CHAPTER 6

A Resolvable Bank

Thomas F. Huertas

Making banks resolvable is a key component of the regulatory reform program enacted in response to the crisis. A resolvable bank is one that is "safe to fail": it can fail and be resolved without cost to the taxpayer and without significant disruption to the financial markets or the economy at large.

Much of the discussion on recovery and resolution focuses, quite understandably, on global systemically important financial institutions (G-SIFIs) in their current form. This chapter takes the opposite approach. It starts with a blank sheet of paper and designs a bank that will be resolvable, first for a bank in a single jurisdiction and then for a banking group with branches and/or subsidiaries in multiple jurisdictions.[1]

Separation of investor obligations from customer obligations at the operating bank holds the key to resolvability. Such a separation hinges on two factors:

- "Customer" or "operating" obligations, such as deposits and derivatives, are senior to, and distinct from, "investor" obligations, such

The Financial Markets Group of the London School of Economics distributed an earlier version of this chapter as a Special Paper, and parts of the paper are taken from the author's book, *Safe to Fail: How Resolution Will Revolutionise Banking* (2014). The author is grateful to David Schraa, Stefan Walter, Wilson Ervin, Markus Ronner, and John Whittaker for helpful comments on earlier drafts. The opinions expressed here are the author's personal views.

1. The paper takes a global perspective, as expressed in FSB (2011a) and abstracts from the situation in specific jurisdictions.

as the bank's capital instruments (common equity tier 1 [CET1], additional tier 1 [AT1] and tier 2 [T2] capital).

- "Investor" instruments are subject to "bail-in," i.e., to write-down or conversion into CET1 capital at the point of nonviability (PONV).

If the amount of investor obligations is large enough, the bail-in will replenish the common equity of the bank. This assures the solvency of the bank-in-resolution and provides the basis for the bank-in-resolution to obtain liquidity. Together, the recapitalization and the liquidity provision should go a long way toward stabilizing the bank-in-resolution, assuring that it is able to continue its customer operations and paving the way for the resolution authorities to restructure the bank. Overall, resolution can occur without cost to the taxpayer and without significant disruption to the financial markets or the economy at large.

Standards for Resolvability

A resolvable bank should be "safe to fail."[2] This calls for the bank and the resolution process to meet three conditions:

1. The bank can be readily recapitalized without recourse to taxpayer money.
2. The bank-in-resolution[3] can continue to conduct essential functions, such as executing payments for customers, ideally from the opening of business on the business day following the initiation of the resolution.
3. The resolution process itself does not significantly disrupt financial markets or the economy at large.

Resolution falls into three stages, (i) pulling the trigger, or initiating resolution, (ii) stabilizing the institution, and (iii) restructuring the institution (see figure 6.1). This paper focuses on the second, or

2. For a full discussion, see Huertas 2014a.

3. The term "bank-in-resolution" covers the period from the entry of the bank into resolution until the end of the restructuring period.

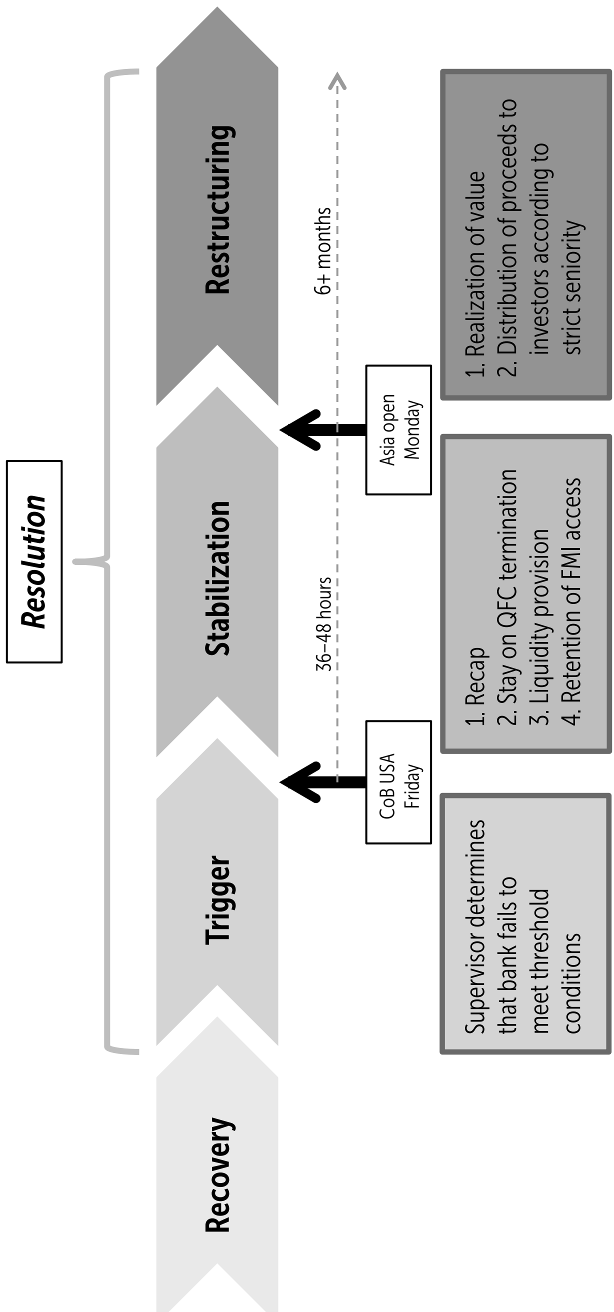

Figure 6.1. Resolution Has Three Stages

Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

stabilization, phase, under the assumption that the authorities initiate resolution as soon as the bank reaches the PONV. The key to stabilizing the bank is its prompt recapitalization, via write-down or conversion of investor liabilities such as subordinated debt into CET1 capital. The recapitalization sets the stage for the provision of liquidity to the bank-in-resolution, secured by a charge over the bank's unencumbered assets.

Resolution of a Unit Bank

We start with the case of a unit bank: a single bank in a single jurisdiction with no branches or subsidiaries. Assets consist of loans, securities, and other claims on customers such as derivatives. These assets are financed by capital instruments (CET1, AT1, and T2 capital); by customer obligations, such as deposits and derivatives; and by senior debt (see figure 6.2).

Capital instruments are plainly investor obligations. CET1 capital is the basis for capital requirements under the Basel III accord. It bears first loss and is the ultimate determinant of the bank's solvency. Under Basel III, AT1 and T2 capital must be subject to write-down or conversion into CET1 capital when the bank reaches the PONV. AT1 and T2 capital therefore contribute to what might be called "reserve capital," i.e., instruments that can be readily used to replenish CET1 capital, should CET1 capital be insufficient to maintain the bank's viability. Aggregate loss-absorbing capacity (ALAC) is therefore the sum of CET1 capital and the bank's "reserve capital."[4]

4. We have used the terms "reserve capital" and "aggregate loss-absorbing capacity" to avoid confusion with terms specifically used in legislation and/or policy proposals as well as to avoid framing the discussion in a vocabulary specific to any one jurisdiction. "Reserve capital" conforms in concept to gone-concern loss-absorbing capacity (GLAC)—instruments that are specifically subject to write-down or conversion at the PONV/entry of the bank into resolution. "Aggregate loss-absorbing capacity" conforms in concept to "total loss-absorbing capacity" (TLAC) and equals the sum of reserve capital and total CET1 capital. However, the details of ALAC do not necessarily conform to the term sheet proposed for TLAC in FSB (2014).

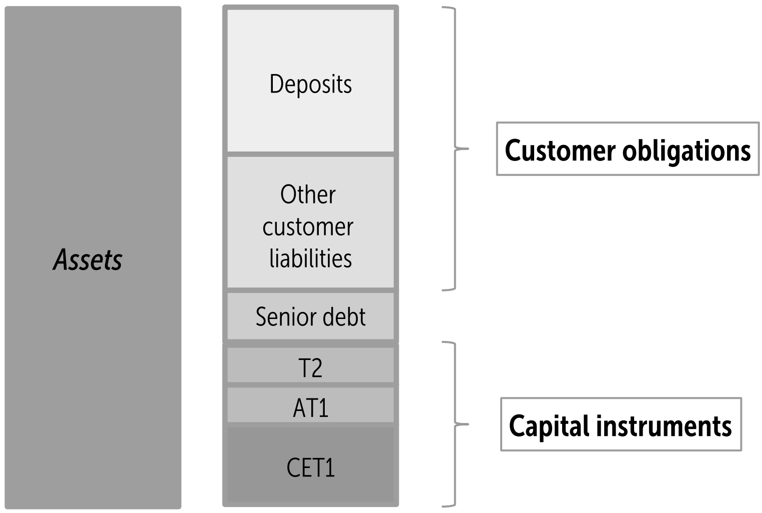

Figure 6.2. Unit Bank: Balance Sheet Overview

Senior debt is an investor obligation, but it is not clear that it should count toward reserve capital. Unlike AT1 and T2 capital, it is not generally subject to write-down or conversion at the PONV. Indeed, senior debt ranks on a par with other senior obligations, so that a default on senior debt would very likely trigger a default on customer obligations, such as derivatives, and compromise the bank's ability to continue to perform critical economic functions.

For senior debt to be counted toward reserve capital, it should be subordinated to customer/operating liabilities, such as deposits and derivatives. Although depositor preference and the collateralization

---

Note, however, that neither "reserve capital" nor ALAC encompasses the full scope of liabilities that would be subject to bail-in (i.e., subject to write-down or loss in the event of resolution). Should losses at the bank in resolution exceed ALAC, these losses would be imposed—in reverse order of seniority—on the remaining elements in the bank's liability structure. If losses were so severe as to reach insured deposits (the super-senior tranche of liabilities), losses attributed to that tranche would be borne by the deposit guarantee fund. For a summary of how this would work under the EU Banking Recovery and Resolution Directive (Directive 2014/59/EU, hereinafter "BRRD"), see BoE (2014, p. 14).

of the net exposure under derivatives contracts go a long way toward making senior debt subordinated in an economic sense, it would be preferable to make senior debt subordinate in a legal sense as well, so that it effectively becomes intermediate debt. Such intermediate debt could count toward reserve capital and ALAC.[5]

For a bank to be resolvable there has to be a reasonable assurance that the amount of reserve capital will be sufficient to replenish CET1 capital to a level where the bank is not only solvent but able, given sufficient access to liquidity, to continue operation whilst restructuring under the aegis of the resolution authorities. Determining the level of reserve capital therefore requires one to take a view on (i) what constitutes the correct target for CET1 capital after replenishment/recap; (ii) what is the likely state of CET1 capital at the point at which the authorities initiate resolution; and (iii) whether there should be provision for what might be called a reload capability (see figure 6.3).

As to the target for CET1 after recap, a conservative standard is to assume that CET1 should be replenished so that the bank-in-resolution meets not only the Basel III minimum requirement (4.5 percent of risk-weighted assets, or RWAs), but also fills the capital conservation buffer (2.5 percent of RWAs) and possibly some or all of the SIFI surcharge (currently 1 percent to 2.5 percent of RWAs). This would assure that the bank-in-resolution started the restructuring phase with CET1 capital at the threshold at which a bank outside resolution would be permitted to pay dividends or make distributions without restrictions.[6]

5. This is in fact the approach toward subordination taken in FSB (2014). Note, however, that the FSB proposes to require that intermediate debt have a remaining maturity of more than one year if it is to qualify as TLAC. This seems unduly restrictive (especially if the short-term intermediate debt remains *pari-passu* with the longer term intermediate debt) and consideration might be given to relaxing the maturity restriction and replacing this with a requirement for the bank to develop and be able to implement recovery options, should the weighted average maturity of the bank's issuance fall below two years.

6. According to the Bank of England (BoE 2014, p. 21), "The goal of ensuring that the firm can operate unsupported means that the firm must be recapitalised to a level that is sufficient to restore market confidence and allow the firm to access private funding markets. This means that the level of capital held by the

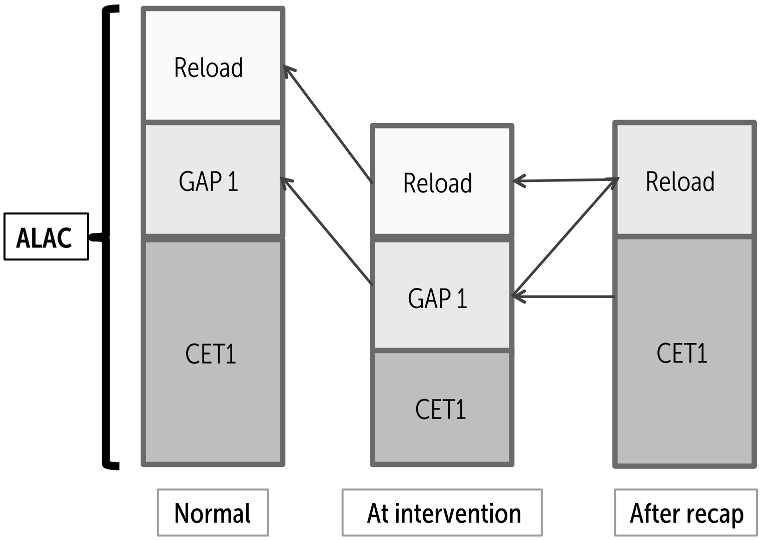

Figure 6.3. Determination of Reserve Capital and ALAC Requirements

The amount of replenishment required (GAP1 in figure 6.3) depends to a significant degree on whether the supervisor initiates resolution ("pulls the trigger") in a timely fashion. If it does, there is a greater probability that the bank still has positive net worth and positive CET1 capital. In contrast, if the supervisor and/or central bank exercises forbearance, by the time resolution is initiated CET1 capital may have slipped below the minimum of 4.5 percent of RWAs, possibly to zero or even below (so that the bank becomes balance-sheet insolvent).

To be very conservative, the ALAC standard could include what amounts to a reload component. This would assure that the bank maintained enough reserve capital to restore CET1 capital to its target level for a second time. The amount of the reload is accordingly equal to the GAP1 calculated above.

The total ALAC requirement therefore amounts to the bank's CET1 requirement plus the estimated GAP and any reload provision.

firm is likely to need to be higher than the minimum required for authorisation by the relevant supervisor." The European Banking Authority (EBA 2014) takes a similar approach.

Alternatively, one may posit a requirement for reserve capital either in lieu of, or as a supplement to, an ALAC requirement. Note that a reserve capital requirement targets much more exactly the problem at hand, namely assurance that there will be instruments available to convert into CET1 capital, in the event that the bank goes into resolution, but has the disadvantage of discouraging banks from holding equity in excess of minimum requirements (and so making failure more likely in the first place).[7]

Figure 6.4 illustrates how such an approach might work for a bank with a SIFI surcharge of 1 percent of RWAs. In normal times, the bank would have to maintain CET1 capital of 8 percent (the 4.5 percent minimum requirement, the 2.5 percent capital conservation buffer, and the 1 percent SIFI surcharge). We assume that losses deplete CET1 capital so that the buffers are exhausted at the point of intervention, that the bank reaches the PONV at 4.5 percent of RWAs, and that the authorities intervene promptly (do not exercise forbearance). This creates a gap of 3.5 percent of RWAs that must be filled and an equivalent provision for reload. The bank's ALAC in normal times (exclusive of the amount of CET1 capital in the buffers) is therefore 11.5 percent of RWAs (4.5 percent minimum CET1 capital plus 7 percent reserve capital).[8]

To assure that the bank can fill the recap gap at the PONV, the bank in normal times carries AT1 and T2 capital of 3.5 percent of RWAs. This also assures that the bank can meet its 8 percent total capital (CET1 + AT1 + T2) requirement without reliance on the CET1 capital contained in the buffers, both in normal times and after bail-in. To provide for the possibility that a reload might be required, the bank in normal times maintains intermediate debt equal to 3.5 percent of

7. The FSB TLAC proposal (FSB 2014) envisages that such "reserve capital" instruments would constitute at least one-third of TLAC.

8. Proposals to require higher levels of ALAC such as found in FSB (2014) therefore implicitly assume either (a) the bank-in-resolution will need much higher capital following stabilization or (b) the bank's CET1 capital ratio at the point of intervention will be lower than the 4.5 percent minimum, either as a result of deliberate forbearance or due to the difficulty in establishing a timely and accurate valuation of the bank's asset portfolio.

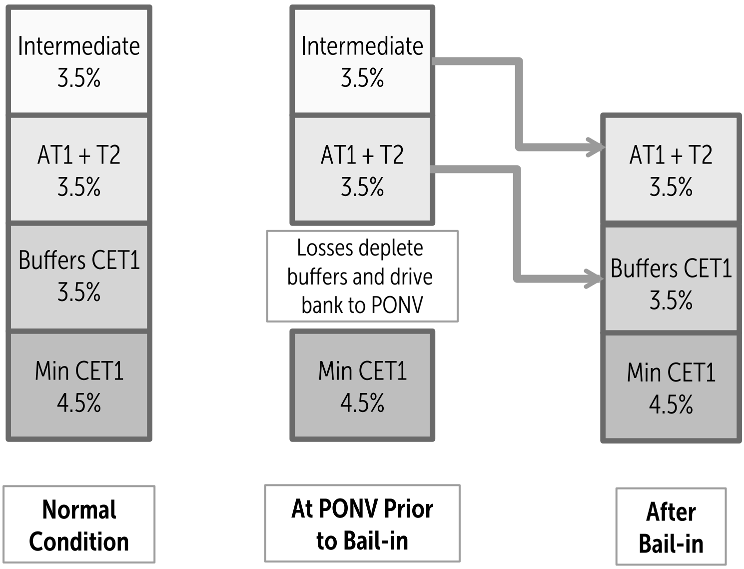

Figure 6.4. Prompt Corrective Action Limits the Need for Reserve Capital

RWAs. At the PONV, the AT1 and T2 capital is written down or converted into CET1 capital, and the intermediate debt is converted into AT1 or T2 capital.

This forms the basis for stabilizing the bank and should be supplemented by measures to assure the following:

- The bank-in-resolution has access to adequate liquidity (see below).
- The bail-in does not trigger close-out of qualified financial contracts (such as derivatives or repurchase agreements) or the liquidation of collateral held by counterparties in association with such contracts.[9]
- The bank-in-resolution retains access to financial market infrastructures (and such infrastructures remain robust).[10]

9. See "Other Considerations" below.
10. See "Other Considerations" below.

Do Branches Make a Bank Unresolvable?

We now extend the analysis to the case where the bank subsidiary has branches. This analysis certainly yields the same result where the branches are domestic, within the same jurisdiction as the parent, for the branch is an integral part of the bank as a whole.

It also yields the same result where the bank has foreign branches, provided the foreign jurisdiction takes a unitary approach to resolution. In this case the foreign jurisdiction also regards the foreign branch as being an integral part of the bank as a whole and the foreign jurisdiction accepts that the home country will run the resolution process. In this case the foreign jurisdiction recognizes that the assets of the foreign branch will be pooled with the assets of the rest of the bank. The foreign jurisdiction further accepts that the liabilities of the foreign branch will be paid in accordance with the rules of the home country. Effectively, the foreign jurisdiction recognizes the lead of the home country supervisor and home country resolution authority and accepts the decisions of the home country authorities.[11]

Things become more complex if the foreign jurisdiction takes a territorial approach to resolution and/or the home country institutes a preference for domestic liabilities such as deposits in head office and domestic branches. Although the motivation in each case is to preserve value for "their" creditors, the aggregate result is likely to be mutually assured fragmentation, possibly even liquidation, with significant costs to creditors as well as disruption to the financial markets and the economy at large.

---

11. The home country resolution authority also needs to follow the unitary principle. This involves an acceptance that the liabilities of the foreign branches are on a par with those of the bank's head office and domestic branches. Note that this commitment is easier to sustain if the bank has an ample amount of reserve capital that can be bailed-in in the event the bank enters resolution. Without such reserve capital in place, the home country resolution authority may elect or be directed to prefer the obligations of the bank's domestic branches over the bank's foreign branches. This is particularly likely to be the case (and was the case in Iceland in 2008) if the unitary approach to resolution would result in severe losses to domestic depositors and/or punitive levies on domestic banks under the domestic deposit guarantee scheme.

Under the territorial approach to bank resolution, the foreign jurisdiction resolves the foreign branch separately from the rest of the bank.[12] It uses the assets of the foreign branch to meet the obligations of the foreign branch to the creditors of that branch. Should any proceeds remain after the branch has fully met its obligations to its creditors, this excess would be remitted to the estate of the parent bank. Should a deficiency remain, the creditors of the foreign branch would have an unsecured claim on the estate of the parent bank. In effect, the territorial approach turns the liabilities of the foreign branch into what amounts to a covered bond, where the coverage constitutes the assets of the foreign branch. For this reason, the territorial approach is frequently reinforced by an asset maintenance requirement to assure that the foreign branch will have enough assets to cover its liabilities if the bank enters resolution.

The territorial approach to resolution is essentially a liquidation approach. It is likely to result in significantly greater costs to creditors and to society as a whole. In particular, if the foreign jurisdiction begins to liquidate the foreign branch, the home country will for all practical purposes have to liquidate the parent bank as well. That will almost certainly disrupt financial markets and the economy at large.

Foreign authorities are particularly likely to want the option to employ the territorial approach if the home country grants preference in resolution to creditors of the domestic offices of the bank, either generally or within a certain class of liabilities (e.g., deposits).[13] In such a case, the home country has the option to resolve the bank by transferring the obligations of the bank's domestic offices to a bridge bank along with the bank's best assets and leave the obligations of the bank's foreign branches (along with the bank's worst assets) behind in a rump bank. The bridge bank would continue in operation; the rump would not—it would be liquidated over time under the aegis of the home country resolution authority. As a result, creditors of the foreign branch would be likely to lose access to their funds for an extended

12. For a discussion of the US approach to branches of foreign banks, see Lee (2014, pp. 298–317).

13. See, for example, PRA (2014).

period of time and to suffer severe losses as and when the estate of the rump bank made a distribution. The territorial approach of the foreign jurisdiction counteracts this by placing the liquidation of the foreign branch under the administration of the foreign resolution authority. And, the asset maintenance requirement effectively collateralizes the obligations of the foreign branch and therefore counteracts the preference that the home country seeks to give to creditors of the bank's domestic offices.

Ideally, countries would change their legislation to adopt the unitary approach. But realistically, this is unlikely to happen in the near future. However, what authorities can do is to commit to these two principles:

A. The host country authorities will refrain from initiating the resolution of the branch in the host country without giving prior notice to the home country authority and giving the home country authority the opportunity to either cure the deficiency in the branch or initiate resolution of the bank as a whole.
B. If the home country authorities do initiate resolution of the bank as a whole, the host country authorities will refrain from initiating the territorial approach provided the home country authorities act to stabilize the bank-in-resolution via the bail-in of investor capital and the provision of liquidity facilities to the bank-in-resolution.[14]

Such a commitment offers the best hope of avoiding the "mutually assured fragmentation" that would result if home and/or host authorities were to actually implement the territorial approach to resolving a global systemically important bank.

14. The suggestions made here are a concrete example of the more general precept advanced by the Bank of England (2014, p. 9): "A host authority should not seek to take action with respect to subsidiaries or branches of foreign banks in its own jurisdiction which might frustrate the orderly resolution of the group being co-ordinated by the home authority."

Unit Bank with Parent Holding Company

We now turn to the case where the unit operating bank is owned by a parent holding company and both entities are incorporated or headquartered in the same jurisdiction (see figure 6.5). The parent holding company is not a bank, and has no license to conduct banking activities directly. We further assume that the parent holding company owns 100 percent of the equity in its bank subsidiary and subscribes to 100 percent of the reserve capital (AT1 and T2 capital plus intermediate debt) issued by the bank subsidiary.

The parent holding company's assets are restricted to investments in CET1 capital and reserve capital (AT1, T2, and intermediate debt) instruments issued by the bank subsidiary to the parent plus cash and marketable securities (such as government bonds). The liabilities of the parent holding company consist of common equity and debt (see figure 6.6). Note that the debt of the parent to investors is structurally subordinated to the obligations of the bank subsidiary. Cash flow from the operations of the bank subsidiary goes first to meet the bank's customer obligations, such as deposits and derivatives. Only after these have been met in full can the bank subsidiary pay interest (on intermediate debt or T2 capital), pay dividends, or make distributions.

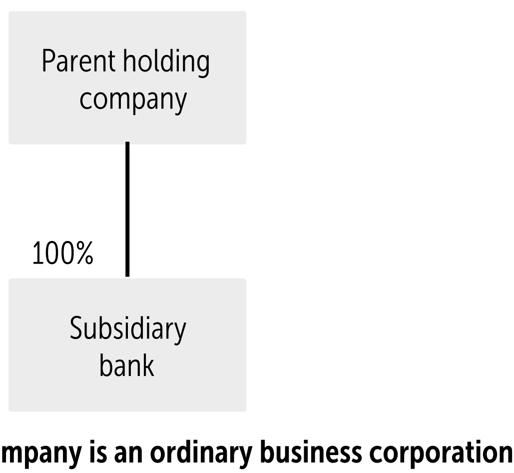

Figure 6.5. Unit Bank with Parent Holding Company
Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

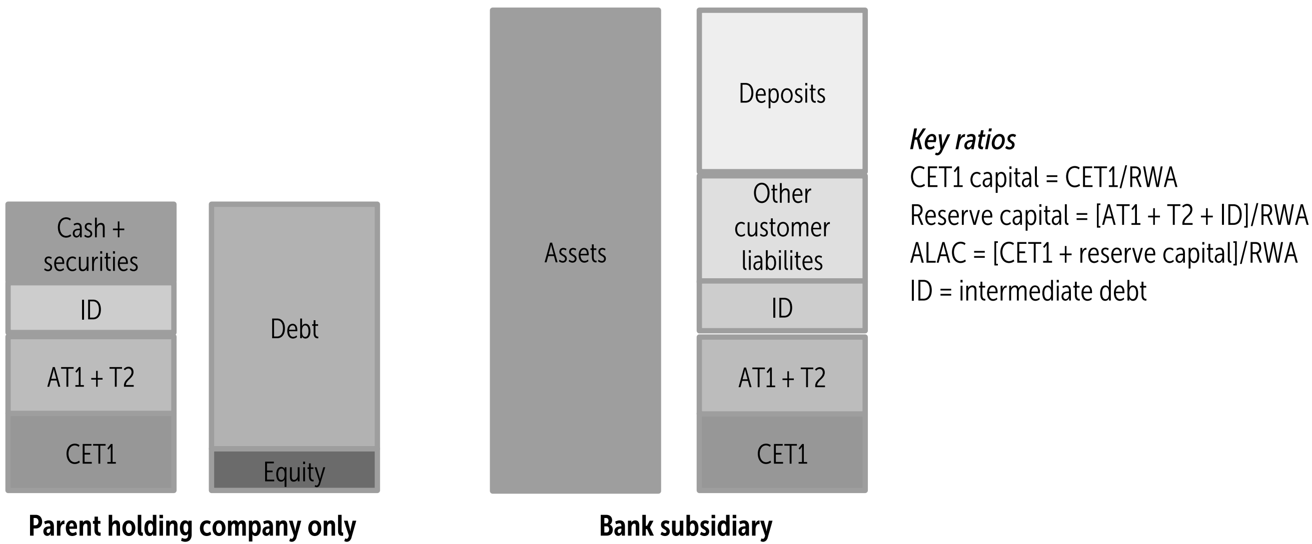

Figure 6.6. Parent Holding Company/Bank Sub: Balance Sheet Overview

Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

At the subsidiary bank, we assume that the bank conducts a full range of permissible banking activities (including securities trading, and derivatives) and that the bank has a standard balance sheet, with four significant exceptions:

1. The bank subsidiary may not invest in any obligation issued by the parent.
2. The subsidiary bank may not enter into contracts with cross-default clauses to the parent holding company. If the parent holding company defaults on its obligations to third-party investors, this shall not constitute an event of default for the subsidiary bank.[15]
3. The obligations of the bank subsidiary to its parent holding company are subordinated to the bank's obligations to third parties. This includes any payments due to the parent company under service contracts.
4. The bank subsidiary shall be subject to a requirement that it issue reserve capital in the same manner as described above for a unit bank. To satisfy this requirement, the bank subsidiary must issue reserve capital instruments to the parent holding company and the parent holding company must hold such reserve capital. Such instruments issued to the parent holding company are also subject to bail-in as a matter of contract between the parent holding company and the bank subsidiary. This contract shall be fully disclosed to supervisors of the bank and the parent holding company as well as to the creditors of the bank and of the parent holding company. As noted above, the bank subsidiary may pay interest and amortization on its reserve capital instruments, if and only if the bank has met its customer obligations on time and in full. Thus, cash flows like a waterfall, first to the holders of customer obligations at the bank level, and only then to the parent holding company as investor in the bank's reserve capital instruments and CET1 capital.

15. The ISDA (2014) Resolution Stay Protocol applies this principle on a temporary basis with respect to derivatives contracts.

We now examine the impact of varying levels of loss at the bank subsidiary (see table 6.1) and trace through the implications for recovery and resolution at the bank subsidiary, taking into account the bail-in/conversion of the reserve capital at the bank level into CET1 capital that would occur upon the subsidiary bank reaching the PONV/entering resolution.[16] We also trace the implications of losses at the bank level for the parent holding company.

We start with the case where the parent holding company's assets consist of marketable securities (50) as well as investments in and claims on its daughter bank subsidiary (CET1 capital [100], T2 capital [50], and intermediate debt [50]). These total assets of 250 are financed by third-party investors in the form of CET1 capital (100), T2 capital (50), and senior debt (100).

Now assume that the loan portfolio in the subsidiary bank has to be written down by 50 so that the CET1 capital of the bank subsidiary is reduced by 50. This in turn leads to a reduction of the same magnitude in the parent holding company's equity, or CET1 capital (see columns labelled "L" in table 1). In effect, losses at the subsidiary bank are borne by investors in the parent holding company's obligations.

To restore its equity to the prior level, the parent holding company bails-in the T2 and senior debt that it has issued to third-party investors. In a manner similar to that depicted in figure 6.4, the parent company converts 50 of T2 into CET1 capital (restoring this to 100) and converts 50 of senior debt into 50 of T2 capital (see columns headed "BP" in table 6.1).

But bail-in at the parent does not affect the balance sheet of the subsidiary bank (see table 6.1). The recapitalization of the parent has no impact whatsoever on the level of CET1 capital in the bank subsidiary. To recapitalize the bank subsidiary, it is necessary either to inject new equity into the bank subsidiary or to bail-in (via write-down or conversion) the bank subsidiary's reserve capital.

16. Alternatively, the bank itself may initiate the bail-in conversion at the bank level possibly upon demand by parent holding company creditors with longer remaining maturities who are time-subordinated to creditors with short remaining maturities. This would defer and possibly avoid resolution.

Table 6.1. Bail-in at Parent Does Not Recapitalize the Subsidiary Bank

Assets	I	L	BP	BB	Liabilities	I	L	BP	BB
Parent holding company only									
CET1 in bank sub	100	50	50		CET1	100	50	100	
Sub debt (T2) in sub	50	50	50		AT1	0	0	0	
Intermediate debt in sub	50	50	50		T2	50	50	50	
Marketable securities	50	50	50		Senior debt	100	100	50	
Total	250	200	200		Total	250	200	200	
Bank subsidiary									
Loans	1000	950	950		CET 1	100	50	50	
Investments	1000	1000	1000		Sub debt (T2) [AT1 = 0]	50	50	50	
					Intermediate debt	50	50	50	
					Other customer obligations	900	900	900	
					Deposits	900	900	900	
Total	2000	1950	1950		Total	2000	1950	1950	

Notes: I = initial condition; L = loss (50) in bank sub; BP = bail-in at parent; BB = bail-in at bank

To inject new equity into the bank subsidiary, the parent holding company would have to have recourse to other resources, such as cash or marketable securities. Note that the bail-in at the parent level cannot be the source of that cash, as the write-down or conversion of the parent's T2 capital and senior debt affects only the liability side of the parent-only balance sheet. It creates neither new cash nor new investments in marketable securities.

Consequently, if the parent holding company's cash and marketable securities are to be the source of funds for the recapitalization of the subsidiary bank, the parent will have had to take steps to assure that:

- The cash would in fact be available, when the bank subsidiary reached the PONV/entered resolution.
- The cash would indeed be used to recapitalize the failed bank subsidiary.

To assure that the cash and marketable securities would in fact be available at the PONV, the parent could place them into a segregated account pending the entry of the subsidiary bank into resolution. To assure that such cash would actually be used to recapitalize the subsidiary bank, a mechanism would have to be put in place to force the parent to make such an investment. This could, for example, take the form of an option that gives the bank subsidiary the right to sell (put) new CET1 capital to the parent holding and requires the parent holding to use the cash and marketable securities in the segregated account to buy the CET1 capital put to it by the subsidiary bank.

Conceptually, the parent could also raise new capital from third-party investors. However, such capital-raising will generally take time (unless the parent holding company has prearranged a contingent underwriting commitment from third-party investors) and will in any event depend on the condition of, and the prospects for, the bank subsidiary. Indeed, in the case outlined here, payments from the bank subsidiary (interest on debt, dividends, and distributions, plus any payments for services) are the primary and perhaps the only source of cash flow to the parent company.

Similarly, for bail-in to recapitalize the failed bank subsidiary, there must be enough reserve capital available (see discussion under "unit bank" above) and regulation must permit the resolution authority to execute this in a timely manner. This is most likely to be the case where the statutory provisions for bail-in are reinforced via the contract(s) governing the investment of the parent holding company in the reserve capital (AT1, T2, and intermediate debt) of the bank subsidiary.

In terms of our example, bail-in at the subsidiary bank (see column BB in table 6.2) converts 50 of T2 capital into CET1 capital at the subsidiary bank and 50 of intermediate debt into T2 capital. At the parent level, nothing changes on the liability side; all that changes is the composition of the asset side of the balance sheet, with the amount of CET1 capital rising from 50 to 100 and the amount of intermediate debt falling from 50 to zero.

This example brings out a number of issues. First, what counts in a resolution scenario is the asset side of the parent holding company's balance sheet, not in the first instance the capital structure of the parent holding company. If the parent holding company has endowed the bank subsidiary with reserve capital, the write-down or conversion of some or all of these instruments into CET1 capital is the source of strength that the parent has supplied in advance to the bank and upon which the bank can immediately and unequivocally draw. In contrast, the liability side of the parent only balance sheet cannot act as an immediate source of strength to the subsidiary bank (see above).

Second, the customer obligations of the operating bank subsidiary such as deposits and derivatives are considerably safer than the debt of the parent holding company. They have a much lower probability of default. The income of the bank goes first to service the claims of third-party creditors of the bank. Moreover, the rapid bail-in via write-off or conversion of the bank's reserve capital into CET1 capital (if the bank enters resolution) assures that deposits at the bank level enjoy what amounts to double protection (the bank's CET1 capital plus the bank's reserve capital or in total the amount of ALAC). Customers will only incur losses on their claims on the bank (e.g., via deposits or derivatives) if the losses at the bank level exceed the bank's ALAC and such claims are uncollateralized and uninsured.

Table 6.2. Bail-in at Subsidiary Bank Recapitalizes the Subsidiary Bank

Assets	I	L	BP	BB	Liabilities	I	L	BP	BB
Parent holding company only									
CET1 in bank sub	100	50	50	100	CET1	100	50	100	100
Sub debt (T2) in sub	50	50	50	50	AT1	0	0	0	0
Intermediate debt in sub	50	50	50	0	T2	50	50	50	50
Marketable securities	50	50	50	50	Senior debt	100	100	50	50
Total	250	200	200	200	Total	250	200	200	200
Bank subsidiary									
Loans	1000	950	950	950	CET 1	100	50	50	100
Investments	1000	1000	1000	1000	Sub debt (T2) [AT1 = 0]	50	50	50	50
					Intermediate debt	50	50	50	0
					Other customer obligations	900	900	900	900
					Deposits	900	900	900	900
Total	2000	1950	1950	1950	Total	2000	1950	1950	1950

Notes: I = initial condition; L = loss (50) in bank sub; BP = bail-in at parent; BB = bail-in at bank

In contrast, the parent receives cash flow from the subsidiary only if the subsidiary meets minimum requirements for CET1 and reserve capital. Consequently, the parent holding company has a much higher probability of default than the bank subsidiary and a much higher expected loss (see figure 6.7). For high levels of ALAC, the credit rating of customer obligations (e.g., deposits and derivatives) at the bank level will approach the AAAA standard that customers ideally want from their banks.[17]

Resolution of the Parent

A third issue concerns resolution at the parent and the degree to which this can be conducted using ordinary bankruptcy proceedings. Losses at the bank subsidiary directly reduce the equity of the parent holding company. If the losses are great enough, the parent holding company may not be able to service its debt to third parties in a timely fashion or it may become balance-sheet insolvent, so that the parent holding company has to enter some type of resolution proceedings.

Indeed, that threat is the whole point of the parent company superstructure and the attendant structural subordination of parent company debt to debt at the bank level. Such a superstructure effectively preserves the bank as a going concern for any loss less than the bank's ALAC and it forces parent company shareholders and creditors to absorb very significant amounts of first loss at the bank level (i.e., the total of the bank subsidiary's ALAC) before third-party creditors at the bank level would be called upon to bear loss.

Consequently, clarifying the process of resolution at the parent, including the rights of creditors during that process, is essential if investors in holding company debt are to understand the risks to which they would be exposed. Note that the clarification must cover cases where:

17. Merton and Perold (1993) make the point that customers acquire certain claims on banks in order to obtain a particular service (e.g., protection against a specific risk in the case of derivatives, or the ability to execute payments in the case of transaction accounts). Ideally, the bank should always be in a condition to provide the service in question. Counterparty risk should not be an issue—hence the reference to the AAAA standard.

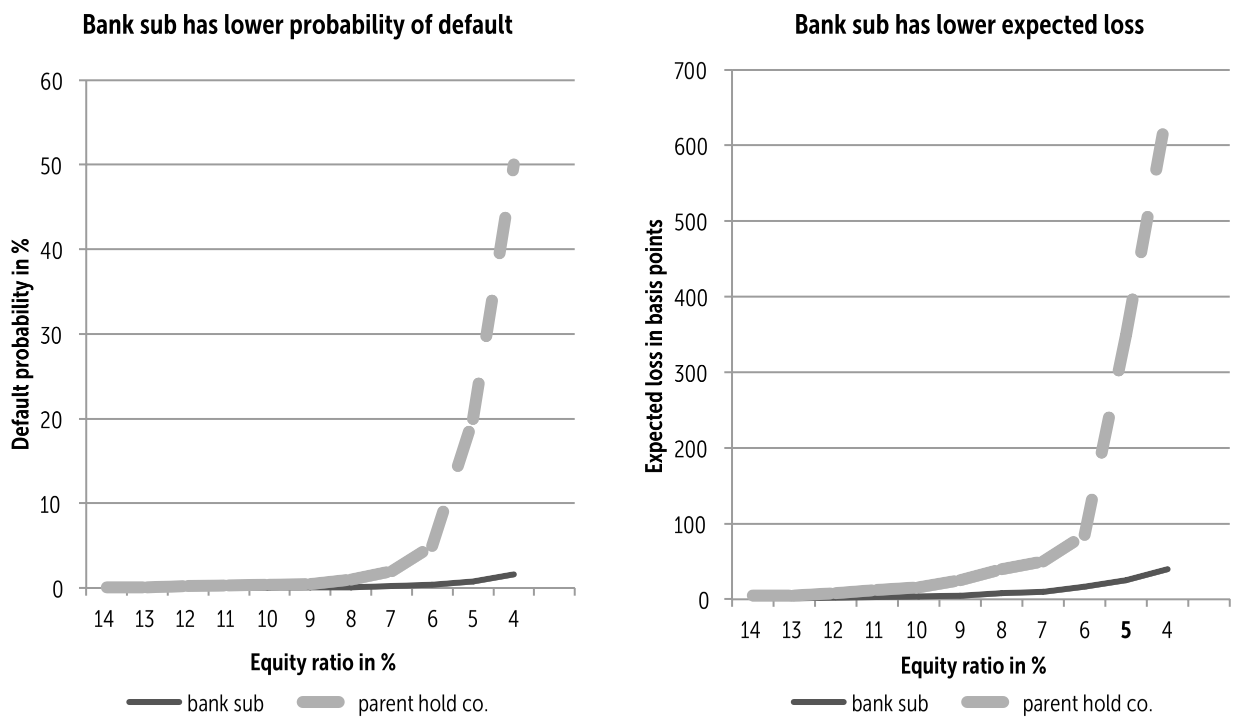

Figure 6.7. Bank Subsidiary Is Safer Than Parent Holding Company

Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

- The bank subsidiary has not entered resolution and continues to fulfill minimum capital and liquidity requirements.
- The bank subsidiary has entered resolution, but has become—as a result of the bail-in/conversion of the bank's reserve capital into CET1 capital—stabilized and is able to continue in operation while under administration of the resolution authority in the manner described above for a unit bank.[18]

The question is how resolution should proceed at the parent level and whether the proceeding at the parent level will adversely impact the ability of the bank subsidiary to continue operations.

The simple form of the parent—a pure holding company whose activities and assets are restricted to investments in the bank subsidiary plus holdings of cash and marketable securities—allows a very simple "pre-pack" restructuring process to be used (see figure 6.8).[19] This should be incorporated into the parent holding company's debt contracts and has two steps.

The first step is the creation of a solvent entity, Newco, that becomes the immediate parent of the subsidiary bank. Initially, at least, Newco is 100 percent equity financed. This equity represents the collective claims of the creditors of Oldco on the assets of the failed holding company. Newco's strong capital structure facilitates the ability of the bank subsidiary to meet regulatory requirements as well as satisfy concerns of creditors and supervisors of the bank subsidiary that the owner of the bank be in good financial condition. This lessens the danger of contagion, namely that the bankruptcy of the parent would infect the bank subsidiary.

---

18. Indeed, the parent holding company will almost certainly default on its obligations—almost regardless of its liability structure—as soon as the cash flow from the bank subsidiary is cut off, unless the parent has alternative sources of cash, such as investments in marketable securities.

19. This is essentially the approach advanced by Jackson (2015). This builds on an earlier proposal by the Bipartisan Policy Committee (Bovenzi, Guynn, and Jackson 2013) and is similar to the single-point-of-entry approach advanced by the FDIC (2013).

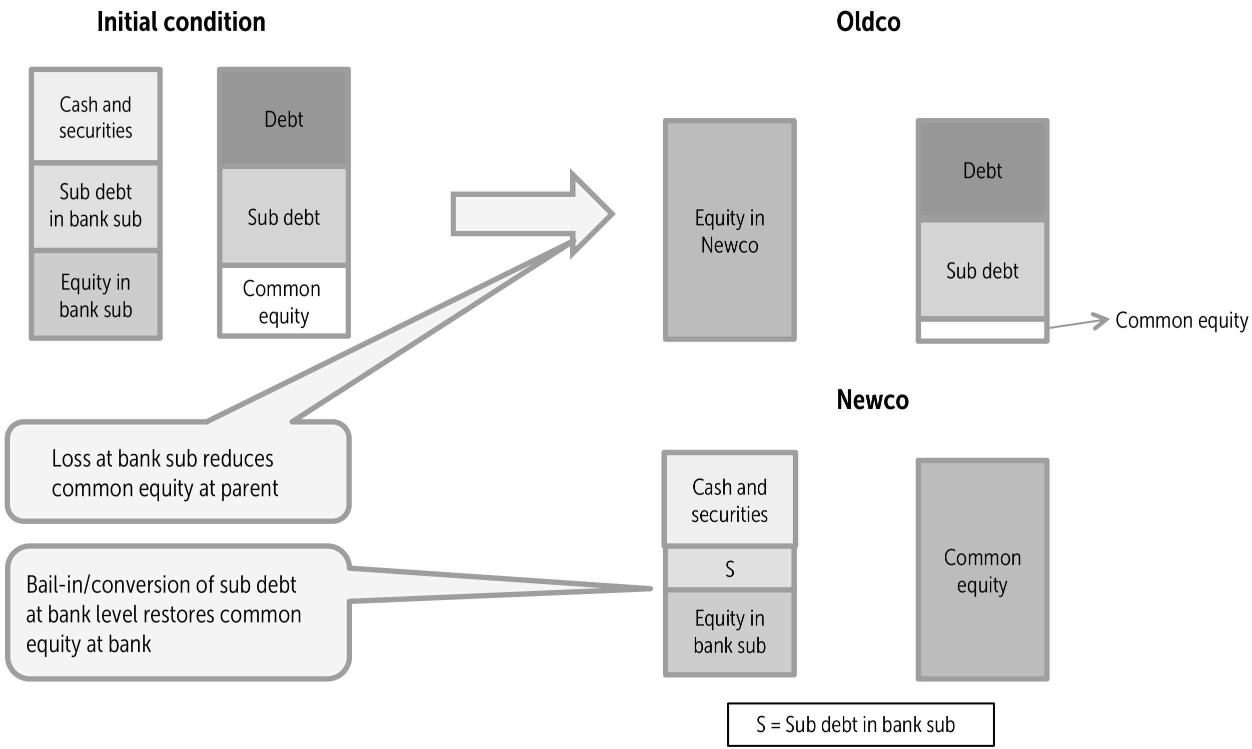

Figure 6.8. Resolution of Parent

Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

To create Newco, the estate of the parent in restructuring (Oldco) contributes its assets (investments in and advances to the bank subsidiary plus any remaining cash and marketable securities) to Newco in exchange for equity in Newco.

The second step is introduction of a stay on payments to creditors and investors in Oldco until such time as Oldco receives proceeds from Newco. Oldco's income is restricted to any dividends and distributions that Newco may make to Oldco over time, and Oldco is obligated to pass these payments onto creditors and investors according to strict priority.

There remain the questions of (i) who should exercise the decision rights over Newco (act as administrator) and therefore have decision rights over its bank subsidiary and (ii) what rights the creditors of Oldco should have during the restructuring process.

Take first the case where the parent holding enters resolution before the bank reaches the PONV/enters resolution. As noted above, this could happen as soon as the parent holding company stops receiving dividends and distributions from the subsidiary bank—an event that could happen, once losses at the bank start to deplete the bank's capital conservation buffer.[20]

In this case, there is no basis for putting the bank into resolution. The parent holding company should go into resolution, not necessarily the subsidiary bank. From the standpoint of bank regulation, this amounts, not to resolution, but to a change in control of the parent holding company (from equity owners in the parent holding company to investors in the parent company's debt). Effecting that change in control as promptly and smoothly as possible is the best way to prevent contagion (i.e., prevent the condition of the parent from adversely affecting the subsidiary bank).

In practical terms, the resolution of the parent should be handled via the pre-pack solution outlined above. This effectively transfers

20. Note that bail-in at the parent level (via write-down or conversion of debt to equity) may be an effective means for the parent to avoid default while the subsidiary bank continues to meet minimum conditions for authorization.

economic control of the parent holding company (and decision rights over the subsidiary bank) to the creditors of the parent holding company.[21]

21. Consideration might also be given to implementing in advance the "pre-pack" solution outlined above. In such a case, the immediate parent of the bank would be 100 percent equity financed. Thus, the parent would remain solvent (and remain outside of resolution proceedings) as long as the loss at the bank subsidiary was less than the bank's ALAC. This minimizes the risk of contagion from the parent to the bank subsidiary. As the owner of the bank, the 100 percent-equity financed parent would be regulated and supervised as a bank (or financial) holding company. However, the owner of the owner need not be so regulated (and indeed is not in cases where the bank is owned by a natural person or a non-financial company). In particular, the 100 percent-equity financed parent could be owned by another company, the "grandparent." The grandparent could potentially be an ordinary business corporation subject to ordinary bankruptcy proceedings. It would not be subject to capital requirements. In effect, there would be a "trade": the addition of a reserve capital requirement at the bank subsidiary level plus a requirement that the bank's immediate parent be 100 percent equity financed, in exchange for the removal of capital requirements at the grandparent level.

Under the structure we have outlined, the critical economic functions are exercised at the bank level. Consequently, it is the bank that needs to continue in operation, and the bank that needs to be able to meet its liabilities on an ongoing basis. The parent assures that the bank can do this by acting as a source of strength up front via investments in the bank's common equity and reserve capital. By instituting a reserve or "gone concern" capital ratio, the regulator mandates the degree of back-up strength that the parent must provide. In effect, the parent has committed to what amounts to double liability.

The 100 percent-equity finance requirement at the parent level assures that the parent remains solvent until the entire amount of the bank's ALAC is exhausted. This simplifies resolution of the bank subsidiary. As emphasized above, the ability of the parent holding company to act as a source of strength to the bank in resolution does not depend on the parent's liability structure. It depends on the asset side of the parent company's balance sheet.

Removing capital regulation at the "grandparent" (this would require legislation in jurisdictions such as the United States) also underlines that public concern is primarily at the bank level—with the safety of deposits, the operation of the payments system, etc.—and secondarily at the parent level (the owner of the bank). Owners of the owner of a bank should be subject to market discipline; arguably, the removal of capital requirements on "grandparents" would underline that such

Creditors would be better placed to guard their interests and exercise their rights if they (or the banking group) were to set up a standing creditors' committee (or empower a trustee) in advance of any entry of the parent into resolution proceedings. Such a standing creditors' committee or trustee would monitor the banking group's condition as well as the group's observance of any covenants contained in the debt that the parent holding company issues to investors, including any provisions for write-down or conversion of parent company debt into parent company equity. The standing creditors' committee (or trustee) would also be empowered to exercise on behalf of creditors any remedies foreseen under the parent holding company's debt contracts, including the right, in the event that the parent defaults, to put the parent (but only the parent) into resolution proceedings.[22]

We now turn to the case where the subsidiary bank has entered resolution. In general, resolution regimes envision that the resolution authority should exercise control over the bank while it is in resolution. This allows the resolution authority to take the decisions necessary to stabilize the bank and assure continuity of essential functions. Such decisions include without limitation the bail-in of reserve capital at the bank level and the arrangement of any necessary liquidity facilities.

What implications should this have for the parent holding company and its creditors? We distinguish between two cases: first, where the resolution statute restricts the resolution authority's mandate to the subsidiary bank; and second, where the resolution statute empowers the resolution authority of the bank to put the parent holding company into resolution as well.

Where the resolution authority's mandate is limited to the subsidiary bank, the parent holding company would be resolved according to the pre-pack solution depicted in figure 8. Newco would own any

market discipline would indeed be applied to the investors in holding companies that were the owners of parents of banks.

22. Such arrangements for a standing creditors' committee or trustee might also help assure that the parent holding company discloses information to investors adequate to enable them to assess the risk of investment in holding company debt and capital instruments. For further discussion, see Huertas (2012).

equity in the subsidiary bank that remained after the losses had been written off and Newco's investments in the reserve capital of the subsidiary bank had been bailed in.

However, if the bail-in of the bank's reserve capital were insufficient to restore the subsidiary bank to positive net worth, Newco would no longer have any interest in the failed bank, and no responsibility, under the principle of limited liability, to make additional investments in the failed bank, even if Newco had the resources (such as cash and marketable securities) to enable it to do so. Creditors of the failed bank subsidiary (such as uninsured depositors) would have no right to "pierce the corporate veil" and attach the assets of Newco. From the standpoint of investors in the debt of the parent holding company, there would be a reasonable assurance that their exposure to losses at the subsidiary bank would be limited to the extent of their investment in the subsidiary bank.

It is not clear that such investors would enjoy such assurance in the case where the resolution statute empowers the resolution authority of the subsidiary bank to put the parent holding company into resolution alongside the subsidiary bank. In such a case it would be possible for the resolution authority to order the parent holding company in resolution to utilize other resources (if available) to absorb losses in the failed subsidiary bank in excess of the parent holding company's original investment in the equity and reserve capital of the bank subsidiary.[23]

Creditors of the parent holding company (Oldco), who are the shareholders in Newco, have very limited rights while the bank is in resolution. Instead, they are protected ex post by the "no creditor worse off" than under liquidation (NCWOL) clause. Should the

23. Although debt investors would enjoy protection under the NCWOL provision, they would have to bring, prove, and win such a case before they could receive compensation. This may be particularly difficult in the United States, as section 616 of the Dodd-Frank Act codifies the obligation of parent holding companies to act as a source of strength to domestic insured depository institutions. Note that this source-of-strength obligation does not necessarily extend to foreign subsidiaries—an additional reason why host country authorities would want to see parent holding companies inject reserve capital into such entities up front.

creditors in fact fare worse under resolution, they have a claim for compensation for the difference.[24]

This allocation of rights may be quite appropriate for situations where the bail-in of reserve capital fails to stabilize the bank (return the bank to compliance with minimum conditions for authorization). However, where the bail-in of reserve capital has stabilized the bank subsidiary (and thereby enabled it to meet again the minimum conditions for authorization), consideration might be given to granting the creditors of Oldco/shareholders of Newco[25] certain rights with respect to major decisions, such as the sale of the business to a third party. These might include the right of first refusal (right to match the third party's bid) and the right to bid in terms of debt forgiveness rather than be required to raise fresh cash to support their bid. Oldco creditors could also receive the right to present a reorganization plan for the parent holding company. Decisions taken by creditors would be by class, with the ability of a supermajority (e.g., 90 percent) to "cram down" its decision (force acceptance by the rest of the creditors in that class). Additionally, the creditors of a junior class could receive the right to buy out the claims of the next most immediately senior class at par plus accrued interest (see table 6.3).

Linking creditors' rights in a parent company bankruptcy to condition of the bank subsidiary after bail-in aligns the rights of the parent holding company creditors with the degree of strength that the parent has given the bank subsidiary up front. If the bail-in of reserve capital is sufficient to restore the bank subsidiary's ability to meet threshold conditions, the creditors of the parent holding should effectively have some say over the disposition of the bank subsidiary. If, however, the bank subsidiary fails to meet the minimum conditions for

24. The resolution regime should spell out how such a claim would be calculated/established and who would be responsible for paying such a claim. Note that the latter is often left unclear in resolution statutes.

25. Note that the shareholders in Oldco (the original parent) have no rights in resolution (even though resolution may have been initiated at a point where the bank had positive net worth). Although shareholders may receive warrants in recognition of their economic interest, they have no voting or control rights in the resolution/restructuring process.

Table 6.3. Decision Rights during Resolution Process

	Sub bank meets MC after bail-in		Sub bank fails MC after bail-in	
	Parent solvent	Parent in resolution	Parent solvent	Parent in resolution
a. Right to run subsidiary bank	Oldco equity	Resolution authority pending approval of (d)	Resolution authority	Resolution authority
b. Right of first refusal on sales	n.a.	Oldco creditors	Resolution authority	Resolution authority
c. Bid via debt forgiveness	n.a.	Oldco creditors	Resolution authority	Resolution authority
d. Right to present reorganization plan	n.a.	Oldco creditors	Resolution authority	Resolution authority
e. Safeguard	n.a.	NCWOL	NCWOL	NCWOL

Notes: MC = minimum conditions for authorization; NCOWL = no creditor worse off than under liquidation

Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

authorization even after the bail-in/conversion of the subordinated debt into CET1 capital, the parent company has either elected or been forced to walk away from the bank subsidiary and the decision rights over Newco should fall entirely to the resolution authority for the bank.

Finally, some consideration should be given to the question of double leverage (the ratio of CET1 capital at the bank subsidiary to CET1 capital at the parent holding company). For ratios greater than one, the parent holding company has effectively borrowed money from third-party investors and down-streamed the proceeds into the bank subsidiary as CET1 capital. This makes the bank subsidiary less likely to fail (than would be the case if its CET1 capital were limited to the amount of the parent's CET1 capital). Although double leverage increases the risk of debt at the parent holding company, in a world where resolution at the parent works smoothly, double leverage becomes a secondary consideration (as parent company debt effectively bears loss). Thus, from a public policy standpoint the far more relevant leverage ratio for the group as a whole is the ratio of ALAC to the total assets of the group.

Parent Holding Company with Domestic and Foreign Subsidiaries

We now turn to the case where the parent holding company has two subsidiaries, one in the same jurisdiction as the parent (the domestic bank) and one in a foreign or host-country jurisdiction (see figure 6.9). This introduces issues of (i) interaction and possible conflict between the laws of the home and host countries as well as (ii) coordination and cooperation between home and host authorities.

The resolution statutes in the respective countries set the framework—and pose the potential for conflict. Generally, the resolution statute mandates domestic authorities to act to promote financial stability in the domestic jurisdiction. This is the overriding objective, even if the statute mandates the domestic authorities to cooperate with their foreign counterparts.

Two approaches are under discussion. Under the first, single-point-of-entry (SPE) approach, resolution is a unified, global process

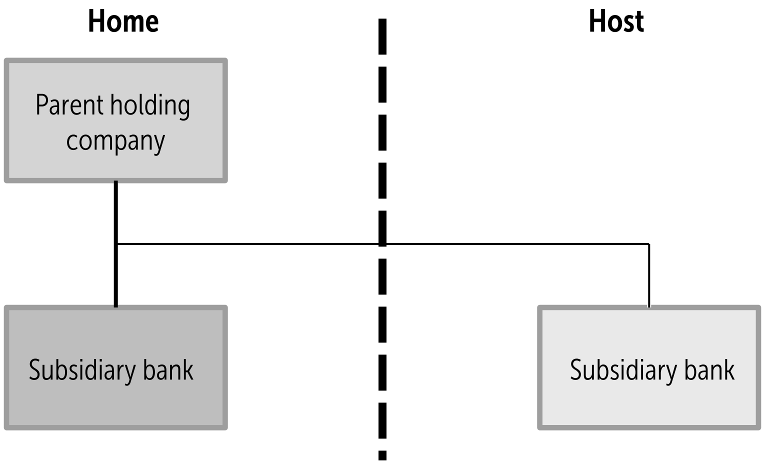

Figure 6.9. Banking Group with Domestic and Foreign Subsidiaries
Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

under the aegis of the home country resolution authority. Under the SPE approach, the failure of one or more subsidiaries to meet minimum conditions for authorization triggers resolution of the group as a whole. The home country resolution authority takes control of the parent holding company and acts to recapitalize the failing bank(s). This stabilizes the banks in the group and the group as a whole, and serves as the basis for the provision of a liquidity facility (see below), so that "subsidiaries would remain open and continue operations."[26] The SPE approach therefore assures continuity and removes any need for the taxpayer to provide solvency support.

Under the second, multiple-point-of-entry (MPE) approach, subsidiaries are resolved separately within each jurisdiction. If a subsidiary bank reaches the PONV/enters resolution, the resolution authority for that subsidiary resolves it, while the rest of the group continues in operation. In effect, the MPE approach follows the principle of limited liability and allows the parent holding company to walk away from a failing subsidiary.

26. See FDIC (2013).

Who should make the choice between the two approaches, and when should the choice be made? Should the choice be left entirely to resolution authorities, and entirely until resolution is initiated? That would be consistent with a long-standing bias among policymakers, particularly central banks, in favor of "constructive ambiguity." But this doctrine refers to the creation of doubt as to whether there will or will not be a bailout.

What bail-in requires is "constructive certainty"—a method to assure that markets know that investors, not taxpayers, will bear the cost of bank failure. Although the authorities may prefer ambiguity, for it enables them to retain the option to decide based on the facts of a specific resolution case, more certainty as to the path the authorities would actually take is likely to enhance resolvability. Policymakers and firms need to map out in advance how an institution is likely to be resolved, and take steps—such as the institution-specific cooperation agreements advocated by the Financial Stability Board (FSB)—to anchor these commitments into what might be called a presumptive path.[27] Not only will such a presumptive path underline that holders of investor obligations will indeed be exposed to loss, but it will enable investors in such instruments to form a better idea of the losses that they could incur if resolution were required. That in turn will facilitate the sale of such instruments to investors and facilitate resolvability.

Today, no such certainty exists as to the presumptive path the authorities might follow. A firm can express a preference for resolution under an SPE approach, but there is no assurance that resolution authorities will respect or implement this choice. Alternatively, a firm can express a preference for an MPE approach, but there is no assurance that the resolution authorities will respect or implement this choice. There is a gap between theory and reality. In theory, all subsidiaries are equal. In practice, they are not. The bank subsidiary headquartered in the same jurisdiction as the parent holding company

27. There is also a timing consideration in favour of ex ante cooperation agreements. Waiting until resolution is initiated to start negotiation of international cooperation is impractical and raises the likelihood that resolution will result either in a bailout or in disorderly liquidation.

is plainly, in the eyes of the home country regulator, *primus inter pares*. This poses challenges to both the SPE and MPE approaches. Confronting those challenges holds the key to creating constructive certainty.

Single Point of Entry

The SPE approach is viable if, and only if, (i) the home country resolution authority is authorized, able, and willing to assume command of what amounts to a global resolution syndicate and (ii) the host countries are willing to accept such leadership by the home country resolution authority (see figure 6.10).

For the SPE approach to work, the home country resolution statute must authorize the home country resolution authority to take control of the parent holding company upon (i) the failure of the group to meet minimum conditions for authorization on a consolidated basis, or (ii) in the event that a subsidiary bank fails to meet minimum conditions and is placed into resolution.[28] However, seizing the parent due to losses at the subsidiary raises significant issues with respect to property rights, so that the authorization to take control of the holding company may be (i) subject to prior approval by the central bank, finance ministry, and/or head of government; (ii) restricted to certain resolution techniques, such as temporary public ownership, that involve the use of taxpayer funds (iii); and/or restricted to cases where the failing bank is headquartered in the home country.[29]

---

28. Note that the subsidiary bank in question must generally be a domestic subsidiary bank. There is no provision for the resolution authority of a host country subsidiary bank to put the parent holding company in the home jurisdiction into resolution, much less for the host country resolution authority to take responsibility for the resolution of the group.

29. In the United States, for example, the FDIC may employ the Orderly Liquidation Authority (the basis for the SPE approach) if—and only if—it can demonstrate that resolution under normal bankruptcy procedures (as called for under Title I) would be harmful to financial stability in the United States and this decision has the prior approval of the FDIC itself (two-thirds of its Board), the Board of Governors of the Federal Reserve System (with two-thirds majority), and the secretary of the treasury "in consultation with the President."

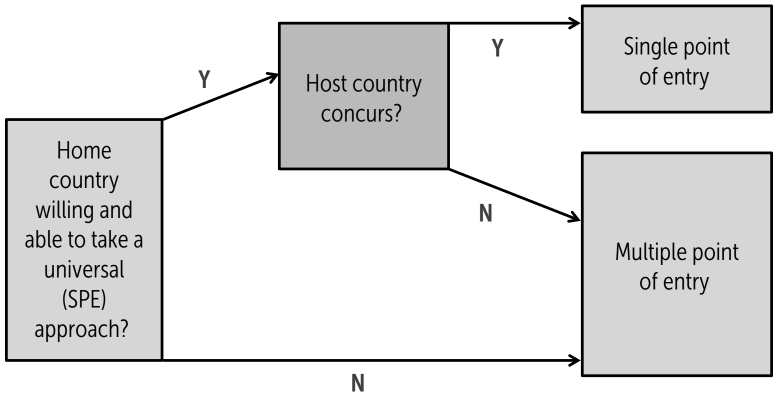

Figure 6.10. SPE Approach Demands Concurrence of Home and Host
Source: Thomas F. Huertas, *Safe to Fail: How Resolution Will Revolutionise Banking* (London: Palgrave MacMillan, 2014)

From the standpoint of the host country authorities responsible for the home country's subsidiary in the host jurisdiction, this situation is not entirely satisfactory, as there is no guarantee the home country resolution authority can actually assume the role intended for it and assigned to it under the SPE approach. Not only does the home country resolution authority have to pass a test before it can implement the SPE approach, but the grades for that test are generally based on the impact that the failure of the global systemically important bank (G-SIB) would have on financial stability in the home country only. Hence, from the vantage point of the host country authorities, it is unclear that the home country resolution authorities could always implement the SPE path, particularly if the losses prompting the entry into resolution were concentrated in the group's foreign subsidiaries.

For this reason, it will be entirely rational for host countries to require—if they are to concur with the SPE approach—some greater assurance that the home country will actually implement the SPE approach regardless of the source of the loss and that the SPE approach will actually result in the stabilization of the subsidiary in the host country. Failing such reassurance, it is natural to expect host authorities to take measures to protect the creditors of the subsidiaries located within their jurisdictions.

Multiple Point of Entry

The central premise of the MPE approach is that resolution can take place at the level of each individual subsidiary according to the rules and procedures of that jurisdiction. For this to be the case, each of the subsidiaries should be self-sufficient, with separate funding and no inter-affiliate transactions. In particular, the bank subsidiaries should not invest in instruments issued by the parent holding company; should not hold cash balances with other entities within the group; and should refrain from using affiliates for services, such as cash management and/or custody that create a credit exposure to the affiliate. To the extent that the subsidiary obtains services from other affiliates within the group, the services should be provided from a separately capitalized central services subsidiary (rather than from another bank within the group) that can continue to provide services to the subsidiary in resolution for a transition period. In other words, each bank subsidiary should be handled in the manner outlined for a unit bank at the start of this paper.

Under the MPE approach, there is a premise that the holding company can walk away from a subsidiary in country A where losses have exhausted its equity investment in that subsidiary. But the terms on which this could occur need to be spelled out. First, is each bank subsidiary within an MPE group required to issue a minimum amount of reserve capital (see "unit bank" above)? Second, to the extent that a bank within an MPE group sells reserve capital instruments to third parties, is there a robust resolution process by which the holders of such instruments as a class can take control of the subsidiary bank-in-resolution? In particular, will the subsidiary bank be resolved on the unitary principle or the territorial principle (if the latter, the resolution process will in all likelihood result in liquidation rather than continuity—see above). Third, will all resolution authorities in the jurisdictions in which an MPE group does business confirm that they will not exercise what amounts to a cross-resolution provision, whereby country B takes the entry into resolution of the group's subsidiary in country A to put the group's subsidiary in country B into resolution and sell this subsidiary to a third party at a knock-down price?

Fourth, is the home country also willing to have the MPE process apply to the group's domestic bank, so that the parent could keep healthy foreign subsidiaries while limiting its liability for losses at the domestic bank to the amount of its investment? It is doubtful that this would be the case, especially where the domestic bank is systemically important in the domestic market and legislation in the home country allows the resolution authority to take control of the parent holding company upon entry of the domestic bank into resolution. Even though the owners of the parent holding may conclude that it would be economically rational for them to walk away from the domestic bank, the economics for the home resolution authority point in the direction of exercising its option to take over the holding company, employ a single-point-of-entry approach, provide a continuity guarantee to host countries with respect to the group's subsidiaries in the host country, and use proceeds from the sale of the group's healthy foreign subsidiaries to reduce losses to creditors of the domestic subsidiary bank.

This brings us full circle. Although the SPE approach is likely to be most effective from a global standpoint in terms of preserving financial stability, political pressures in the home country (as well as the terms of the home country legislation) may lead to the impression that the home country wishes to have the option to implement an SPE approach when the losses have occurred at the domestic bank subsidiary, but reserve the right to resort to an MPE approach when the losses are at the foreign subsidiary. To defend against this possibility, host countries will potentially want to ring-fence their bank up front, demand significant infusions of capital up front, and restrict inter-affiliate transactions.[30]

---

30. Recent policy proposals by the United States illustrate the differing perspectives of home and host. As home, the United States (FDIC 2013) advocates the SPE approach for US-headquartered institutions and proposes that the FDIC act as a global resolution authority in a manner that will assure that subsidiaries "remain open and continue operations." As host, the United States (FRB 2014) has expressed doubt regarding the ability of foreign banking organizations (FBOs) "to provide support to all parts of its organization." For this reason, the Federal Reserve Board, as the principal host regulator of FBOs in the United States, has

Constructive Certainty

Fragmentation is likely to be the end result. This will diminish efficiency without necessarily improving resolvability. What is needed is a presumptive path—call it constructive certainty—that both home and host authorities can follow.

One possible approach is a hybrid between the SPE and MPE approaches. This would be driven by who holds the reserve capital that all bank subsidiaries would be required to issue: the parent holding company or third-party investors. It is based on putting and keeping a certain amount of strength (either from the parent holding company or third-party investors) up front into the subsidiary banks within a group, rather than requiring the parent holding company to act as a source of strength after the subsidiary bank has failed.

For all groups designated as G-SIBs, this would entail the following steps:

1. Each bank subsidiary within a group must issue and keep outstanding reserve capital greater than or equal to the threshold level required for that bank under [3] or [4]. Such reserve capital shall be mandatorily convertible into CET1 capital in the bank immediately upon entry of the bank subsidiary into resolution.
2. The parent holding company may not pay dividends or make distributions unless all the group's bank subsidiaries—both domestic and foreign—meet both (i) their minimum CET1 capital requirement (7 percent of RWAs including the capital conservation buffer) and (ii) the reserve capital requirement outlined in [3] or [4].
3. Where the parent holding company does not own 100 percent of the reserve capital issued by the bank subsidiary,

---

imposed a rule requiring FBOs to establish intermediate holding companies that meet US standards. In the view of the Federal Reserve, this "reduces the need for an FBO to contribute additional capital and liquidity to its U.S. operations during times of home country or other international stresses, thereby reducing the likelihood that a banking organization that comes under stress in multiple jurisdictions will be required to choose which of its operations to support."

a. The threshold amount of reserve capital at the bank subsidiary shall be equal to the minimum required CET1 capital ratio (including capital conservation buffer) *plus* the SIFI surcharge. The terms and conditions for the conversion of such reserve capital into CET1 capital in the bank shall be established in advance, including the process by which the holders of such debt as a class could assume control of the subsidiary bank-in-resolution.[31]

b. The bank subsidiary shall fulfill what might be called an independence requirement so that the bank subsidiary could continue in operation, even if the parent holding company and/or a sister affiliate were to enter resolution. This independence requirement would include strict limits on inter-affiliate transactions. To the extent that the bank subsidiary obtained services from the rest of the group, contracts for such services should assure that such services could continue to be provided to the bank subsidiary for an extended transition period in the event that the bank subsidiary entered resolution, notwithstanding the possibility that such a subsidiary could cease to be part of the group.[32]

4. Where the parent holding company owns 100 percent of the reserve capital issued by the bank subsidiary,

   a. The threshold amount of reserve capital at the bank subsidiary shall be equal to the minimum required CET1 capital ratio (i.e., 7 percent, including capital conservation buffer). The

---

31. In particular, such a process shall make clear that the original parent holding company has no claim on the subsidiary bank-in-resolution, but mandate that the original parent holding company provide a warranty and indemnity to the restructured bank-in-resolution for liabilities relating to misconduct at the subsidiary bank-in-resolution prior to the entry of the subsidiary bank into resolution.

32. To fulfill such an independence requirement, the banking group may find it advantageous to form a separately capitalized services subsidiary (OpCo) that is bankruptcy-remote from the entry of either the bank subsidiary or the parent holding company/sister affiliate. This would assure continuity of services to the subsidiary bank, even if the parent holding company or a sister affiliate entered resolution.

bank subsidiary shall be prohibited from paying interest and dividends or making distributions to the parent holding company unless the reserve capital issued to and held by the parent exceeds the threshold amount. Should the bank subsidiary not be permitted to pay interest in cash to the parent holding, it shall pay interest in kind (e.g., if the bank cannot pay interest on its T2 capital, the bank shall issue additional T2 capital to the parent on the same terms and conditions as the previous T2 capital in an amount equal to the interest payable).

b. Should such in-kind payments be insufficient to restore the reserve capital to the threshold 7 percent level, the subsidiary bank shall have the right to sell additional reserve capital to the parent holding company and the parent holding company shall have the obligation to subscribe to such capital. To help assure that the parent holding can meet such commitments, the parent holding shall maintain a reserve of cash and marketable securities at the parent level equal to the SIFI surcharge for the group as a whole on a consolidated basis.

Together, these measures would go a very long way to assure that each of the group's bank subsidiaries—domestic or foreign—could be recapitalized in the event that the subsidiary in question failed to meet minimum conditions for authorization. Moreover, the measures go a long way to establishing a presumptive path for resolution. Finally, the measures should help assure host country authorities that the subsidiary in their country could be resolved without recourse to their taxpayer and without significant disruption to their economy.

The Provision of Liquidity to the Bank in Resolution

As outlined above, recapitalization is necessary but insufficient to stabilize the bank-in-resolution. In addition to fresh capital, the bank-in-resolution will need access to liquidity. This will be especially true for G-SIBs. If a G-SIB were to enter resolution, it would in all likelihood require very significant amounts of liquidity, starting immediately upon the opening of business in Asia.

The bail-in/conversion of reserve capital creates the basis for such a provision of liquidity, for it assures that the "bank-in-resolution" remains solvent for any loss that is less than the ALAC of the bank. However, in addition to being solvent, the bank-in-resolution also has to have unencumbered assets that it can pledge as collateral to the liquidity provider. To prepare for such an eventuality, the bank should prepare and maintain what might be called a collateral budget that tracks the bank's unencumbered assets so that they can be readily pledged, if required during resolution, to the central bank or private lenders.[33]

For banking groups with domestic and foreign subsidiaries, it makes sense to think through in advance the arrangements that would be made to provide liquidity to the banks within the group, should one or more bank subsidiaries in the group reach the PONV and enter resolution. It would seem sensible to align the approach to liquidity provision to the overall (MPE or SPE) approach to resolution.

Under the MPE approach, the liquidity facility to each subsidiary would be based solely on that subsidiary's collateral as pledged to that bank's resolution authority/central bank as lender. In making this loan, the local resolution authority/central bank would act as principal and keep the home country (group) resolution authority/central bank informed that it had made the loan. Should the subsidiary bank fail to repay the credit and the collateral prove insufficient to extinguish the bank's obligations to the liquidity provider, the lender would have recourse against that subsidiary only and no claim on either the parent holding company or other subsidiaries within the group.

Under the SPE approach, it would potentially be advantageous for the home country resolution authority/central bank to arrange a global liquidity facility for the group as a whole. This would effectively

---

33. Proposed liquidity regulation (BCBS 2014) would in fact require banks to track unencumbered assets. The "collateral budget" (Huertas 2014a, p. 100) would take this a step further and look at sources (including borrowing of collateral) and prospective uses (including possible demands for the bank to post additional collateral, if the bank were to be downgraded). Such an analysis would help the bank and the supervisor/resolution authority estimate the amount and type of collateral that might be available to the bank-in-resolution.

allow collateral to be pooled across the group and funds to flow to the point at which they were most needed within the group. In practical terms, the global liquidity provider would take a fixed and floating charge over the parent holding company's assets as well as over any unencumbered assets that the subsidiary might currently have or obtain in the future. To the extent that local resolution authorities/central banks figured in such a facility, it would be as agents of the home resolution authority/central bank.

Other Considerations

Although recapitalization via bail-in of reserve capital and access to liquidity hold the key to making banks resolvable, there are a number of other considerations that the presumptive path should also take into account. These include:

1. Assuring that the bank-in-resolution can continue to obtain essential services, both from other affiliates within the group and from third parties.[34]
2. Assuring that counterparties to the failed bank's qualified financial contracts (e.g., repurchase agreements and derivatives) do not immediately terminate such contracts and liquidate the collateral that the bank-in-resolution had provided.[35]

---

34. This may require amendment of service level agreements and/or contracts with third parties to assure that the service provider continues its services without interruption to the bank-in-resolution. To facilitate this result, it may make sense, particularly where the banking group has multiple subsidiaries, for the group to form a so-called OpCo, or separately capitalized service subsidiary that would contract on behalf of the group with third parties and provide services to the bank subsidiaries within the group. For further details, see Huertas (2014a, 171).

35. Under qualified financial contracts (QFCs), the bank's counterparty is entitled to terminate the contract upon the entry into resolution of either the bank or its parent holding company (if the parent has guaranteed the obligations of the subsidiary bank). Upon termination the bank's counterparty has the right to sell any collateral provided by the bank and to use the proceeds to satisfy its claim on the bank (should the proceeds exceed the claim, the excess is returned to the bank; if the proceeds do not cover the claim, the counterparty has a claim

3. Assuring that the bank-in-resolution retains its authorization to operate as a bank.[36]
4. Assuring that the bank-in-resolution retains access to financial market infrastructures, such as payment systems, securities settlement systems, and central counterparties.[37]

Summary Assessment

In sum, resolving a G-SIB is a complex, multifaceted task. But it is a doable task, on which banks and the authorities have already made much progress.[38] What remains to be done are above all four things:

- Complete the reserve capital/bail-in regime so that banks can be readily recapitalized.
- Complete arrangements for provision of liquidity to the bank in resolution.
- Assure that resolution is not derailed by either derivatives counterparties or financial market infrastructures.

---

on the bank-in-resolution for the deficiency. This arrangement provides no incentive for the bank's counterparty to maximize proceeds from the sale (once the proceeds cover the debt due). Consequently, the so-called haircut (excess of collateral value over debt amount) may be at risk, if the bank's counterparty terminates the QFC.

In the case of derivatives, early termination would also very likely increase the amount due to the bank's counterparty. Under the ISDA master netting agreement underlying most OTC derivative transactions the non-defaulting counterparty has the right to close-out at its replacement cost (this includes the spread that it must pay to the dealer providing the replacement derivative). For further discussion of these points, see Roe (2011) and Huertas (2014a).

36. Formally, the entry into resolution brings about a change in control to the resolution authority and prospectively to the providers of reserve capital to the bank in resolution. Resolution planning should include steps to assure that this does not lead to revocation of the bank's license to operate, especially in foreign jurisdictions where the bank may have branches, subsidiaries, and/or affiliates.

37. For further discussion, see Huertas (2014b). It is also important that financial market infrastructures themselves remain robust. See CSS IOSCO (2013) and Duffie (2015).

38. For an assessment of progress toward resolvability, see Carney (2014) and IIF (2014).

- Conclude cooperation agreements among the G-SIB's supervisors and resolution authorities that create constructive certainty as to how the G-SIB would be resolved.

References

Bank of England. 2014. *The Bank of England's Approach to Resolution,* http://www.bankofengland.co.uk/financialstability/Documents/resolution/apr231014.pdf.

BCBS (Basel Committee on Banking Supervision). 2011a. *Basel Committee Issues Final Elements of the Reforms to Raise the Quality of Regulatory Capital,* http://www.bis.org/press/p110113.pdf.

BCBS (Basel Committee on Banking Supervision). 2011b. *Definition of Capital Disclosure Requirements,* http://www.bis.org/publ/bcbs212.pdf.

BCBS (Basel Committee on Banking Supervision). 2013a. *Liquidity Coverage Ratio Disclosure Standards,* http://www.bis.org/publ/bcbs259.pdf.

BCBS (Basel Committee on Banking Supervision). 2013b. *Revised Basel III Leverage Ratio Framework and Disclosure Requirements,* http://www.bis.org/publ/bcbs251.pdf.

BCBS (Basel Committee on Banking Supervision). 2014. *Basel III: The Net Stable Funding Ratio.* http://www.bis.org/publ/bcbs271.pdf.

Bovenzi, J., R. D. Guynn, and T. H. Jackson. 2013. *Too Big to Fail: The Path to a Solution. A Report of the Failure Resolution Task Force of the Financial Regulatory Reform Initiative of the Bipartisan Policy Center,* http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/TooBigToFail.pdf.

Carney, M. 2014. *Statement before the International Financial and Monetary Committee, International Monetary Fund,* https://www.imf.org/External/AM/2014/imfc/statement/eng/FSB.pdf.

CPSS IOSCO. 2013. Committee on Payments and Securities Settlement Systems and Board of the International Organisation of Securities Commissions: Recovery of Financial Market Infrastructures, http://www.bis.org/publ/cpss109.pdf.

Committee on the Global Financial System. 2013. *Asset Encumbrance, Financial Reform and the Demand for Collateral Assets,*http://www.bis.org/publ/cgfs49.pdf.

Duffie, D. 2015. "Resolution of Failing Central Counterparties," chapter 4 in this volume.

Enhanced Disclosure Task Force. 2013. *Enhancing the Risk Disclosures of Banks (2nd Report),* http://www.financialstabilityboard.org/publications/r_130821b.pdf.

EBA (European Banking Authority). 2014. *Consultation Paper (EBA/CP/2014/41). Draft Regulatory Technical Standards on Criteria for Determining the Minimum Requirement for Own Funds and Eligible Liabilities under Directive 2014/59/EU,* http://www.eba.europa.eu/documents/10180/911034/EBA+CP+2014+41+%28CP+on+draft+RTS+on+MREL%29.pdf.

FDIC (Federal Deposit Insurance Corporation). 2013. *Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy,* http://www.fdic.gov/news/board/2013/2013-12-10_notice_dis-b_fr.pdf.

FRB (Board of Governers of the Federal Reserve System). 2014. *Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations*, http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20140218a1.pdf.

FSB (Financial Stability Board). 2011a. *Key Attributes of Effective Resolution Regimes for Financial Institutions,* http://www.financialstabilityboard.org/publications/r_111104cc.pdf.

FSB (Financial Stability Board). 2011b. *Effective Resolution of Systemically Importnat Financial institutions: Recommendations and Timelines,* http://www.financialstabilityboard.org/wp-content/uploads/r_110719.pdf.

FSB (Financial Stability Board). 2013a. *Thematic Review on Resolution Regimes: Peer Review Report*. http://www.financialstabilityboard.org/publications/r_130411a.pdf.

FSB (Financial Stability Board). 2013b. *Progress and Next Steps Towards Ending "Too-Big-To-Fail" (TBTF): Report of the Financial Stability Board to the G-20,* http://www.financialstabilityboard.org/publications/r_130902.pdf.

FSB (Financial Stability Board). 2014. *Adequacy of Loss-Absorbing Capacity Of Global Systemically Important Banks in Resolution. Consultative Document,* http://www.financialstabilityboard.org/wp-content/uploads/TLAC-Condoc-6-Nov-2014-FINAL.pdf.

Huertas, T. F. 2012. *A Race to the Top?* London School of Economics Financial Markets Group Special Paper 208, http://www.lse.ac.uk/fmg/workingPapers/specialPapers/PDF/SP208.pdf.

Huertas, T. F. 2014a. *Safe to Fail: How Resolution Will Revolutionise Banking.* London: Palgrave Macmillan.

Huertas, T. F. 2014b. "Financial Market Infrastructures: Their Critical Role during Recovery and Resolution." *Banking Perspective: The Quarterly Journal of the Clearing House,* 2 (1): 68–75, https://www.theclearinghouse.org/~/media/Files/Banking%20Perspective/Q1_2014/011-certifying%20continuity.pdf.

IIF (Institute of International Finance). 2011. *Addressing Priority Issues in Cross-Border Resolution,* available at https://www.iif.com/publication/regulatory-report/iif-proposes-approaches-bail-and-resolution-planning.

IIF (Institute of International Finance). 2012. *Making Resolution Robust: Completing the Legal and Instiutional Frameworks for Effective Cross-Border Resolution of Financial Institutions.* Retrieved from hyperlink located at http://www.iif.com/press/press+259.php.

IIF (Institute of International Finance, Cross-Border Working Group on Resolution). 2014. *Achieving Bank Resolution in Practice: Are We Nearly There Yet?* Retrieved from hyperlink located at http://www.iif.com/regulatory/article+1479.php.

ISDA (International Swaps and Derivatives Association). 2014. *Major Banks Agree to Sign ISDA Resolution Stay Protocol,* http://www2.isda.org/news/major-banks-agree-to-sign-isda-resolution-stay-protocol.

Jackson, T. H. 2015. "Building on Bankruptcy: A Revised Chapter 14 Proposal for the Recapitalization, Reorganization, or Liquidation of Large Financial Institutions," chapter 2 in this volume.

Lee, P. L. 2014. Cross-Border Resolution of Banking Groups: International Initiatives and US Perspectives, Part III. *Pratt's Journal of Bankruptcy Law*, June 2014, 291–335.

Merton, R. C., and A. Perold. 1993. "Theory of Risk Capital in Financial Firms," *Journal of Applied Corporate Finance* 6 (3): 16–32. Reprinted in *Corporate Risk Management,* ed. Donald H. Chew (New York: Columbia Business School, 2008), 131–61.

PRA. 2014. Bank of England Prudential Regulation Authority. *Supervising International Banks: The Prudential Regulation Authority's Approach to Branch Suprvision. Consultation Paper CP4/14,* http://www.bankofengland.co.uk/pra/Documents/publications/policy/2014/branchsupcp4-14.pdf.

Roe, M. 2011. "The Derivatives Market's Payment Priorities as Crisis Accelerator." *Stanford Law Review* 59 (3): 539–90.

Skeel, D. A. 2015. "Financing Systemically Important Financial Institutions in Bankruptcy," chapter 3 in this volume.

Strongin, S. H. 2013. "Does Being More Resolvable Make a Firm More Resilient? It Depends!" Presentation at Federal Reserve Bank of Richmond Conference on Resolution, Washington, D.C., October 18, 2013, https://www.richmondfed.org/conferences_and_events/banking/2013/pdf/resolution_conf_panel_5_strongin_doesbeingmoreresolvable.pdf.