Survey of Resolution and Restructuring in Europe: Pre- and Post-BRRD

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Survey of Resolution and Restructuring in Europe: Pre- and Post-BRRD

Christian M. McNamara, Carey K. Mott, Salil Gupta, Greg Feldberg, and Andrew Metrick

Yale Program on Financial Stability Survey
March 28, 2024

Abstract

This paper surveys 19 case studies of bank resolutions and restructurings across 15 Key Design Decisions. It focuses on interventions that occurred in Europe both in the years leading up to the adoption of the Bank Recovery and Resolution Directive (BRRD) in 2014 (when many jurisdictions were constrained by a lack of legal authority) and in the years after the BRRD was in place. The main themes that emerge are: (a) the need for resolution and restructuring to eliminate uncertainty about an institution’s solvency by closing it, recapitalizing it, or merging it with a healthier institution; (b) the importance of effective valuation in achieving this result; (c) the necessity of clarity in the treatment of creditors; and (d) the value of a credible bail-in tool to incentivize creditors to agree to solutions outside of resolution.

Keywords: bankruptcy, resolution, restructuring

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1 This survey reviews a Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering bank resolutions and restructurings. The individual cases underlying it are available from the Journal of Financial Crises at https://elischolar.library.yale.edu/journal-of-financial-crisis/vol6/iss1/.
2 Director, New Bagehot Project, YPFS, Yale School of Management.
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**Introductory Note:** This survey is an analysis of important considerations for policymakers seeking to resolve and restructure a troubled financial institution. It is based on insights derived from case studies of 19 specific examples of resolution and restructuring the Yale Program on Financial Stability has completed and from the existing literature on the topic. While this survey can help inform a decision about whether or not to resolve and restructure a troubled financial institution, our main purpose is to assist policymakers who have already made that decision in designing the most effective intervention possible. In analyzing the case studies that are the focus of this survey, we used a color-coded system to highlight certain particularly noteworthy design features.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE – INTERESTING</td>
<td>A design feature that is interesting and that policymakers may want to consider. Typically, this determination is based on the observation that the design feature involves a unique and potentially promising way of addressing a challenge common to this type of intervention that may not be obvious. Less commonly, empirical evidence or a consensus will indicate that the design feature was effective in this context, in which case we will describe that evidence or consensus.</td>
</tr>
<tr>
<td>YELLOW – CAUTION INDICATED</td>
<td>A design feature that policymakers should exercise caution in considering. Typically, this determination is based on the observation that the designers of the feature later made significant changes to the feature with the intention of improving the intervention. Less commonly, empirical evidence or a consensus will indicate that the design feature was ineffective in this context, in which case we will describe that evidence or consensus.</td>
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<tr>
<td>FOOTNOTE IN ITALICS</td>
<td>Where the reason that a given design feature has been highlighted is not apparent from the text, it is accompanied by an italicized footnote that explains why we chose to highlight it. Where necessary, these footnotes will be used to identify any considerations that should be kept in mind when thinking about the feature.</td>
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This highlighting is not intended to be dispositive. The fact that a design feature is not highlighted or is highlighted yellow does not mean that it should not be considered or that it will never be effective under any circumstances. Similarly, the fact that a design feature is not highlighted or is highlighted blue does not mean that it should always be considered or will be effective under all circumstances. The highlighting is our subjective attempt to guide readers toward certain design features that (1) may not be obvious but are worth considering or (2) require caution.
Introduction

Resolution refers to the process by which authorities take over or otherwise intervene in a failing financial institution to allow it to continue to provide essential services; to protect its depositors; and, in some cases, to avoid financial instability. At the time of the Global Financial Crisis of 2007–2009 (GFC), few countries had resolution regimes that allowed authorities to intervene in failing financial firms. When confronted with the failure of a large and complex financial firm for which there were no available private solutions, policymakers faced a difficult choice between “on the one hand, putting the firm into a regular bankruptcy proceeding and accepting massive systemic disorder and, on the other hand, going to the fiscal authority to seek a taxpayer bailout to avert systemic collapse” (Tucker 2018). The failure of Lehman Brothers and its global consequences demonstrated how inadequate bankruptcy can be for financial institutions (see, for example, Wiggins and Metrick 2019b), whereas the rescue of institutions such as American International Group and the resulting political consequences demonstrated the need for additional options to handle troubled financial institutions besides ad hoc public funding, or “bailouts.” Countries with no preset resolution mechanisms resorted to central banks, finance ministries, and others to improvise solutions for which they had no experience or training. The disparate approaches they took heightened uncertainty for stakeholders of financial institutions across the world, particularly creditors and uninsured depositors (FSB 2014). In Europe, the focus of this survey, the emergence of the sovereign debt crisis in 2010 called further attention to the gap in regulators’ toolkits and highlighted the fiscal risks of banking crises.

In light of the dilemma faced by policymakers during the GFC, it is perhaps not surprising that one of the most significant post-GFC reforms to authorities’ crisis-fighting toolkits involved the establishment of new resolution frameworks intended to provide a “third option” beyond disruptive bankruptcies and taxpayer-funded bailouts for systemically important firms. In 2011, the Financial Stability Board published the Key Attributes of Effective Resolution Regimes for Financial Institutions (which it later updated in 2014) (the Key Attributes) to promulgate a set of essential features for jurisdictions creating resolution regimes, focusing on financial institutions whose failure could have systemic repercussions (FSB 2014). These features are intended to “allow authorities to resolve financial institutions in an orderly manner without taxpayer exposure to loss from solvency support, while maintaining continuity of their vital economic functions.” (FSB 2014).

Many countries have created special resolution regimes for financial firms outside of bankruptcy or expanded existing resolution powers in line with the Key Attributes, even in parts of the world less directly affected by the crisis, such as Asia (FSB 2022; G-30 2018). In the United States, for example, Title II of the Dodd-Frank Act (2010) established an Orderly Liquidation Authority for resolving systemically important bank holding companies and nonbank financial institutions, complementing the resolution authority for all commercial banks that the Federal Deposit Insurance Corporation (FDIC) had long administered. In the

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7 Although here we refer to "private" solutions, it is not unusual for such solutions to take the form of forced mergers in which regulators encourage the acquisition of troubled firms by healthier institutions to prevent their collapse.
United Kingdom, the Banking Act 2009 established a Special Resolution Regime for banks, and the Financial Services Act 2012 subsequently widened its scope.

Complementing the development of resolution tools, countries have sought to strengthen their tools for preventing banks from needing to be resolved in the first place, during the pre-resolution period of distress that the Key Attributes refer to as the “recovery phase.” (See, for example, Key Attributes Annex 4.) These include recovery tools that banks can use without government intervention and early-intervention tools that supervisors, rather than resolution authorities, can use to react to financial problems at an early stage (World Bank Group 2016b). Both these early measures and bank resolutions may entail a restructuring of a troubled firm’s liabilities. In a restructuring, to avoid resolution, banks can improve their capitalization by writing down or converting capital instruments into equity. If that effort is insufficient, banks may bail in a broader set of liability claims once they enter resolution. Consistent with Key Attribute 11, many countries also now require banks to prepare recovery and resolution plans so that they and their supervisors and resolution authorities are prepared for these scenarios, although only three cases in our survey involved firms that had such plans in place.

The region that may have seen the most significant developments from a resolution standpoint—both in the creation of a new resolution framework and in the use of that new framework to resolve systemically important failed institutions—is the European Union (EU). In May 2014, the EU adopted the Bank Recovery and Resolution Directive (the Directive or BRRD) to “establish common EU rules for the recovery and restructuring of failing banks” (PO 2014). Under the BRRD, EU member states had until December 31, 2014, to transpose the Directive into their own national laws with an effective date of January 1, 20158 (European Parliament and Council of the European Union 2014, art. 130). As discussed in greater detail in Key Design Decision No. 3, Legal Authority, even before the Directive was formally adopted, individual European countries began implementing new resolution frameworks in anticipation of the BRRD. These BRRD frameworks “provide an alternative to the otherwise applicable national corporate insolvency law where resolution is deemed to be necessary in the public interest” (Schillig 2016).

This paper surveys 19 case studies of bank resolutions and restructurings that took place in Europe either in the years immediately preceding the adoption of the BRRD or in the years following its adoption. Figure 1 lists the 19 case studies. This range of case studies allows for an examination of how the resolution of financial institutions has evolved in Europe coming out of the GFC with the implementation of the BRRD. In addition to cases involving formal resolutions, we have also included one case study of a bank that recovered through a voluntary restructuring and was able to avoid resolution (the Piraeus liability management exercise discussed in Key Design Decision No. 9, Treatment of Creditors and Equity Holders) to provide further insight into the use of restructuring tools outside of resolution. Finally, although we have not yet completed a case study on the takeover of Credit Suisse by UBS following the former’s collapse, given that events were still unfolding as we were developing

8 BRRD provisions related to the “bail-in tool” (discussed in Key Design Decision No. 8, Approach to Resolution and Restructuring) did not need to apply until January 1, 2016.
this series, we have included key takeaways from the episode as part of the discussion in this paper.

The main body of the paper analyzes 15 Key Design Decisions. Wherever possible, we explore why policymakers structured the intervention in the way that they did. The paper seeks to distill important considerations for policymakers when resolving and restructuring financial institutions. Among the themes that emerge are (a) the need for resolution and restructuring to eliminate uncertainty about an institution’s solvency by closing it, recapitalizing it, or merging it with a healthier institution; (b) the importance of effective valuation in achieving this result; (c) the necessity of clarity in the treatment of creditors; and (d) the value of a credible bail-in tool to incentivize creditors to agree to solutions outside of resolution.

Many of the important practices and approaches discussed in this paper are interventions that authorities in Europe may have been seeking to undertake even before the BRRD, while facing constraints on their ability to do so (for a discussion of some of these constraints, see Key Design Decision No. 3, Legal Authority). The requirement to transpose the BRRD into national law provided an explicit basis for such measures as:

- Recovery and resolution planning, with the planning process serving to streamline institutions and promote more effective recovery and resolution even when the plans aren’t ultimately followed exactly as developed. (See Key Design Decision No. 15, Duration.)

- Establishing conditions for resolution (including “failing or likely to fail” determinations) that provide rules for when authorities may place institutions into resolution, while leaving them with enough discretion to intervene early. (See Key Design Decision No. 1, Purpose.)

- The use of valuation to guide resolution decisions so that the going-concern entities that emerge are solvent and credible and that shareholders and creditors are left no worse off than they would have been under liquidation. (See Key Design Decision No. 1, Purpose, and Key Design Decision No. 9, Treatment of Creditors and Equity Holders.)

- The use of bail-in and write-down to require stakeholders in a failed institution—rather than taxpayers—to bear the losses associated with that failure. (See Key Design Decision No. 9, Treatment of Creditors and Equity Holders.)

It may still be too early to judge how successful these and other features of the BRRD will ultimately be, but the case studies reviewed suggest that there are benefits to having a resolution framework that incorporates these elements.

Underlying the need for resolution frameworks is the fact that financial firms are fundamentally different from other types of companies. A nonfinancial company can enter and exit bankruptcy while still making and selling its products. Bankruptcy allows it to continue to pay commercial creditors while delaying payment to financial creditors.
Preserving this ability to pay commercial creditors while delaying payment to financial creditors is the basis for insolvency regimes around the globe (Gleeson and Guynn 2016). Financial firms can’t enter and exit bankruptcy so easily. For financial firms, their financial liabilities—particularly deposits—are their most essential product. Depositors and other financial creditors must have confidence in the firm, or they will demand their money back. There is no ability to distinguish between commercial creditors and financial creditors because they are effectively one and the same. Thus, unlike for a nonfinancial company, a traditional insolvency proceeding would not result in the continued operation of the firm. Depending on the firm in question, this constraint could cause significant harm to the financial system and to the broader economy—both because of the loss of that firm and the specific function it performed and because of the threat of contagion stemming from creditor losses. Resolution frameworks are intended to provide an alternative to this outcome by preserving the function of the failed financial institution while protecting those creditors whose losses would be most likely to result in contagion. In so doing, they typically focus only on systemically important firms (World Bank Group 2016b). (See, for example, Key Attribute 1.1.)

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9 As discussed in more detail in Key Design Decision No. 1, Purpose, under the BRRD, resolution is limited to situations in which it is in the “public interest” to deviate from normal insolvency proceedings. This is sometimes interpreted as limiting the scope of the BRRD to systemically important banks (see, for example, World Bank Group [2016a]), but other commentators have argued that the definition of public interest is sufficiently flexible such that the BRRD is not limited to systemically important banks as that term is commonly understood (see, for example, Schillig [2016]). The BRRD itself notes that “[a]ll types of financial intermediaries, markets and infrastructure may be potentially systemically important to some degree” (European Parliament and Council of the European Union 2014, art. 2.1[30]).
### Figure 1: Case Studies and Abbreviated Names

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Short-form Case Name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria: Heta Asset Resolution Restructuring, 2015</td>
<td>Austria, Heta</td>
<td>Decker (2024a)</td>
</tr>
<tr>
<td>Belgium: Fortis Group Restructuring, 2008</td>
<td>Belgium, Fortis</td>
<td>George (2024a)</td>
</tr>
<tr>
<td>Belgium, France, Luxembourg: Dexia Group Restructuring, 2011</td>
<td>Belgium, France, Luxembourg, Dexia</td>
<td>George (2024b)</td>
</tr>
<tr>
<td>Cyprus: Laiki Bank and Bank of Cyprus Restructuring, 2013</td>
<td>Cyprus, Laiki</td>
<td>Schaefer-Brown (2024a)</td>
</tr>
<tr>
<td>Denmark: Andelskassen J.A.K. Slagelse Restructuring, 2015</td>
<td>Denmark, JAK</td>
<td>Swaminathan (2024a)</td>
</tr>
<tr>
<td>Denmark: Roskilde Bank Restructuring, 2008</td>
<td>Denmark, Roskilde</td>
<td>Decker (2024b)</td>
</tr>
<tr>
<td>Greece: ATE Bank Restructuring, 2012</td>
<td>Greece, ATE</td>
<td>Schaefer-Brown (2024b)</td>
</tr>
<tr>
<td>Greece: Piraeus Bank Restructuring, 2015</td>
<td>Greece, Piraeus</td>
<td>Schaefer-Brown (2024c)</td>
</tr>
<tr>
<td>Hungary: Magyar Külkereskedelmi Bank Restructuring, 2014</td>
<td>Hungary, MKB</td>
<td>Swaminathan (2024b)</td>
</tr>
<tr>
<td>Iceland: Landsbanki Restructuring, 2008</td>
<td>Iceland, Landsbanki</td>
<td>George (2024c)</td>
</tr>
<tr>
<td>Italy: Restructuring of Four Banks, 2015</td>
<td>Italy, Four Banks</td>
<td>Gupta (2024a)</td>
</tr>
<tr>
<td>Latvia: Parex Bank Restructuring, 2008</td>
<td>Latvia, Parex</td>
<td>Decker (2024c)</td>
</tr>
<tr>
<td>Luxembourg: Kaupthing Bank Luxembourg Restructuring, 2008</td>
<td>Luxembourg, Kaupthing</td>
<td>George (2024d)</td>
</tr>
<tr>
<td>Netherlands: SNS Reaal Restructuring, 2013</td>
<td>Netherlands, SNS Reaal</td>
<td>George (2024e)</td>
</tr>
<tr>
<td>Portugal: Banco Espírito Santo Restructuring, 2014</td>
<td>Portugal, BES</td>
<td>Gupta (2024b)</td>
</tr>
<tr>
<td>Spain: Banco Popular Restructuring, 2017</td>
<td>Spain, Popular</td>
<td>Mott (2024)</td>
</tr>
<tr>
<td>Spain: BFA-Bankia Group Restructuring, 2012</td>
<td>Spain, Bankia</td>
<td>Swaminathan (2024c)</td>
</tr>
<tr>
<td>Switzerland: UBS Restructuring, 2008</td>
<td>Switzerland, UBS</td>
<td>Makhiya (2024a)</td>
</tr>
<tr>
<td>United Kingdom: Dunfermline Building Society Restructuring, 2009</td>
<td>UK, Dunfermline</td>
<td>Makhiya (2024b)</td>
</tr>
</tbody>
</table>

*Source: Authors’ compilation.*
Key Design Decisions

1. Purpose: What motivated policymakers to resolve the institution?

In all of the cases in our survey, both pre-BRRD and post-BRRD, the authorities had determined that the targeted firm was likely to fail and had exhausted other available measures. In response to this situation, the authorities settled on direct intervention with the view that the targeted firm should not be handled through a traditional insolvency. In the European context, Article 32 of the BRRD, adopted in 2014, codified these three primary conditions for the commencement of a resolution action and provided standards for meeting them:

(a) The institution has failed or is likely to fail (the FOLTFT determination).

(b) There is no reasonable prospect that any alternative private sector measures will prevent the failure of the institution within a reasonable time frame.

(c) Resolution is in the public interest.

Under the BRRD, in most cases, the supervisory authority makes the first of these determinations, in consultation with the resolution authority. The resolution authority makes the second and third.

A potential pitfall in weighing whether to initiate resolution action is the risk of costly delay. Early action can improve the likelihood of maintaining critical functions and minimizing the impact of an institution’s failure on the financial system and broader economy. It also reduces the amount of time during which an institution’s bail-in-able base can erode through depositor withdrawals and other redemptions, as occurred in Cyprus in 2011–2013 due to a delay between attempted recapitalizations and resolution (World Bank Group 2016a).

FOLTFT Determinations and the Role of Valuation

To be placed into resolution under the BRRD, an institution must have failed or been likely to fail. Per Article 32(4) of the BRRD, this FOLTFT determination requires that one or more of the following conditions be met:

- The institution is facing a loss of its banking license or other official authorization.
- The institution's assets are or will soon be less than its liabilities.
- The institution is or will soon be unable to pay its debts as they come due.
- The institution requires extraordinary public financial support (subject to certain exceptions).
These conditions are more flexible than, for example, a specific capital ratio trigger, providing authorities with discretion to intervene early and avoid the potential for costly delays as mentioned above (World Bank Group 2016b).

A key component of the decision to initiate resolution action is an understanding of the magnitude of the losses the financial institution could face in the near future. In the words of Gleeson and Guynn (2016), two leading bankruptcy attorneys, “you can't know how to fill a potential hole if you can form no reasonable estimate at all of the size of the hole” (Gleeson and Guynn 2016, 15). For resolution to be successful, the entities that emerge as going concerns—for instance, any financial institutions that have acquired assets and liabilities of the failed firm—must be solvent and financial market participants must not be uncertain as to their solvency (Gleeson and Guynn 2016). Effective valuation of a firm’s assets and liabilities is thus an important early step in determining whether and how to resolve that firm.

The European Banking Authority—the EU-wide supervisory authority for banking—has created a framework for distinguishing among the valuations required by the BRRD (SRB 2019):

Valuation 1—to inform the determination of whether the conditions for resolution are met (BRRD Article 36[4][a]).

Valuation 2—to inform the choice of resolution option to be adopted (BRRD Article 36[4][b]).

Valuation 3—to inform the “no creditor worse off” determination, a concept described in more detail in Key Design Decision No. 9, Treatment of Creditors and Equity Holders (BRRD Article 74).¹⁰

Valuations under the BRRD must be “fair, prudent and realistic” and be carried out by “a person independent from any public authority, including the resolution authority, and the institution or entity” (Article 36[1]). In exigent circumstances, a resolution authority may conduct a provisional valuation subject to subsequent confirmation by an independent valuation expert (Article 36[2]).

A full discussion of the technical approaches to performing valuations in preparation for resolution is beyond the scope of this paper (see, for example, EBA [2017]) for a discussion of the technical standards for valuation in the BRRD context). However, the challenge associated with performing such valuations in the condensed time frame of a rapidly failing institution should not be ignored.¹¹ This is especially so when the source of an institution’s trouble is improper lending or previously undisclosed liabilities, as was the case with Portugal’s BES. Not surprisingly, then, allegations of improper valuations are often at the

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¹⁰ For further discussion of the relationship between the three valuations, see World Bank Group (2016b).

¹¹ In its Valuation 2 report for Banco Popular, Deloitte noted that it had been given 12 days to perform a valuation exercise that would typically take six weeks to complete (SRB 2017).
heart of creditor and shareholder litigation in response to resolutions, as was the case in Banco Popular.

Mechanisms for addressing the differences between estimated valuations and the actual economic outcomes that are achieved as a resolution unfolds are discussed in Key Design Decision No. 9, Treatment of Creditors and Equity Holders. There are also steps that could potentially be taken to provide additional time for valuations to occur. It has been proposed that a “moratorium tool” that would prevent creditors from running on an institution approaching resolution could provide for a less rushed valuation process (see, for example, Lastra and Olivares-Caminal [2018]). However, the potential benefits of such a tool must be weighed against the risk that the threat of a moratorium could accelerate the run on an institution. While Heta issued a moratorium on its debt to provide authorities additional time to assess the situation before initiating bail-in, Heta was the asset management vehicle created out of an earlier bank resolution and had no deposits. Additionally, the announcement of the moratorium resulted in a collapse in the price for Heta bonds and a wave of litigation and contributed to a protracted resolution. In Iceland, three failed banks were split into new banks with government capital support, which continued to operate, and the legacy old banks, which were put under moratoriums. Still, uncertainty about further obligations the new banks may have had to the old banks remained for a year, affecting their ability to conduct business.

Other Options

The BRRD requires that a resolution action be initiated only where alternative private sector solutions are not available. More broadly, given its challenges and risks, resolution is typically something authorities do after exhausting other options. Key Design Decision No. 2, Part of a Package, discusses interventions authorities undertook before resolution in an attempt to stabilize the institutions that are the focus of the case studies reviewed here. Resolutions also often occur following unsuccessful attempts by private parties to inject capital into or acquire troubled institutions, as was the case in Roskilde, Parex, and JAK.

Public Interest

As noted in the Introduction, resolution is generally intended to prevent harm to the financial system and broader economy. Within the BRRD framework, resolution actions are to be initiated only when in the public interest. Article 31(2) of the BRRD defines public interest to include:

(a) The continuity of critical functions;

(b) The avoidance of significant adverse effects on the financial system, particularly via contagion;

(c) The protection of public funds by minimizing extraordinary public support;

(d) The protection of depositors; and
(e) The protection of client funds and assets.

In the case studies reviewed, both those pre- and post-BRRD, authorities typically cited one or more of these considerations as justifying the need to resolve the institution in question. A determination that the resolution of a given institution is in the public interest is a context-specific analysis. It can depend on factors such as the size and composition of a country's banking system, the primary activities of the institution and how they fit into that system, and whether the activities can be substituted for. In the case of Banco Popular, for example, the nature of the small and medium-sized enterprise (SME) lending market (in both Spain and Portugal) and the payments system (in Spain) were such that authorities feared that Popular's collapse would significantly undermine these functions.

2. Part of a Package: Was the resolution accompanied by other interventions intended to address the problems that caused the institution to fail?

Authorities typically resort to resolution only after prior attempts to support the institution using other tools have failed. As noted in the Introduction, new resolution regimes have been accompanied by the strengthening of tools to be used in the recovery phase, before an institution has reached the point of needing to be resolved. The Key Attributes call for recovery measures including private sector recapitalization, capital conservation via suspension of dividends and variable compensation, the sale of subsidiaries and the spin-off of business units, voluntary conversion of debt into equity, and diversification of funding sources. All of these measures appeared at least a few times in the cases studied for this paper.

Additionally, interventions often accompany resolution itself, particularly when the authorities are concerned about the potential systemic implications of a disorderly failure. In about half of the cases we reviewed, the central bank also provided emergency lending to the troubled bank in order to ensure access to adequate liquidity. The resolution may even give rise to the need for such interventions. In the Roskilde case, a transfer of assets triggered an early termination right resulting in creditor withdrawals that required emergency liquidity assistance (see Key Design Decision No. 10, Treatment of Clients).

A key consideration when pairing other interventions with a resolution is how the other interventions will interact with the creditor hierarchy. Given the desire to ensure creditors and shareholders absorb losses before taxpayers, the public is often given priority over certain other creditors in recouping amounts from interventions accompanying resolution. However, structures can vary. In the case of Dunfermline, for example, the British Treasury contributed approximately 1.6 billion pounds sterling (GBP) as part of the resolution, splitting its claim into two so that GBP 0.5 billion ranked equal to other unsecured creditors while the remaining GBP 1.1 billion was subordinated to unsecured creditors (but senior to other subordinated note holders).

Most of the cases studied involved some amount of government recapitalization. Although one of principal purposes of resolution as articulated in the Key Attributes is to provide an alternative to taxpayer exposure to losses for solvency support, authorities continued to see
such support as sometimes required to achieve a necessary outcome of resolution—the elimination of uncertainty about an institution’s solvency. Under the BRRD, the use of public funds for recapitalization is not prohibited but rather is subject to a requirement that shareholders and creditors first absorb losses equal to 8% of the institution’s total liabilities. We review recapitalization cases in a separate survey.

3. **Legal Authority: What was the legal basis for the resolution and how did it influence how the resolution was done?**

The resolution of failed institutions typically affects the property rights of individuals, as when assets and liabilities are transferred out of the institution or the claims of shareholders or creditors are written down (Gleeson and Guynn 2016). Thus, to a degree that is even more true than with other crisis interventions, a clear and complete framework providing policymakers with the necessary legal authorities to accomplish resolution is essential.

As noted in the Introduction, in May 2014, the EU adopted the BRRD to provide a common set of rules for resolution among member states. This common set of rules sits alongside existing national laws providing for “normal insolvency proceedings.” (European Parliament and Council of the European Union 2014, 197). Under the BRRD, such normal insolvency proceedings remain the default approach to dealing with failed institutions, with resolution per the BRRD considered only when it is in the public interest to deviate from this default approach, as discussed in Key Design Decision No. 1, Purpose.

Although member states had until December 31, 2014, to transpose the Directive into their national law and until January 1, 2016, before bail-in requirements had to become effective, the transition from a pre-BRRD framework to a post-BRRD framework was even more gradual. Still, some member states had already adopted certain elements of the BRRD (including loss absorption requirements) even before its enactment. This change resulted from best practices, the ongoing negotiations over the BRRD, and EU State Aid rules (World Bank Group 2016a). The case studies reviewed thus represent a mix of resolutions undertaken at various stages in the BRRD’s implementation and resolutions undertaken outside the BRRD (whether because in non-EU countries or in EU countries before any BRRD implementation had taken place). Figure 2 summarizes the legislation authorities relied on in the case reviewed—whether existing or new and whether adopted pursuant to the BRRD or not.

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12 These common rules represent a “minimum harmonised set of resolution tools and powers.” (European Parliament and Council of the European Union 2014, 197). As the word “minimum” suggests, under the BRRD, member states have the ability to adopt additional tools and powers at the national level, provided that such additional tools and powers are consistent with the principles and objectives of the BRRD and other EU legal requirements. The degree to which individual countries have gone past the minimum requirements of the BRRD is beyond the scope of this paper (World Bank Group 2016b).
Discussion of how legal frameworks influenced the design of specific elements of resolution in the case studies reviewed is included across the various Key Design Decisions analyzed in this paper. The discussion in this Key Design Decision focuses on case studies in which the legal framework proved inadequate. An inadequate legal framework lacking powers necessary for effective resolution can require hurried amendments to provide missing powers or result in delays and changes to the design of an intervention. Cyprus, for example,
had to pass a new resolution law on an urgent basis in March 2013 to provide authorities with the ability to resolve Laiki Bank.

In several of our cases, authorities lacked the ability to impose losses on stakeholders, tying their hands in the resolution process. In Belgium, authorities lacked the necessary authority to override shareholder rights, necessitating costly and time-consuming negotiations with shareholders before the restructuring could proceed. In the cases of SNS Reaal and BES, the fact that the BRRD had not yet been adopted left Dutch and Portuguese authorities without an explicit legal basis for such powers as the ability to impose losses on creditors. In Denmark, the absence of a legal and organizational framework for orderly resolution resulted in authorities’ needing to rely on existing legislation to resolve Roskilde while concurrently undergoing financial sector reform.

4. Administration: Who was responsible for administering the resolution?

One of the lessons of the GFC is that existing entities—bank supervisors, central banks, and ministries of finance—weren’t necessarily best positioned to handle failed institutions (World Bank Group 2016b). When the objectives associated with resolution are layered on top of these entities’ other mandates, the possibility for conflicts of interest arise. For instance, a bank regulator may not want to initiate proceedings that would call into question the effectiveness of its supervisory function. In various cases, the government, or specifically ministry of finance, sought to delay resolution due to short-term political considerations (World Bank Group 2016b). For example, in the Cyprus case, both the government and the Eurogroup, which was considering official support for the country, sought to delay agreement on the resolution of their banking crisis for several months, until after a scheduled election.

Key Attribute 2.5 calls for the designation of a resolution authority with operational independence (yet still subject to transparency and accountability mechanisms). Under Article 3 of the BRRD, member states are required to designate a resolution authority that can include the central bank, the ministry of finance, or (exceptionally) bank supervisors, provided that adequate structural arrangements must be in place to ensure operational independence and avoid conflicts of interest. In the eurozone, the Single Resolution Board (SRB) acts as the central resolution authority. Globally, resolution powers for deposit insurers have also significantly increased, with the role played by the FDIC in the United States a model (Defina 2021).

Even where the resolution authority is not housed within the central bank, ministry of finance, supervisory authority, or deposit insurer, these entities have a role to play in resolution. As noted in Key Design Decision No. 1, Purpose, the supervisory authority is generally responsible for the FOLTF determination that triggers resolution. The central bank and ministry of finance may be needed to provide additional assistance as described in Key Design Decision No. 2, Part of Package.
5. Governance: How was the authority responsible for administering the resolution governed and what mechanisms existed for holding it accountable?

As noted in Key Design Decision No. 4, Administration, the Key Attributes provide for a balance between a designated resolution authority with operational independence on the one hand and mechanisms to ensure that this resolution authority is accountable for its decisions on the other. Ex post reviews of resolution decisions and their implementation were one common approach to promoting accountability in the cases reviewed. Such reviews often occurred at the behest of the legislature. Once again, the US is something of a model, with the Federal Deposit Insurance Act requiring a review any time the Deposit Insurance Fund incurs a loss of USD 50 million or more (FDIC 2018, 38[k]). That said, if the legislature (or other body mandating the review) is not committed to undertaking a sufficiently comprehensive review, the results can give a false impression of accountability. In Latvia, the commission tasked by parliament with investigating the resolution of Parex ultimately issued an incomplete report after parliament declined to extend the length of the investigation. If not handled appropriately, reviews can also raise questions of independence, objectivity, and political motivations. In Cyprus, a report by the central bank in the immediate aftermath of the resolution of Laiki Bank absolved the central bank’s leadership of wrongdoing. At around the same time, Cyprus’s president launched his own investigation after being critical of the central bank.

6. Communication and Disclosure: What did authorities communicate about the need for resolution and how it would unfold?

The fundamental goal of resolution is to promote credibility and confidence in the banking system. A resolution may result in the closure, sale, or reopening of the failed institution, or the sale of its assets to a bridge bank on the way to one of those outcomes. But whatever path the authorities take, insured depositors of the failed institution must have confidence that their claims will be protected. Throughout the process, the institution must be able to perform its essential functions for the economy. And if the authorities do impose losses on some creditors, they must do so in a way that doesn’t erode the confidence of participants in the broader financial system. Given the role communication can play in either bolstering or undermining credibility and confidence, effective communication is essential in the resolution context. Oftentimes, effective communication will require balancing the objectives of credibility and confidence. Leaning too far in either direction may cause problems, as when Hungarian authorities insisted that the resolution of MKB was being undertaken to improve profitability despite clear evidence of insolvency, thereby potentially jeopardizing their credibility. Similarly, Portuguese authorities suggested that BES was being split into a good bank and a bad bank at no risk to the taxpayer. Continued losses at the so-called good bank and the decision to transfer some senior debt holders back to the “bad” bank (as discussed in more detail in Key Design Decision No. 9, Treatment of Creditors and Equity Holders) resulted in criticism from the European Commission and ultimately undermined authorities’ credibility. Opposition politicians also accused Portuguese policymakers of misrepresenting Portugal’s potential exposure under a capital backstop provided in connection with the sale of the “good” bank, resulting in the issuance of a clarifying statement.
Even within robust resolution frameworks, significant discretion is inherent in the process. Providing transparency into the decision-making involved in the use of this discretion can provide greater clarity for market participants about how similar situations might be handled in the future. A lack of such clarity has the potential to undermine confidence. This is especially true when it comes to issues such as the creditor hierarchy. If policymakers’ communications leave market participants uncertain as to the treatment of their assets, panic may grip the institution and spread to the broader financial system. In Cyprus, for example, rumors of potential depositor haircuts and a failed legislative bill to impose such haircuts resulted in further runs on an already struggling Laiki Bank. A lack of communication and disclosure may also hinder accountability. This circumstance can be a particular challenge in the case of vehicles used to wind down the remaining assets of a failed institution over a period of many years. Limited disclosure around the assets transferred to wind down vehicles and their ultimate disposition occurred in several countries, including Cyprus, Hungary, and Portugal.

7. **Source and Size of Funding: How was the resolution funded?**

Although the new resolution regimes adopted in the wake of the GFC are intended to provide policymakers with a third option beyond chaotic insolvency and taxpayer-funded bailouts, resolution has often required a commitment of significant official funds. Determining where those funds will come from is thus an essential consideration in any resolution.

The objective of an effective resolution regime as defined by the Key Attributes is to “make feasible the resolution of financial institutions without severe systemic disruption and without exposing taxpayers to loss” [emphasis added]. Key Attribute 6.2 provides that any funding extended by the authorities to accomplish orderly resolution should be temporary in nature, with losses covered by equity holders and unsecured creditors or, if necessary, the broader financial system. Under Key Attribute 6.3, broader funding can be accomplished ex ante, via a privately financed deposit insurance or resolution fund, or ex post, via a funding mechanism with recovery from the financial sector. Article 103 of the BRRD requires member states to establish a national resolution fund with the ability to raise ex ante contributions from banks based on their size and risk profile. These funds are to meet a minimum funding threshold of 1% of insured deposits by December 31, 2024. If the proceeds of ex ante contributions are insufficient to cover losses resulting from resolution funding, the national resolution funds must require extraordinary ex post contributions from banks to make up the difference. Although distinct from national deposit insurance funds, national resolution funds may use the same administrative structure per Article 100 of the BRRD.

In the eurozone, the requirement to establish a national resolution fund is satisfied by the Single Resolution Mechanism (SRM) and its Single Resolution Fund (SRF). The SRF set a funding target of 1% of covered deposits to be reached by December 31, 2023. In July 2023, the SRF announced that it would reach this target by year’s end, with a balance of more than EUR 77 billion (SRB 2023).

Adequate ex ante funding can be a challenge early in the life of a resolution fund, before it has been able to build up its balance. In the Italy case, for example, the resolution fund had
to rely on market-rate borrowings from three major Italian banks to meet its needs in connection with the resolution of four banks in 2015. The resolution fund then repaid these borrowings using both ordinary contributions and extraordinary ex post contributions, a process that was not complete until 2021.

In addition to having potential administrative roles in resolution as described in Key Design Decision No. 4, Administration, deposit insurance systems also provide a potential source of resolution funding. If instead of being used to reimburse depositors once losses have already occurred, the same funds could be deployed earlier to minimize the extent of the losses, deposit insurance systems should be able to expend funds in this way. This approach is consistent with, the International Association of Deposit Insurers’ Core Principles for Effective Deposit Insurance Systems (the Core Principles), which provide that the contribution of deposit insurance funds to resolution be “restricted to the costs the deposit insurer would otherwise have incurred in a payout of insured depositors in a liquidation net of expected recoveries” (IADI 2014).

In addition to minimizing losses, the proactive use of deposit insurance may also promote other objectives such as providing depositors continued access to their money. In the case of Dunfermline, for example, UK authorities allowed the use of the Financial Services Compensation Scheme (FSCS) to facilitate a sale of business to a purchaser, thereby ensuring immediate access to deposits as compared with a potentially drawn-out reimbursement process. Under this approach, the UK Treasury made a GBP 1.6 billion payment to the purchaser representing the difference in the assets and liabilities it would take on. The FSCS in turn agreed to reimburse the UK Treasury for any amounts not recovered from the liquidation of the remaining business (subject to a cap equal to the amount the FSCS would have had to pay to insured depositors in liquidation net of recoveries).

Consistent with the Core Principles, Article 109 of the BRRD limits the amount that a deposit insurance system can contribute to a resolution to the amount that it would have had to pay out to insured depositors under a normal insolvency proceeding. However, because insured deposits receive priority in normal insolvency proceedings under the BRRD and are thus unlikely to sustain losses, as a practical matter, deposit insurance systems typically would not be a viable source of resolution funding under the BRRD (Gleeson and Guynn 2016). One exception among the case studies reviewed is JAK, where losses were significant enough to affect insured deposits, requiring a contribution from the deposit insurance fund.

Roskilde presents a unique approach among the cases reviewed, with a private sector banking group collaborating with the central bank on the resolution and providing a source of funds.

In four of the cases we reviewed, the International Monetary Fund or other international bodies provided significant financial support to the sovereign. However, in Cyprus, the funds were explicitly not to be used directly to support bank resolution.
8. Approach to Resolution and Restructuring: What tools were used to accomplish the resolution?

Given the wide range of financial institutions, no one approach to resolution will be appropriate in all situations. Rather, policymakers should have at their disposal a suite of tools to be combined as needed based on the particular case. As will be discussed, this analysis is highly context dependent.

The primary tools to be used for resolution are summarized in Figure 3. Chapter IV of the BRRD establishes and defines these tools.

**Figure 3: Resolution Tools**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale of Business</td>
<td>Transfer of shares, assets, or liabilities to a purchaser or purchasers</td>
</tr>
<tr>
<td>Bridge Institution</td>
<td>Transfer of shares, assets, or liabilities to a temporary institution wholly or partially owned by public authorities</td>
</tr>
<tr>
<td>Asset Separation</td>
<td>Transfer of assets or liabilities to an asset management vehicle (or “bad bank”) wholly or partially owned by public authorities</td>
</tr>
<tr>
<td>Bail-in/Write-down</td>
<td>Reduction in the principal amount of liabilities/capital instruments or conversion into equity</td>
</tr>
</tbody>
</table>

*Source: BRRD Chapter IV.*

In this paper, we group “bail-in” and “write-down” into the same category as each involves a reduction in principal or conversion into equity, but it is important to note that under the BRRD, they are separate powers with key differences. A full discussion of these differences is beyond the scope of this paper, but in brief, write-down can also occur outside of resolution (and indeed, under Article 59[3], must occur once an institution reaches the point of nonviability) and is specific to capital instruments, whereas bail-in occurs in resolution and can be applied to liabilities generally. Thus, under the BRRD, write-down can be used as a recovery tool before resolution. This differs from the Key Attributes, which focus on the use of bail-in as a resolution tool.

As shown in Figure 4, authorities typically use these tools in combination. One tool can also sometimes be used to accomplish the outcome typically associated with another tool. For example, if a given liability cannot be bailed in or written down (for example, because the legal framework and instruments’ terms do not allow for it), the use of other tools to transfer assets out of the institution while leaving the liability behind can result in the liability being bailed in (that is, there being nothing remaining in the institution to satisfy the liability). For example, in the case study of the four Italian banks, of approximately EUR 800 million in total subordinated debt, only about EUR 500 million was eligible to be written down directly pursuant to Article 59 of the BRRD. To impose losses on the remaining EUR 300 million, authorities left it behind in the residual entities for liquidation. Similarly, Iceland split three
failed banks into new banks, with performing domestic assets and domestic deposits, and the old legacy bank, whose liabilities vastly exceeded the value of assets. The banks’ original equity and subordinated debt holders were wiped out, while legacy senior creditors ultimately lost about three-quarters of their investment as the legacy banks sold assets at a loss.

**Figure 4: Approach to Resolution**

<table>
<thead>
<tr>
<th>Short-form Case Name</th>
<th>Sale of Business</th>
<th>Bridge Bank</th>
<th>Asset Separation</th>
<th>Bail-in or Write-down</th>
<th>Debt Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria, Heta</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Senior debt, Subordinated debt</td>
</tr>
<tr>
<td>Belgium, France, Luxembourg, Dexia</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium, Fortis</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyprus, Laiki</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Uninsured depositors, Senior debt, Junior debt</td>
</tr>
<tr>
<td>Denmark, JAK</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Uninsured depositors, Senior debt, Subordinated debt</td>
</tr>
<tr>
<td>Denmark, Roskilde</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Subordinated debt</td>
</tr>
<tr>
<td>Greece, ATE</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>Senior debt, Junior debt</td>
</tr>
<tr>
<td>Greece, Piraeus</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>Senior debt, Junior debt</td>
</tr>
<tr>
<td>Hungary, MKB</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iceland, Landsbanki</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Subordinated debt</td>
</tr>
<tr>
<td>Italy, Four Banks</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Junior debt</td>
</tr>
<tr>
<td>Latvia, Parex</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Subordinated debt</td>
</tr>
<tr>
<td>Luxembourg, Kaupthing</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands, SNS Reaal</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Junior debt</td>
</tr>
<tr>
<td>Portugal, BES</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Senior debt, Subordinated debt</td>
</tr>
<tr>
<td>Spain, Popular</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>AT1, Tier 2 debt</td>
</tr>
<tr>
<td>Spain, Bankia</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Junior debt</td>
</tr>
<tr>
<td>Switzerland, UBS</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>UK, Dunfermline</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Subordinated debt</td>
</tr>
</tbody>
</table>

*Source: Authors’ compilation.*

The specific tools that are appropriate for a given resolution are highly dependent on the institution and the extent of its difficulties. As outlined in Key Design Decision No. 1, Purpose, a valuation of the institution is necessary to inform the approach to be taken. For instance, whether the use of bail-in or write-down is itself sufficient to recapitalize a failed institution depends on whether the institution has enough bail-in-able debt relative to the size of its losses. Finding this balance may be particularly difficult to achieve in economies where
banks are heavily dependent on deposits and capital markets are not sufficiently developed for the issuance of bail-in-able debt (Richards 2020). As discussed in Key Design Decision No. 9, Treatment of Creditors and Equity Holders, who holds this debt also matters. It is important to note that among the case studies reviewed, the use of bail-in or write-down was relatively concentrated among institutions in what may have been a “sweet spot”—large enough to issue bail-in-able debt, not so large that creditor bail-ins or write-downs would threaten financial stability.

The approach to resolution is also dependent on the broader context of the financial system. For example, the use of the sale of business tool requires the existence of viable buyers. So too does the bridge institution tool when used in anticipation of an eventual sale (which is typically done to provide a longer time frame in which to market the failed institution to buyers and to give them an opportunity to conduct diligence). Authorities were able to resolve Banco Popular overnight with no direct cost because of Santander’s willingness and ability to purchase it. In a financial system with no viable buyers, the sale of business tool becomes unworkable—either no sale will occur (as was the case, for example, with JAK and BES) or, perhaps even worse, the sale may take place to a buyer that is itself troubled (as was the case, for example, with the sale of Laiki Bank’s businesses to Bank of Cyprus and Piraeus and the sale of ATE to Piraeus). Among the case studies reviewed, it is interesting to note the significant role of private equity firms as purchasers in systems that may have lacked domestic institutions capable of acquiring resolved banks.

Conditions in the broader financial system can also drive the use of the asset separation tool. Whereas bridge institutions are intended to be short term (under the BRRD, allowed to exist for no more than two years), asset management vehicles typically allow for a longer time frame. This longer horizon may be important in a situation in which rapid asset sales could further destabilize markets or result in lower recoveries than would otherwise be possible. Asset separation also offers greater flexibility to authorities because asset management vehicles typically don’t require banking licenses or minimum capital levels given that they exist solely to dispose of assets.

9. Treatment of Creditors and Equity Holders: How were the claims of creditors and equity holders treated during the resolution?

A major question any time an institution is facing failure is how the institution’s losses will be absorbed and thus what will happen to the claims of its creditors and equity holders. One of the chief motivations behind post-GFC resolution regimes such as the BRRD was the desire for stakeholders in a failed institution—rather than taxpayers—to bear the losses associated with that failure. Under the BRRD, government recapitalization and temporary public ownership tools may be used only after shareholders and creditors bear losses equivalent to 8% of the bank’s total liabilities.

As discussed in the Introduction, a fundamental difference between financial firms and nonfinancial companies when it comes to insolvency involves the nature of their creditors. Nonfinancial companies have both commercial and financial creditors. Traditional insolvency proceedings can enable an insolvent nonfinancial company to continue operating
by allowing payments to commercial creditors while delaying payment to financial creditors. Given the nature of financial firms, there is no such distinction between commercial and financial creditors, and thus no ability to keep firms in operation during a traditional insolvency proceeding.

One function of resolution regimes is to divide the financial liabilities of a firm into two categories: operating liabilities such as deposits and capital structure liabilities such as subordinated debt (Gleeson and Guynn 2016). Resolution regimes generally seek to protect the former type of liabilities because of their nature (for example, because authorities typically want to safeguard depositors from loss) and because losses on those types of liabilities could destabilize the system (say, because depositor losses may result in a broader run on the financial system). The latter type of liabilities includes those intended to absorb losses through bail-in or write-down if a firm becomes troubled.

Problems can arise when the demarcation between these categories becomes blurred or cannot be adhered to. In Italy, a significant amount of bail-in-able debt was held by retail investors, which made authorities reluctant to trigger bail-in.13 In Austria, the existence of a state guarantee on debt subject to bail-in complicated the resolution of Heta and ultimately imposed significant public costs despite the bail-in.14 Bail-in can also be more difficult if bail-in-able debt is held by other financial market participants in amounts that make it a vector for contagion. An additional potential source of contagion may occur if the holders of liabilities thought to be in the protected category face losses. In Cyprus, the bail-in of depositors at Laiki Bank and Bank of Cyprus undermined confidence in the broader banking system and caused some depositors to default on their own obligations, resulting in new nonperforming loans. The treatment of Credit Suisse’s additional Tier 1 (AT1) bondholders as junior to equity holders resulted in a freezing up of the market for such instruments (although it now seems to have rebounded) (Vossos, Ramnarayan, and Gutscher 2023). In the pre-BRRD case of SNS Reaal, authorities had the ability to bail-in senior debt holders but decided not to, citing contagion risk and the heavy reliance of Dutch banks on unsecured funding markets. Bail-in can also create a challenge when aggrieved former creditors become involuntary equity holders, as was the case with the Bank of Cyprus.

The valuation process described in Key Design Decision No. 1, Purpose, drives the initial treatment of creditors and equity holders during resolution. Given the uncertainty inherent in these valuations, an important consideration in determining the treatment of creditors and equity holders is the mechanism by which adjustments are made for the differences that emerge between estimated valuations and the actual economic outcomes that are achieved as a resolution unfolds. If creditors suffer losses based on an estimation of the value of an institution’s assets that turns out to be too low, the BRRD seeks to establish a mechanism for compensating them when the assets are ultimately worth more than expected. This is especially true in government recapitalizations, when valuations are conservative by their nature given the need for the entity to emerge from resolution solvent and credible. In the

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13 Italian authorities bailed-in retail investors but ultimately set up a fund to compensate them for their losses.

14 Although the BRRD itself does not provide for the bailing in of liabilities secured by third-party collateral such as a state guarantee, the legislation transposing the BRRD into Austrian law did allow for this outcome.
case studies reviewed, any adjustments were almost always in favor of creditors. (An exception being BES, where certain senior bonds had to be transferred from the bridge bank back to BES, where they would suffer unexpected losses, triggering litigation and creating uncertainty among senior bond holders about the different treatment of creditors at the same level of the creditor hierarchy). In addition to providing equity in new entities pursuant to bail-in or write-down, authorities used a variety of other mechanisms to accomplish these adjustments, including earn-out provisions (Roskilde), contingent bonds (Iceland), and write-backs (Heta).

One key consideration regarding the treatment of creditors is the requirement contained in many resolution regimes, consistent with Key Attribute 5.2 and with the BRRD, that they be left no worse off under resolution than they would have been in a traditional insolvency proceeding. This “no creditor worse off than in liquidation” (NCWOL) principle is set forth in Article 73 and is evaluated using Valuation 3 as described in Key Design Decision No. 1, Purpose. An assumption of resolution regimes is that they will generally result in less loss of value; and thus, the “no creditor worse off” principle will not typically be in danger of being violated, partly because models assume that the process of selling assets in liquidation would deflate their value. This was true in the case studies reviewed, with the exception of JAK, where a small number of creditors received NCWOL compensation.

The treatment of creditors and equity holders in resolution can also depend on whether and how a jurisdiction has adopted a system of depositor preference. Under such systems, depositors received priority over other unsecured senior creditors in insolvency proceedings, either in unlimited amounts or up to the level of deposit insurance coverage. On the one hand, depositor preference can facilitate resolution by enabling the transfer of all deposits out of a failed institution without violating the NCWOL principle because such deposits would have received priority anyway (Gleeson and Guynn 2016). On the other hand, knowing that they will rank behind depositors in the event of insolvency could cause other senior unsecured creditors to run, reducing the pool of creditors that can absorb losses (Clifford Chance LLP 2023). As noted in Key Design Decision No. 7, Source and Size of Funding, it may also limit the ability of a deposit insurance fund to contribute to resolutions because such contributions typically cannot exceed what the fund would have expended in liquidation, an amount that depositor preference reduces or eliminates altogether.

Finally, it is important to note that one of the potential outcomes of a credible resolution regime is that by creating clarity about the losses to which creditors and equity holders may be exposed, the regime incentivizes stakeholders to agree to solutions before an institution enters resolution. Knowing what will happen to their claims in resolution, creditors may agree to a voluntary writing down of their holdings through “liability management exercises.” This happened in the case of Piraeus, where creditors faced with the prospect of a total loss via bail-in agreed to exchange their debt for shares worth 100% of par (for Tier 2 and senior notes) or 50% of par (for Tier 1 notes). Such “consensual bail-ins” may have advantages including the ability for them to unfold on a less urgent time frame and the reduced likelihood of legal challenge (World Bank Group 2016a).
10. Treatment of Clients: How were the institution’s clients treated during the resolution?

Authorities must also consider the effects of a resolution on an institution’s clients. Entering a resolution proceeding could result in contractual accelerations or the exercise of early termination rights that allow counterparties to demand immediate repayment, which can further stress the institution. The triggering of such rights in normal insolvency proceedings can be one of the chief reasons why such proceedings are a poor fit for financial institutions, as when the Lehman Brothers bankruptcy resulted in widespread terminations by derivatives counterparties. These terminations cost the bankruptcy estate an estimated USD 30 billion to USD 75 billion and helped spread contagion (Wiggins and Metrick 2019a). Among the case studies reviewed, Roskilde’s transfer of senior liabilities to a bridge institution resulted in creditors’ exercising acceleration rights and demanding the return of their funds. This development required the Danish central bank to provide almost USD 8 billion in credit facility support to fund redemptions.

The Key Attributes include mechanisms to help authorities avoid such scenarios. Key Attributes 4.2 and 4.3 provide that entry into resolution should not constitute an event that triggers acceleration or early termination and that if it nonetheless does, resolution authorities should have the ability to temporarily stay such rights (FSB 2014). New resolution regimes have incorporated these attributes. For example, Article 71 of the BRRD requires member states to provide their resolution authorities with the power to temporarily suspend termination rights.

11. Treatment of Assets: How were the institution’s assets treated during the resolution?

Even for an institution that finds itself on the brink of failure, not all its assets are problematic. Thus, a common theme in the resolution context is the need to separate good assets from troubled assets and to come up with a strategy for dealing with the latter. Among the cases studied for this paper, about half involved so-called good bank/bad bank resolutions. Typically, assets identified as good are transferred from the existing entity directly to a purchaser (via a sale of business tool) or to a bridge institution for eventual sale (via a bridge institution tool). The existing entity retains the troubled assets and is placed into normal insolvency proceedings. In some cases, a new entity may be established to take on those troubled assets (via an asset separation tool). This option allows for the pooling of troubled assets from multiple failed institutions, as was the case in Italy.

One notable exception to this approach to transferring assets was Iceland, where the division of assets was based not solely on good versus bad but also on domestic versus foreign. Following the failure of Iceland’s three largest banks, authorities established new entities to take on their domestic performing assets and domestic insured deposits. Foreign assets and foreign deposits, together with nonperforming domestic assets and uninsured domestic deposits, remained with the failed entities, which were then wound down. This strategy allowed for the continuation of Iceland’s domestic banking business, with the help of government capital injections, separate from its foreign operations, which had become too
large relative to the size of Iceland’s economy for the state to rescue. This distinction between domestic and foreign was highly controversial and resulted in years of legal challenges but, given the magnitude of the challenge posed by the foreign operations, it is not clear that Iceland had other options.

A full treatment of the challenges associated with managing troubled assets is beyond the scope of this paper. (For some discussion on this topic, see McNamara et al. [2021]). However, it is important to note that such challenges can hinder the ability to bring a resolution to a successful conclusion in a timely fashion. In an attempt to avoid this issue and dispose of assets quickly, Roskilde attracted loan purchasers by providing them with a window during which to return any loans the purchasers ultimately did not want. More than 50% of purchased loans were ultimately returned, prolonging the resolution. The body tasked with disposing of troubled assets can also itself become troubled, as was the case with Heta, the asset management vehicle established to facilitate the resolution of Hypo Alpe Adria.

The mechanisms available for transferring assets can present challenges. During the resolution of Dunfermline, property transfer orders used to move assets and liabilities could be amended only via legislation. This constraint added complexity to the resolution. Given the haste often associated with resolution and the possibility that subsequent due diligence will reveal the need for adjustments to initial transfers, a system that relies on contracts that can be more easily amended to transfer assets and liabilities may reduce complexity. The nature of the assets themselves can also create difficulties. Before its resolution, Dunfermline had entered into several swap contracts, subject to netting arrangements, to hedge parts of its business. These netting arrangements required that swaps be kept together even when the underlying assets and liabilities being hedged were separated.

12. Treatment of Board and Management: How were the institution’s board and management treated during resolution?

A fundamental premise underlying post-GFC resolution regimes is that the consequences of an institution’s failures should be borne first and foremost by its own stakeholders. In that vein, the very first power included in Key Attribute 3.2’s list of general resolution powers is the ability to remove and replace an institution’s senior management and directors and to recover funds, including via clawback of incentive compensation. This authority is followed by the ability to appoint an administrator to take control of and manage the institution. Article 61(l) of the BRRD requires member states to provide resolution authorities with the power to remove or replace the management body and senior management of an institution in resolution, but the BRRD does not specifically require the power to recover funds (Coleman, Georgosouli, and Rice 2018). In several of the cases studied, including Heta and BES, authorities charged former members of the board and/or management with crimes associated with the failure of their institutions, typically for fraud contributing to the collapses.
13. Cross-border Cooperation: Did other countries participate in the resolution and if so, how?

The challenges associated with handling the failure of a financial institution operating across multiple national borders were one of the primary motivations behind the new resolution regimes adopted by policymakers post-GFC. In Europe before the introduction of the BRRD, the rescue of failed multinational financial institutions was often a source of significant conflict among different national authorities. In the case of Fortis, an initial agreement among authorities from the Netherlands, Belgium, and Luxembourg fell apart after the Dutch unilaterally nationalized Fortis’s Dutch assets, highlighting the threat that incomplete information sharing and differing priorities and assessments can pose to multilateral resolution. Critics have argued that strategic differences also marred the rescue of Dexia by Belgium and France, with Belgium focused more on domestic financial stability and France on maintaining a key source of municipal finance (with both seeking to minimize the costs to their respective countries).

As described in more detail in Key Design Decision No. 11, Treatment of Assets, Iceland’s rescue of its banking system involved favoring domestic creditors over foreign ones (although, as noted, the magnitude of the challenge foreign operations posed may have left Iceland with no other options). Similar allegations of differing treatment between domestic and foreign creditors arose during the resolution of BES, as did operational difficulties stemming from the treatment of assets and subsidiaries located in different countries that might not have recognized Portugal’s resolution decisions.

The Key Attributes contain an entire section devoted to the legal framework for cross-border resolution. This section calls for countries to create statutory mandates that empower and strongly encourage resolution authorities to cooperate with their foreign counterparts. It also calls for countries to avoid provisions that trigger automatic action upon the initiation of resolution or insolvency proceedings in other jurisdictions and to treat foreign creditors the same as domestic creditors. In the European context, Title V of the BRRD implements the cross-border Key Attributes across the European Union. For eurozone countries, the Single Resolution Mechanism established the SRB in 2015 as the central resolution authority, further facilitating cross-border resolution.

Many of the post-BRRD/post-SRM case studies reviewed involved institutions with little to no global footprint. However, the sale of Banco Popular to Santander in 2017 represented the first resolution undertaken by the SRB. Based in Spain, Banco Popular also had a subsidiary in Portugal that accounted for a significant share of Portugal’s SME lending, which the SRB took into account when deciding to resolve Popular by selling its business to Santander. Although the Banco Popular resolution is widely seen as having been a success, it did lead the European Central Bank (ECB) to propose clarifications in the ECB framework. In June 2019, the European Parliament adopted an updated BRRD II that clarified, among other things, the role of cross-border resolution colleges.
14. Other Conditions: Did the resolution require the institution to limit its activities moving forward in any way?

Crisis interventions are frequently accompanied by restrictions on what recipient institutions can do while those interventions are pending. Motivations include protecting taxpayer funds, restricting the activities that got the institutions into trouble in the first place, and preventing institutions under government control from gaining an unfair competitive advantage. Depending on the nature of a given resolution, authorities may not perceive restrictions as necessary to achieve any of these outcomes. For example, in a resolution such as that of Banco Popular where the failed institution was immediately absorbed by another bank with no direct cost to the state, it is not clear what purpose restrictions would serve. Indeed, placing ongoing restrictions on a failed institution after its acquisition may discourage buyers from undertaking the purchase in the first place. Conversely, where a bridge institution continues to operate in anticipation of an eventual sale, restrictions may be imposed, as was the case in Italy, where authorities restricted the bridge banks’ activities, compensation, acquisitions, and advertising. And in cases where wind-down vehicles remain to be liquidated, it is typical for such vehicles to be restricted to only those activities necessary for the wind-down.

15. Duration: How long did the resolution last and was this consistent with any initial timeline proposed by authorities?

Given that the approach to a resolution can vary widely based on the institution and context, as described in Key Design Decision No. 8, Approach to Resolution and Restructuring, the duration can also be quite different, as reflected in Figure 5. Authorities were able to resolve Banco Popular in one day by selling it to Santander. Where viable buyers failed to materialize, as in the cases of JAK and BES, resolution may take longer than anticipated. In cases where an asset management vehicle has been used to deal with troubled assets, resolutions can be ongoing years later (as was the case, for example, in Italy, where the disposition of bridge banks took place in 2017 but the asset management vehicles took until 2023 to dispose of bad loans). Among the case studies reviewed, the UBS restructuring is noteworthy for having concluded a year before its scheduled end date.
The establishment of preexisting resolution plans may assist in the timely completion of resolution. This eventuality is not necessarily because the resolution will strictly adhere to the preexisting plan (Banco Popular had a preexisting plan, but authorities deviated from it in resolving the bank). Rather, the act of planning prepares institutions and authorities for more efficient resolutions by requiring them to become familiar with considerations such as institutions’ complex corporate structures. The planning process may even encourage
institutions to streamline that complexity, with Key Attribute 11.6 calling for institutions to include in their resolution plans the identification of barriers to resolution and steps for mitigating those barriers (Armour 2014).

**Conclusion**

This paper surveys 15 Key Design Decisions for 19 resolution case studies. A comparison of these case studies highlights several important themes for policymakers to consider in resolving and restructuring a financial institution.

**Resolution must eliminate uncertainty about an institution’s solvency.** Uncertainty about institutions’ solvency is at the root of the failure of financial firms. Long before institutions become clearly insolvent, market uncertainty about solvency can cause counterparties to run. This disruption can result in acute liquidity crises that further erode capital. As the collapse of Credit Suisse illustrates, compliance with capital requirements is a necessary but not sufficient condition for maintaining confidence in a bank, with Credit Suisse’s capital ratios exceeding regulatory requirements leading up to its demise (CS 2023; SNB 2023).

A resolution may result in the closure, sale, or reopening of the failed institution, or the sale of its assets to a bridge bank. But whatever path the authorities take, for a resolution to be considered successful, any going-concern entities that result must be not only solvent but sufficiently well-capitalized to eliminate any uncertainty among financial market participants. Otherwise, the problems that resulted in the original failure of the institution may produce a similar outcome for the surviving entity, prolonging and exacerbating the situation. This consideration points to the frequent need for resolution to be paired with other interventions such as recapitalization, despite efforts to avoid taxpayers in rescuing financial institutions.

**Ensuring that resolution achieves this result requires effective valuation.** As noted previously, we can’t fill a hole without some sense of how big the hole is. This requires authorities to value an institution’s assets and liabilities. Given the time constraints and distressed market conditions often associated with resolution, such valuations will necessarily be subject to revision. A typical approach consistent with the need for post-resolution entities to be solvent and credible seems to be to take a conservative tack in valuation while building in mechanisms for compensating creditors if assets turn out to be worth more than initially estimated. Valuations are also likely to be a target for any creditor or equity holder litigation, further indicating the need for care.

**A lack of clarity around the treatment of creditors in resolution can cause an institution’s distress to spread to the broader financial system.** As discussed in Key Design Decision No. 9, Treatment of Creditors and Equity Holders, a primary function of resolution is to separate a financial institution’s liabilities into those to be protected and those that should absorb losses. Some of the biggest difficulties that can arise in this context occur when something unexpected happens in the separation of liabilities into these two...
categories—depositors who are bailed-in (Cyprus), senior debt holders who are written down (BES), retail investors who believe themselves to be protected but who have purchased instruments subject to loss (Italy), AT1 holders who believe they rank senior to equity holders (Credit Suisse). Creditors of other institutions who suddenly become worried about the possible treatment of their holdings can cause panic to spread throughout the system. Clarity and consistency in the treatment of creditors in resolution can help prevent this contagion from occurring.

**Resolution regimes that incorporate a credible bail-in tool may reduce the likelihood that they are used by creating incentives for creditors to agree to solutions outside of resolution.** In the nonfinancial world, the most typical outcome for a troubled company is that its creditors voluntarily agree to alter their rights in hopes of keeping the company alive, thereby ultimately allowing it to repay more than it would otherwise be able to (Gleeson and Guynn 2016). Where the alternative to a negotiated agreement is plausibly known to be suboptimal, incentives exist for the parties to try to do better than that alternative. Conversely, where, as during the GFC, the likely alternative is bail-out because the only other option is destabilizing bankruptcy, no such incentives exist. By creating a third option beyond bail-out and bankruptcy, resolution regimes may eventually render themselves largely unnecessary in practice by creating sufficient incentives for parties to arrive at a solution outside of a formal resolution, as was the case in UBS’s acquisition of Credit Suisse and with “consensual bail-ins” such as the Piraeus liability management exercises (FINMA 2023).
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