand guarantee, where the failure to perform would constitute an event of default for the parent holding company. However, the home country authority may be uncomfortable with the parent holding company's giving such a guarantee and/or seek to insert clauses in domestic statute and/or regulations that would empower the home country resolution authority to suspend such guarantees if the banking group went into resolution.

Parent holding company				
Assets	Prior to intervention	At Intervention	After Bail-in at parent only	After bail-in at parent and bank
Marketable securities	100	100	100	100
Senior debt at bank subsidiary	50	50	50	0
Subordinated debt at bank subsidiary	25	25	25	0
Preferred stock at bank subsidiary	25	25	25	0
Common equity in bank subsidiary	100	0	0	100
<b>Total</b>	<b>300</b>	<b>200</b>	<b>200</b>	<b>200</b>
Liabilities				
Senior debt	100	100	0	0
Subordinated debt	25	25	0	0
Preferred stock	25	25	0	0
Common equity	150	50	0	0
PLAC			200	200
<b>Total</b>	<b>300</b>	<b>200</b>	<b>200</b>	<b>200</b>
Bank subsidiary				
Assets				
Loans	700	600	600	600
Other assets	300	300	300	300
<b>Total</b>	<b>1000</b>	<b>900</b>	<b>900</b>	<b>900</b>
Liabilities				
Deposits	650	650	650	650
Senior debt – third party	150	150	150	150
Senior debt subject to mandatory bail-in – parent	50	50	50	0
Subordinated debt	25	25	25	0
Preferred stock	25	25	25	0
Common equity	100	0	0	100
<b>Total</b>	<b>1000</b>	<b>900</b>	<b>900</b>	<b>900</b>

**Table 1: Operation of bail-in with parent holding company structure: bail-in at parent must be accompanied by bail-in at the bank subsidiary**

cause significant additional losses to the parent (its investment in the common equity of the host country subsidiary bank would have to be written off) and additional losses to the holders of parent company obligations subject to bail-in.

Certainly, such a self-denying ordinance will be easier for host country authorities to give, if the home country authorities make some provision for a global liquidity facility to be provided to the group in resolution.<sup>26</sup> Without such a global facility, there is a risk that

the entry of the domestic bank subsidiary into resolution could cause the host country subsidiary bank to experience liquidity pressures sufficiently great to cause it to fail to meet threshold conditions in the host country. (That would allow the host country authorities to trigger resolution of the bank subsidiary in the host country.)

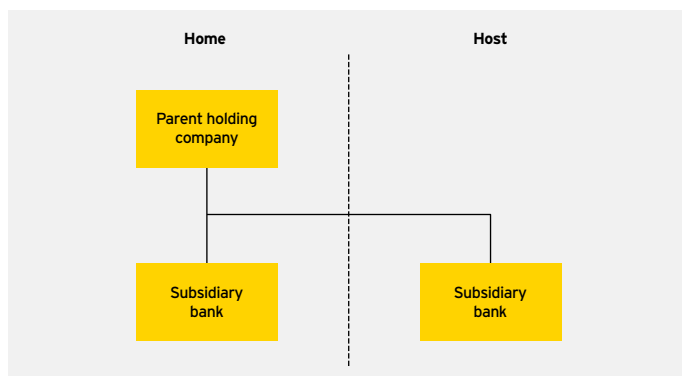
With such a global liquidity facility and with the up-front issuance of bail-in instruments to the parent holding company, the way should stand clear for the home country resolution authority to run what amounts to a single global resolution process. This is the solution most likely to make the bank resolvable, or safe to fail.

### The road to resolution

If the above accurately portrays what would be required to make banks safe to fail, what steps need to be taken by policymakers and by banks to reach resolvability so that banks will be safe to fail? Three steps

<sup>26</sup> The form for such a facility might be as follows: each central bank would be responsible for extending credit to the bank headquartered in its jurisdiction, and such credit would be collateralized by a pledge of assets from that bank to the central bank in its jurisdiction. Should the bank in question be unable to repay its obligation to its central bank and should the liquidation of the collateral be insufficient to repay the obligation in full, the home country resolution authority would make up the shortfall, and it would in turn recoup any loss that it suffered through a levy on the industry and/or recourse to the home country resolution fund.





**Figure 6: Parent holding company with domestic and foreign bank subsidiaries**

stand out. First, authorities need to finish the reform of resolution regimes. Second, banks need to change their funding arrangements to accommodate bail-in. Third, financial market infrastructures need to take steps to coordinate their own recovery and resolution planning with that of their principal participants.

To complete the reform of resolution regimes “authorities” need above all to:

- ▶ Create the legal basis for bail-in at both the parent holding company and the operating bank subsidiary levels. Here, the enactment of the proposed E.U. Bank Recovery and Resolution Directive [BRR (2013)] would represent a critical step forward [Huertas and Nieto (2013)].
- ▶ Require that banks maintain a minimum amount of instruments subject to mandatory bail-in. This should be sufficient to recapitalize the bank, even if the bank’s common equity Tier-I capital is wiped out. These instruments subject to mandatory bail-in should be subordinated to customer obligations, such as deposits, on a statutory and contractual basis.
- ▶ Arrange adequate facilities for the provision of liquidity to the bank-in-resolution.
- ▶ Set out the basis on which home and host countries will cooperate with one another.<sup>27</sup> As outlined above, a single point of entry, global approach to resolution can make banks resolvable. But such a global approach can only work, if (i) the home country is willing and able to take on the direction

and leadership of a global resolution process, and (ii) the host countries are willing to accept the leadership of the home country and refrain from unilateral action to initiate and/or conduct a separate resolution process for the banking group’s subsidiaries or branches in the host country.

Bail-in holds the key to resolution, and “banks” to be resolved under the Single Point of Entry approach<sup>28</sup> will need to rearrange their funding arrangements to accommodate immediate bail-in at both the parent holding company (if they are so organized) and at the level of the operating bank. This involves:

- ▶ Establishing a target funding model with the requisite amount of instruments subject to mandatory bail-in in issue to third-party investors. Note that such instruments will include non-core Tier-I and Tier-II capital instruments. These are likely to form the base of any funding subject to immediate bail-in, as Basel III requires such instruments to be subject to write-down or conversion at the point of non-viability, if they are to continue to qualify as capital. Senior debt subject to mandatory bail-in should be senior to non-core Tier-I and Tier-II capital, but subordinated to customer obligations, such as deposits, as a matter of contract and, ideally statute. As noted above, debt obligations of parent holding companies are structurally subordinated to obligations of the operating bank subsidiaries, and it should be feasible for operating bank subsidiaries to issue instruments subject to mandatory bail-in to their parent holding companies, that is contractually subordinated to senior debt issued to third parties, as well as contractually subordinated to deposits and other customer obligations.
- ▶ Eliminating the entry into resolution as an event of default in instruments (such as deposits and derivatives) that are not subject to mandatory bail-in and are senior to instruments subject to mandatory bail-in. In particular, revisions will need to be made to netting contracts including the standard ISDA agreement, and to repurchase agreements. Such contracts should not be subject to acceleration, and counterparties should have no right to close out or sell collateral pledged by the bank-in-resolution against such contracts, unless the bank-in-resolution fails to make payments as due.

<sup>27</sup> For a further discussion of the importance of international cooperation see IIF (2012).

<sup>28</sup> For a discussion of banks under the Multiple Point of Entry approach see Annex A.

- ▶ Eliminating cross-guarantees or other forms of support (such as repurchase commitments and/or liquidity backstops) from the operating bank subsidiaries to the obligations of the parent holding company. Default on such parent company obligations should not trigger payments from the operating bank subsidiary, either to the parent holding company or third-party investors.
- ▶ Disclosing to investors and counterparties whether the instrument in which they have invested is subject to mandatory bail-in, and where they stand in the queue to receive payments, should the bank enter resolution. To this end, the banking organization may find it helpful to conduct and keep up-to-date what might be called an entity priority analysis. This documents the order in which an investor has claims on the cash flows from specific assets (in the case where the obligation is secured) as well as directly or indirectly from entities within the group, in the event that the immediate obligor fails to pay.

In addition, banks will need to monitor and make available to central banks (and possibly private investors) information concerning what might be called a “collateral budget.” This relates to:

- ▶ Uses, or the encumbrance that the banking group has granted to creditors [assets pledged by the bank to creditors, noting whether such assets are owned outright or borrowed (and re-hypothecated by the bank to the lender)]. Such information should include assurance that, if the borrowing bank repays the obligation the borrowing bank can rapidly and smoothly regain possession of the collateral previously pledged to the lender. Such information should also include estimates of the amount of additional collateral that the borrowing bank might be required to post under different scenarios, including without limitation deterioration in general market conditions and/or in the credit rating of the borrowing bank.
- ▶ Sources, or the amount of unencumbered assets that the banking group retains, the legal vehicles in which such assets are held, the eligibility of such assets for discount at central bank(s), either under ordinary discount window facilities or under emergency liquidity assistance, whether such assets are pre-positioned with the central bank, and some estimate of the terms (e.g., haircut) on which central bank and/or private lenders might be willing to provide funds. Note that the ability to repossess collateral from one lender (e.g., a repo counterparty seeking repayment) in order to provide it

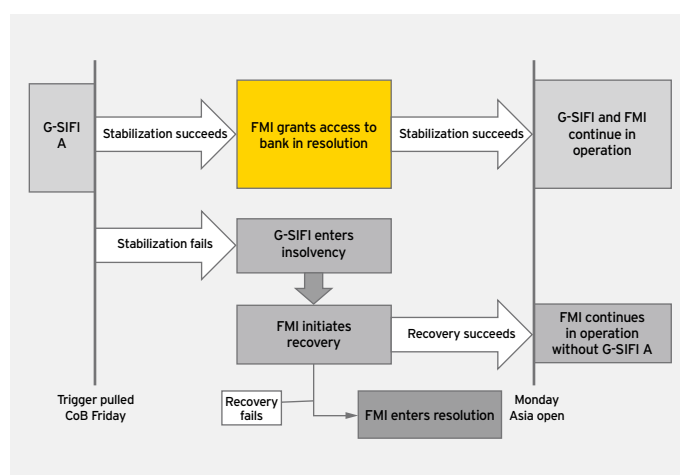


Figure 7: FMIs have to coordinate their own RRP with those of their members

to another (e.g., a central bank providing a liquidity facility) is likely to be especially important in assuring that the bank-in-resolution can gain access to sufficient funding liquidity at the close of the resolution weekend/opening of business on Monday.

Finally, FMIs have to take measures to integrate their own recovery [CPSS-IOSCO (2013)] and resolution [FSB (2013b)] planning with that of the G-SIFIs who are their principal members (see Figure 7). In particular, FMIs should take steps to assure that:

- ▶ The entry of a participant into resolution does not automatically exclude the bank-in-resolution from access to the FMI. If the resolution process succeeds in stabilizing the bank so that the bank-in-resolution can continue operation, it should retain access to the FMI.<sup>29</sup>
- ▶ There is a clear understanding on how the FMI will handle “in-flight” transactions if a participant to the FMI enters resolution, and there should be a bias toward completing such transactions. Indeed, that is the purpose of the margin requirements and default funds that FMIs require participants to post.

<sup>29</sup> However, the terms on which the bank-in-resolution transacts with the FMI may differ from the terms on which the bank was able to transact prior to its entry into resolution. In particular, it is unlikely that the FMI (or the other participants in the FMI) would be willing to grant credit (even on an intraday basis) to the bank-in-resolution.

- ▶ Participants' margin requirements and default funds at FMIs are liquid, i.e., they are either in cash or in instruments readily convertible into cash (even during the weekend).
- ▶ Participants' obligations to replenish a FMI's default fund are limited and capable of being fulfilled rapidly (even during the weekend).
- ▶ The FMI itself has sufficient capital to bear the loss that might arise as a result of the default of at least one of its largest participants.

In addition, both the authorities and FMIs will need to take steps to create a framework for resolution of an FMI, should the recovery measures outlined above prove insufficient. This would include designating a resolution authority for each FMI and empowering the resolution authority to take measures, such as the transfer of the FMI's business to an alternative provider or to a bridge institution, and/or the imposition of a hair-cut on the initial margin provided by the surviving members, to allow the FMI to continue operations or conduct an orderly wind-down [Tucker (2013)].

## Conclusion

These steps together constitute a massive agenda. But it is an agenda that is possible for authorities, banks and financial market infrastructures to achieve. Indeed, important steps have already been taken toward this end.

There is a way to make banks safe to fail, so that they can be resolved without taxpayer solvency support and without significant disruption to the economy. And, this can be done without compromising the contribution that global banks can make to growth in the global economy. What is required is cooperation among the authorities, realignment of funding at banks to accommodate bail-in and reform at FMIs. This constitutes a single, global approach to resolution under the direction of the home country resolution authority.

In contrast, national, "go-it-alone" approaches to resolution will impose significant costs and reduce the capability of global banks to contribute to global growth (see Annex A). More significantly, it is likely that the pursuit of financial stability in one jurisdiction would cause instability elsewhere. If one does not consider the coordination that a single, global approach to resolution would also require, it is difficult to see how the multiple point of entry approach could succeed in making banks resolvable. As Bill Dudley (2013), President of the Federal Reserve Bank of New

York, recently remarked, "We can do better through international cooperation and coordination both on macro policy and on regulation and supervision, rather than trying to 'go it alone'."

In summary, "too big to fail" is not too tough to solve. Now is the time to finish the job.

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### Annex A: A note on resolution via multiple point of entry

The above discussion suggests that banks can be made resolvable via what amounts to a pre-pack reorganization – a single point of entry, global approach to resolution under the firm direction of the home country resolution authority accompanied by a global liquidity facility arranged by the home country central bank/ resolution authority.

A multiple points of entry approach is also feasible, at least for banking groups organized as “archipelagos” or collections of independent, separately capitalized and separately funded bank subsidiaries owned by a common parent holding company. Each of these separate bank subsidiaries would be resolved [if that particular bank subsidiary reached the point of non-viability (failed to meet threshold conditions)] in the jurisdiction in which the subsidiary was headquartered without reference to the parent holding company or affiliates in other jurisdictions. Each such resolution process should proceed along the lines outlined above for the case where the bank is the parent entity.

In general, the caveats outlined in the main text also apply to the multiple points of entry approach. In particular, if an operating bank subsidiary has branches in a foreign country, the resolution of that bank can be seriously compromised if the host country takes a territorial approach to resolution and attempts to resolve the foreign branch of the bank separately from the rest of the bank. Indeed, if the host country were to take such a step without prior consultation or warning to the home country authorities (supervisor, central bank, and resolution authority), such a step would practically assure financial instability in the home country and in the other jurisdictions in which the bank conducted a significant amount of business and/or played a significant role in financial markets. Multiple points of entry should not mean two uncoordinated attempts to resolve the same legal vehicle at the same time.

Similarly, chaos can result if resolution authorities have, and take the option to implement what amounts to a “cross-resolution” clause [entry of a subsidiary (the failed affiliate) into resolution in one country entitles any other resolution authority elsewhere in the world to put into resolution affiliates in its jurisdiction]. As outlined in the main text, such powers could result in the host country authority’s selling a healthy affiliate in the host country to a third party for a nominal sum to the detriment of the creditors of

the parent holding company and to the detriment of the creditors of the other operating subsidiaries of the group (who would be denied access to the capital resources that the parent holding company might otherwise have had available to recapitalize such subsidiaries).<sup>30</sup>

Consequently, for the MPE approach to work some limits will need to be placed on the ability of host countries to take unilateral action. Without some type of coordination and without some type of limitation on unilateral action, the multiple point of entry approach runs the risk of creating, not a race for the courthouse (for there is no international court house to go to) but simply a race for assets, where speed, opportunity and might make right.

At a minimum, the multiple point of entry approach implies that host countries will agree to be blind – when it comes to resolution – to the fact that a bank in its country is owned by a group headquartered in another country. Concretely, it implies that: (1) the host country central bank is willing to extend liquidity facilities to a subsidiary bank owned by a foreign banking group on the same terms and conditions as it would employ for a domestic bank; (2) the host country authorities are willing to stay their hand until such point as the subsidiary in the host country reaches the point of non-viability (fails to meet threshold conditions in the host country); and (3) the home and host country authorities are willing to allow a group to simply walk away from a subsidiary in the host country,

It is not clear whether the authorities have given any such assurances. If anything, authorities in many countries, notably the U.S.,<sup>31</sup> seem to be going out of their way to emphasize that they retain the power of discretion to act as local law empowers them to do to protect local creditors regardless of the impact that such actions may have on the rest of the group or on international financial stability.

Nor is it clear whether authorities are willing to follow through to the logical consequence of a multiple point of entry approach: the

<sup>30</sup> Such behavior would be close to or even tantamount to expropriation or nationalization without compensation and is arguably a risk that banking groups already run in their normal course of business. However, in a resolution situation the barriers to host countries taking such a step are lower as is the likelihood that a court would rule against the host country supervisor.

<sup>31</sup> For example, the recent Federal Reserve Board (2012) proposal for remediation and resolution of foreign banking organizations in the U.S. makes no provision for the Fed to consult or coordinate with the home country supervisor.

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removal of capital requirements on the parent holding company. Under a multiple point of entry approach, the banking group is expected to put in up front all the strength required to keep each subsidiary bank well capitalized and well funded. Each subsidiary is required to be self-sufficient. Should a subsidiary fail to remain so, the supervisor of that subsidiary can put the subsidiary into resolution. That is the supervisory remedy, not a call on the parent to provide more capital (presumably the parent would have injected such capital already, if it had the capital available and if it considered it in its commercial interest to make such an injection).

Removal of parent company capital requirements would underline that under a multiple point of entry approach the focus of supervisors is exclusively on the operating bank subsidiaries, not the group as a whole. It would also underline to the market that there is no support for the group at the group level. And the market, rather than the regulator, would determine the most efficient capital structure (balance of equity and debt) for the parent holding company. This could present an effective means of marrying a very high degree of protection at the bank level (thereby assuring the safety of deposits) with the freedom for financial firms to manage their overall cost of capital in an efficient manner.

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