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Effective resolution of banks: Problems and solutions

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Günter Franke, Jan Pieter Krahnen and Thomas von Lüpke

Effective Resolution of Banks: Problems and Solutions

White Paper Series No. 19

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A cooperation of the Center for Financial Studies and Goethe University Frankfurt



Effective Resolution of Banks: Problems and Solutions¹

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Abstract

This essay reviews a cornerstone of the European Banking Union project, the resolution of systemically important banks. The focus is on the inherent conflict between a possible intervention by resolution authorities, conditional on a crisis situation, and effective prevention prior to a crisis. Moreover, the paper discusses the rules for bail-in debt and conversion rules for different layers of debt. Finally, some organizational requirements to achieve effective resolution results will be analyzed.

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1. Objectives of Resolution

The banking system is an indispensable part of the economy. Through its payment system it provides the lifeblood for the exchange of goods and services, and through its banking services, in particular deposit taking and lending to firms, households and states, it supports the buildup of production facilities and the smoothing of consumption over time. The recent Global Financial Crisis (since 2007) reminds us that financial stability needs to be protected

¹ The views expressed in this paper should solely be attributed to the authors and not to any institution, such as Goethe University, Konstanz University or FMSA (Federal Agency for Financial Market Stabilisation, Frankfurt/M.).

at all times, and that under extreme conditions there is no alternative to a state-financed bank bailout. Much of the political, monetary and regulatory effort of the past several years has been devoted to lowering the likelihood of systemic risk events. Accordingly, much effort has been devoted to setting the regulatory system up in a way that allows the crisis of any individual financial institution, should it ever occur, to remain manageable without systemic repercussions.

The double challenge of individual resolvability and collective stability has led to a comprehensive regulatory framework, the European Banking Union project. One of its main ideas is to replace the traditional (slow-mode) insolvency regime, as it is common for corporations, by a (fast-track) special resolution regime, which is custom tailored for the high speed banking business with its dependency on markets, and on the funding liquidity they provide. Fast-track resolution is supposed to stabilize the surrounding banking system, while allowing an individual, troubled financial institution to be restructured and, if needed, to be liquidated without damaging its economically sound peers.

Bank resolution does not only differ from an insolvency procedure by pace but also by objectives: While an insolvency procedure has the exclusive aim of maximizing proceeds, resolution will also aim at financial stability.

The joint achievement of systemic stability and individual resolvability is not only an intellectual challenge for rule-makers, it also requires robust policy instruments and operational strategies for those who implement these. These instruments and operational strategies should help to stabilize financial markets when insolvency of an institution is imminent. The basic idea is to allocate losses of the endangered institution to its owners and (junior) debt-holders. They should be able to bear the losses without generating contagion effects on third parties – and without any resort to taxpayers' money. Implicit subsidies for big banks through expected bail-outs should be removed so that moral hazard effects are reduced. Moreover, in a fast-track bank resolution, bank owners and debt-holders should not be worse off than in an insolvency procedure (Art. 73 BRRD). Finally, critical bank functions should not be disrupted at any time during the resolution period, while non-critical functions may be liquidated (Art. 31, 2 BRRD). Hence a clear-cut understanding of critical functions of banks is essential.

2. The difficult balance between precautionary measures and resolution actions

The recent financial crisis has demonstrated that it is difficult to avoid disruption of financial markets and to preserve their critical functions during a resolution process. The reason can be found in the strong financial ties that exist between banks, and also between banks, firms and households. A system-wide destabilization might follow from the insolvency of a single institution. Therefore, insolvency should be replaced by resolution. This might also destabilize markets. In order to avoid contagion effects, it is necessary to take precautionary measures before a crisis emerges — that is, in normal times. Detailed plans may help to smooth the resolution process, should it ever become necessary.

As always, the general principle of proportionality applies: the costs of any precautionary measures have to be compared to the private costs of alternatively taking action after the start of the resolution, and, in the worst case, the public cost of bailing banks out. Timing is a main issue with the resolution concept. When is it appropriate to take measures that trigger loss allocation and asset liquidation? One could take a naive view and wait with any decision until a troubled bank comes out with its problems, and identify the optimal response then. For example, assuming a typical bank default to emerge on a Friday after close of business, the authorities could analyze the situation without delay and select the best action, given the case-specific situation. While this naive approach has minimal ex-ante costs, the ex-post costs are likely to be significant. In particular, typically the short horizon between the proverbial Friday and the opening of markets on the following Monday does not allow to find a credible solution for the troubled business model of the endangered bank. The expectation of imminent losses, coupled with an unknown network of exposures to other financial institutions, is a fertile ground for contagion effects on other banks. The emerging threat of systemic risk, in turn, will likely force the government to intervene and to bail out the troubled bank².

The naive approach to bank resolution, which puts all the weight on the ex-post resolution, runs the risk of high private and high public bailout costs. The alternative approach, equally extreme, puts all the weight on an ex-ante crisis avoidance strategy. The latter policy could be achieved, e.g., by severely restricting bank business models such that the interconnection

² This was repeatedly the case during the Global Financial Crisis, see Dübel 2013.

among banks is greatly reduced, and mandatory capital buffers are set sufficiently high to absorb any conceivable shock to the bank's asset value. Tight oversight of bank exposures and detailed controls of bank risk taking will be instrumental in placing a bank on a short enough "leash" to rule out sudden bank crises to a sufficient degree. The extreme risk avoidance strategy is also expected to have high costs, particularly because capital allocation, financial innovation, risk sharing and liquidity provision are believed to take a high toll – all of which are considered to cause social costs as well.

Between the two extreme policies, there is a more comfortable place in the middle, a sensible balancing between precautionary activities and ex-post resolution activities. In order to emphasize the tradeoff between ex-ante and ex-post measures, our paper is structured along a time line of four phases (Figure 1): The first, green phase is called "normal phase" and refers to a period in which the bank is not endangered. The second phase – yellow – is the "recovery phase". In this phase, the bank is already in trouble, but the executive board still manages the bank and tries to restore the bank's health by some recovery measures. The last two phases are the intervention phases in which the resolution authority takes over management. The first intervention phase – light red – is the very short start phase, often over the weekend; the second intervention phase – dark red – is the longer lasting execution phase. This phase comprises all regulatory action leading to the protection of vital banking functions, and the resolution of the rest.

We will use this timeline model to discuss the existing European resolution framework and also to point out some pitfalls in section 4. Before that, we will outline the basic structure of the BRRD as the main regulatory framework for bank resolution.

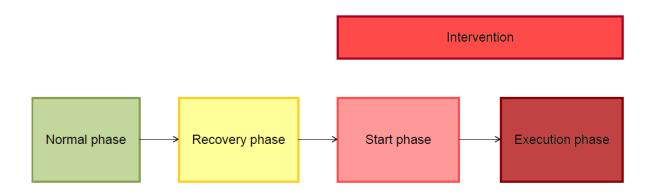


Figure 1: Timeline for prevention and intervention at troubled banks

3. Bank recovery and resolution in the European Union

Lessons learned from the recent financial crisis have initially been advanced (or rather hypothesized) by experts and staff in the administrations of major countries, and discussed on an international (FSB, BIS, G 20) level. In the EU, these interpretations formed the basis for a new architecture of supervision, recovery and resolution. The "Single Supervisory Mechanism Regulation" (SSM-R)³ creates an integrated system of supervisory authorities with the ECB as the responsible institution (with direct responsibility for large and systemically important institutions, and indirect, overruling responsibility for all other institutions) in its center. While the SSM-R is only effective for those member states that have committed themselves to the formation of the Banking Union ("Participating Member States") the conclusions concerning a common recovery and resolution regime were summarized in a directive (Bank Recovery and Resolution Directive, BRRD) which has to be transcribed and implemented by all member states. The BRRD forms a common approach to recovery and resolution by defining generally binding principles⁴ and providing a set of tools⁵ at the disposal of resolution authorities in the case of a crisis. The BRRD aligns resolution legislation across the EU; the allocation of decision powers remains to be tested once the first cases will have to be handled.⁶

As an institutional counterpart to the SSM, the EU created the "Single Resolution Mechanism" by adopting the SRM-Regulation (SRM-R)⁷. Transposing the principles of the BRRD, the SRM-R provides the institutional setup for a system of resolution authorities with a newly created Single Resolution Board (SRB) at the top.

All these rules refer to "systemically important financial institutions" (SIFIs). These rules specify the process of regulatory intervention in the case of the crisis of an individual

³ Council Regulation (EU), No 1024/2013 of October 15, 2013

⁴ Such as (1) Burden Sharing that requires shareholders and creditors to be called upon first to sustain losses and, (2) No creditor worse off ("NCWO") than under normal insolvency proceedings.

⁵ These are (1) bail-in, (2) sale of business, (3) asset separation and (4) bridge bank.

⁶ Germany's federal government has proposed draft legislation for transposing BRRD on July 9, 2014 that will replace the recovery and resolution act from August 2013 (included in "Gesetz zur Abschirmung von Risiken und zur Planung der Sanierung und Abwicklung von Kreditinstituten und Finanzgruppen"; BGBl. 2013 Teil I Nr. 47 S. 3090).

⁷ Regulation (EU) # 806/2014 of July 15, 2014

financial institution. We use the term "intervention" to refer to all potential recovery and liquidation activities of the resolution authority. Among other things, these activities determine the allocation of losses to claimholders, abiding to a pre-defined order of seniority. The taxpayer should not be involved except for bridge financing in certain cases of a viable 'good' bank where receipts from bank levies are insufficient to fill liquidity gaps, and for loss absorption subsequent to depleting a pre-defined layer of loss absorbing capital (equity and bail-in debt)⁹.

During normal times, all SIFIs are expected to prepare their institution for a potential individual solvency crisis, by considering how recovery could be possible, and how its resolvability may be ensured. Impediments to resolution are to be identified, and possibly removed¹⁰. During the recovery phase, decisions will be taken by the bank's own management board; there is no interference by the resolution authorities. Once the intervention phase sets in, the resolution authority takes over the management of the process (Art. 63, 1 BRRD).

Art. 5, 1 BRRD and also the German bank law KWG require each SIFI to draw up and maintain, in the normal phase, a recovery plan that describes measures to be taken in order to restore its financial solidity once this solidity is endangered. This plan has to cover different potential crisis scenarios (Art. 5, 6 BRRD and §§ 47, 47a KWG). Based on the recovery plan, the resolution authority has to set up, in the normal phase, a resolution plan, also for different potential crisis scenarios (Art. 10, 3 BRRD and § 47 f KWG). The resolution plan has to ensure the continuity of critical functions and to specify the potential use of the main tools of resolution (Art. 37, 3 BRRD), like bail-in, sale of business, transfer of assets and liabilities to a bridge bank and/or transfer of assets to a special purpose vehicle.

⁸ Also used in the Dutch "Intervention Act". Unofficial translation dated 11 July 2013 of the Act on Special Measures for Financial Corporations (Intervention Act; official text of the Act in Dutch language has been published in the Dutch Bulletin of Acts, Orders and Decrees (Staatsblad), number 241 on 12 June 2012. The translation of "resolution" into the German term "Abwicklung" (liquidation) is misleading since it excludes recovery activities.

⁹ Public support can be provided to a bank only if owners and debt-holders bear part of the losses. Banking Communication, 30.7.2013 (2013/C 216/01). For more details see section 4.2.

¹⁰ See Article 17 BRRD, § 47e KWG for details.

The BRRD contains many detailed rules for recovery and resolution. In the following, we focus on some of these rules which might cause problems and discuss potential ways to address these problems.

4. Potential problems of the resolution mechanism and ways to address these

4.1 Normal phase

In our discussion of operational challenges relating to the concept of banking resolution we follow the four phases on the time-line mentioned in section 2. The first phase refers to normal times, when the bank's business model performs well. In these times of stability and profitability, banks have to prepare for a possible critical situation in some undefined future. Using different scenarios, e.g. relating to interest risk, credit risk, funding liquidity risk and so on, the bank will develop suitable recovery plans. These plans are contingency plans outlining what management will do to restore solvency should the bank be in trouble one day. In addition to these plans, the bank may already take precautionary measures during normal times to reduce its vulnerability in crisis periods (e.g., a modification of its business model, diversification of funding sources etc.). With respect to a potential resolution scenario also structural changes have to be envisaged, like, for instance, a separation of the institution into two or more distinct business units. 'Distinct' can mean several things, ranging from legal and economic separation, subsidiarization or outsourcing, respectively, of certain business activities to a mere organizational contingency plan. The latter may require setting up one or more 'shadow' shell institutions that are prepared, legally, organizationally and financially, to take over some of the business activities of a troubled bank in no time.

Whether the resolution of a structural form that builds on a number of subsidiaries will be easier than that of a monolithic firm remains to be seen, on a case-by-case basis. It is, however, important to realize that some preparation for a sudden unbundling of activities seems warranted to preserve resolvability. It may even be required to allocate financial assets to such a subsidiary, sufficient to fund teams and equipment for some time¹¹. It has to

¹¹ It remains to be seen whether a competent staff can be retained in the resolution phase

be assured that the financial support of a troubled subsidiary in the recovery phase does not endanger the financial independence of other subsidiaries performing critical functions¹².

The restructuring of bank functions into separate legal entities may improve resolvability of the bank and has been recommended by the Financial Stability Board¹³. The large two Swiss banks were asked to restructure their business so as to ensure the operation of critical functions in separate business units which, – so it is hoped – can easily be ring-fenced in a crisis situation¹⁴.

Recovery and resolution (R&R) plans should be designed separately for different crisis scenarios according to BRRD when the crisis itself is, of course, unknown. One might argue that designing those plans and simulating their execution has a positive learning-through-training effect, by uncovering potential impediments to resolution. But since the simulation of a R&R is difficult, and since designing plans and simulating their execution is likely to be very costly, the number of scenarios will probably be quite limited, and very likely not cover the actual crisis scenario to be observed at some future date¹⁵. This also may help to mitigate illusions about the power of resolution planning.

4.2 Start Phase of Intervention

In this section we address four issues that need to be considered if the resolution process is to be managed successfully. These are the when-, who-, if-, and how-issues: the trigger event (when is resolution initiated?), the bail-in counterparties (who is the holder of the aggrieved claims?), possible exemptions (the *if*'s defining non-applicability of the bail-in rule) and the conversion policy (how is the bail-in carried out?). We will address these issues in turn.

¹² In the recovery phase the bank may support troubled subsidiaries in order to avoid bigger trouble for the whole bank group.

¹³ Financial Stability Board (2011).

¹⁴ See also FINMA (2013).

¹⁵ Hayek (2013) discusses human capacity to predict social interaction processes and to design effective rules for interaction. He strongly points out the limits of both and concludes that, at best, humans may be able to improve rules for social interaction in an evolutionary process by small changes in regulation. Hayek's arguments should caution regulators' optimism about predictability of crisis scenarios and the potential to effectively manage them.

a. Trigger event

The decision to apply the BRRD resolution tools is arguably the most difficult decision of all. Once initiated, there is no easy way back. Since the trigger for a resolution process will have to be declared most likely in a stress situation, possibly on a hectic weekend with little prior information available, the trade-off between type-1 and type-2 errors and their respective costs need to be considered. The costs of a type-1 error consist of the loss in economic value (to the creditors and shareholders of the troubled and potentially other financial and non-financial institutions) caused by *not* starting the resolution of the troubled bank that should have been resolved. The costs of a type-2 error, in contrast, consist of the loss in economic value caused by unnecessarily starting the resolution process while the the bank would have survived on its own without resolution. Both costs refer to the counter-factual of what would have happened if a particular decision (triggering the resolution process) would not have been taken. Such opportunity costs need to be estimated on a hypothetical basis.

The difficulty in finding the best trigger date is that there are no objective criteria for triggering. Resolution should start before a bank run with its potentially disastrous implications. In most cases, the triggering decision will still remain somewhat arbitrary.

The SRM-R allocates the triggering decision to the Single Resolution Board (SRB) in cooperation with the ECB, the European Commission and the Council (Art. 18, SRM-R, see Deutsche Bundesbank 2014). Moreover, the authorities will have to contact the bank owners and top-managers before they take a decision in order to find out whether there are no alternative recovery solutions. Given that there are various people involved, it is unlikely that this discussion can be kept confidential. This creates a danger of a self-fulfilling prophecy: The rumor that a resolution decision is being discussed at SRB level may lead to a bank run, rendering the resolution unavoidable. The confidentiality problem suggests that as few people as possible should be involved in the trigger decision.

b. Bail-in counterparties and exemptions

One purpose of the resolution mechanism is to avoid financial instability through contagion effects. The bail-in may, however, affect other institutions. Generally, in the BRRD as well as in the SRM-R there are certain groups of bail-in exemptions: in particular asset encumbrance (collateralized claims, including derivative claims) and short term claims (with maturities below one week).

Asset encumbrance describes different ways to tie the value of a claim in default to the value of an underlying asset. Encumbered assets are generally not eligible as collateral for other claims, unless the value of the encumbered asset exceeds the value of the claim ¹⁶. The more assets of a given bank are encumbered, the smaller the number of claims that can be included in a potential bail-in process. The regulator still needs to spell out whether partial collateralization of a claim will be sufficient for its exclusion from a possible bail-in. There is clearly room for all sorts of avoidance strategies here, should partial encumbrance lead to total exemption of claims from bail-in. *Financial derivatives* nowadays are mostly secured to exclude counterparty risk. Hence, they will be excluded from bail-in. This may also lead to arbitrage transactions if the security covers risk only partially. For the resolution authority it may also be very difficult to check the extent of collateralisation over the weekend.

Certain short-term liabilities with an original maturity of less than seven days are also excluded from bail-in. This may create an incentive for the use of short-term borrowing as a way to circumvent bail-ins. The implied increase in maturity transformation and the rise of funding liquidity risk may endanger financial stability even further. However, the renewed emphasis on liquidity risk in the Basle rules, exemplified by the liquidity coverage ratio defines a floor for the ability of banks to limit the use of short-term debt. But a troubled bank might refer to these liabilities as a funding of last resort.

The resolution authority needs also to check whether "exceptional circumstances" prevail which, by Art. 44, 3 BRRD or Art. 27, 5 SRM-R, respectively, may permit the resolution authority to exempt certain liabilities from the execution of the otherwise comprehensive mandatory bail-in. The legal consequence of a respective decision of the SRB is that the losses incurred by the waiver can be imposed onto the Single Resolution Fund.¹⁷

These exceptional circumstances are, inter alia, tied to "widespread contagion" which would severely disrupt the functioning of banking and financial market, and, therefore, should be labelled as an extreme macroeconomic event. The diagnosis of such a systemic

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¹⁶ The statement describes the case of securities commonly used in lending contracts (dissociation title; in German: Absonderungsrecht). In the case of a segregation title (in German: Aussonderungsrecht), however, the value of the asset may exceed the value of the claim without being eligible for encumbrance by other parties, as in the case of asset s.t. a long-term leasing arrangement,

¹⁷ See Art. 27, 6 SRM-R.

¹⁸ See Art. 27, 6c SRM-R.

exceptional circumstance is difficult, and typically imposes a difficult job on the resolution authority.

This exceptional-circumstances-driven exemption from the bail-in provides creditors an option to try to convince the resolution authority that their bail-in would destabilize financial markets. It may be almost impossible for the resolution authority to check this claim within a few hours. In order to prohibit such rent seeking attempts, it appears preferable that the resolution authority has no freedom in deciding about bail-in except for the amount of bail-in ¹⁹.

If the resolution authority does not have discretion about which debt-holders should be bailed in, then financial stability should be ensured ex ante by precautionary measures. One measure is (article 44, 2 BRRD): "to limit the extent to which other institutions hold bail-in debt". This is particularly relevant if the above institution is a financial institution, and therefore itself subject to run risk and minimum capital requirements. To enforce these limits, the relevant institutions might be constrained in their purchases of bail-in debt in both the primary and the secondary market. Alternatively, SIFIs may be subjected to high risk weights (possibly up to 1250%) should they hold shares or bail-in debt of fellow banks.

c. Conversion policy

In the start phase, the resolution authority also needs to allocate potential losses to equity-holders and creditors, according to the reverse order of priority of claims (Art. 17, SRM-R). It therefore has to estimate the value of assets and liabilities under the volatile situation of a pending crisis²⁰. A loss estimate is required to determine how much equity and debt need to be bailed in, in order to cover losses and to recapitalize the bank. Losses need to be allocated such that a credible resolution perspective is transmitted to the markets before they reopen on Monday morning. Ideally, the loss allocation which the involved counterparties expect from the resolution, motivates a private debt-to-equity exchange already in the recovery phase, replacing SRB action. The uncertainty about actual accrued losses may lead the resolution authority to bail in more rather than less debt in order to be

¹⁹ Adolff and Eschwey (2013) also argue against screening bail-in debt-holders according to their systemic importance. See also Wissenschaftlicher Beirat (2014). Binder (2013b) expresses basic concerns regarding a forced bail-in

²⁰ Shleifer and Vishny (2010) provide several examples for strong underpricing of financial assets. This may occur, in particular, if certain groups of buyers are not allowed to buy those assets in a crisis.

on the safe side. Bailed-in creditors are, however, protected by the no-creditor-worse-off principle of Article 73, BRRD.

How should claims be written down or converted into equity (Art. 21, (10) SRM-R)? The First Loss Position is held by the bank owners. Then, the next layer of losses is to be absorbed by the most junior debt-holders, the second next layer by the second junior debt-holders, and so on. The situation is similar to that in a securitization transaction where tranches are strictly subordinate to each other. As a consequence, it may look tempting to have the resolution agency structure equity warrants²¹. For the sake of simplicity, however, it may be preferable to use the exchange of debt for plain-vanilla equity included in Article 43, BRRD. Any conversion policy should seek to eliminate to a large extent opportunistic conversion by authorities, and, thus, reduce ambiguity in markets.

Finally, at the end of the start phase, the resolution authority needs to communicate to the public a business plan for the part of the bank to be continued ("good bank") which generates sufficient confidence among counterparties that they are ready to continue business with the good bank. This may be straightforward, if the good bank is taken over by a healthy bank. Otherwise it may take more time to find a viable and credible solution, especially where market counterparties consider the resolution as a first step into liquidation. In order to support the critical bank functions in this period of uncertainty, it may be necessary to provide liquidity and protection against default risk. For that purpose, a bridge bank can be established which is owned by some public institution²². This bridge bank can be supported by resolution funds (Art. 44, 4 BRRD) once equity and bail in-debt have absorbed losses of at least 8% of total assets of the failed bank (Art. 44, 5a BRRD). This support is restricted to 5 % (Art. 44, 5b BRRD). To reduce uncertainty, assets and liabilities may be transferred to an SPV ("bad bank").

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²¹ Converting all claims into standard equity might trigger litigation of senior against junior claimholders since that might violate the "no worse off" rule. In line with strict priority, a theoretical idea for issuing equity warrants might be the following. The most senior debt-holders involved in the bail-in get the highest ranking warrant, capped by the par value of their debt-claims. The second senior debt-holders get the second highest ranking warrant, capped by the par value of their debt-claims, etc. The bank owners then get the lowest ranking warrant without cap. There are still some difficulties with this conversion policy, for example, there may be conflicts of interest between warrant holders of different ranks. It will be up to EBA to advise whether such ideas will be compatible with the BRRD and there may be uncertainty as to whether warrants can be counted as equity.

²² For the benefits of a bridge bank see Rehm (2012).

In summary, we recommend that, in the start phase, the authorities will need clear and transparent rules how to initiate the resolution process. These rules should leave as little discretion as possible to the agency in order to minimize rent seeking behaviour by banks or their customers. Tying the hands of the agency in situations of extraordinary stress, and, possibly confusion, may help to stabilize the situation because agency behaviour becomes rather predictive.

4.3 Execution phase of intervention

In contrast to the start phase, over the medium term of the execution phase, a large degree of flexibility concerning how to manage the resolution process, after an initial stabilization of the troubled bank, seems warranted. With a large degree of flexibility, the resolution authority can custom tailor the restructuring to the current situation.

Such a policy of "long breath" seems to have several advantages. E.g., there is more time to collect and analyze information about the bank's failure, and there is more time to search for suitable counterparties for resolution transactions. On the other hand, a long breath-policy also has its costs:

- preferable resolution options may exist only for a short time in the start phase,
- extended uncertainty about resolution transactions might burden market participants,
- loss generating activities continue to generate losses,
- claimholders may lobby for their own interests, destroying social value (rent seeking).

To constrain this rent seeking, transparency of the resolution actions is warranted, enforced by some external monitoring.

A flexible long-breath policy, combined with a rigid and quick initial intervention, as we have suggested in this text, will require a suitable set-up of the organization of the resolution process. To this we turn next.

5. Organizational issues of the resolution process

In this section, we will broaden our view and look at the organizational set-up supporting the operational issues mentioned before. Who should handle resolutions? The resolution power is attributed to the single resolution board (SRB). This is similar to the attribution of the resolution power to the FDIC, which acts as the "orderly liquidation authority" for systemically important banks in the USA²³. Since independence of the SRB seems crucial, the SRM-R opts for non-renewable five-year terms of Board members.²⁴ Member states have to build National Resolution Authorities (NRA) themselves. The SRB may rely on cooperation and staff exchange with national authorities and the EU Commission. Creating Joint Resolution Teams (JRT)²⁵ may help to combine the specific knowledge about regional banking systems and their legal characteristics with the technical expertise at the supranational level, with a view on cross-border consistency. Yet, conflicts between different legal systems in which cross-border banks operate make resolution more difficult and are unlikely ever to be resolved completely (Binder 2013a). Controversial issues are, among others, (1) the distribution of resolution power between European and national authorities, (2) the cooperation between supervisory and resolution authorities and (3) the resources to be invested in resolution authorities.

Ad (1): The allocation of resolution power should be governed by embedding several objectives. Given the time pressure in the start phase, a single authority should be able to decide quickly. This may be in conflict with Article 18 SRM-R. Assuming that, due to asset encumbrance, there is not enough money to pay back guaranteed deposits, the deposit insurance may be required to contribute money to the resolution budget. This is consistent with the role of the FDIC in the US. In the EU, the SRB is an institution separate from the deposit guarantors. The situation is even more complex in those countries in which bank associations run their own recovery and resolution systems quite effectively, at least for smaller institutions (e.g., for the cooperative banking sector, and for savings banks in Germany). Their involvement in possible bail-in scenarios still needs to be clarified.

²³ Title II, Dodd Frank Wall Street Reform and Consumer Protection Act

²⁴ With an exemption for the first Chair who according to the SRM regulation will be granted a three-year contract renewable once for a five-year period

 $^{^{\}rm 25}$ Comparable to the Joint Supervisory Teams (JST) of the SSM

Ad (2) and (3): As the controversies about the cooperation between supervisory and resolution authorities and about the resources to invest are closely related, we discuss both topics simultaneously. Resolving banks requires highly skilled staff which is difficult to hire as well as to retain. In normal times, recovery planning and resolution planning are closely intertwined. Therefore, the staff in the resolution authority responsible for resolution planning should closely cooperate with bank supervisors and bank employees in charge of recovery planning. That should reduce the costs of planning under 'normal' conditions, i.e. outside crisis episodes.

The situation is different in the intervention phase. Recovery aims for the resurrection of the solvency of a troubled bank by, for instance, raising new capital and/or reducing risk and is run under the bank management's responsibility. Resolution, however, normally replaces management and aims to keep critical functions of the bank intact while liquidating non-viable bank activities. Recovery skills are quite different from resolution skills. Synergies between recovery experts and resolution experts may actually be small. Moreover, agency problems may exist if supervisors are also responsible for resolution ²⁶. Moreover, supervisors may want to avoid resolution altogether because such intervention might also be interpreted as a failure of supervision.

In any case, the management expertise and staff qualifications needed to carry out a resolution activity for any particular financial institution should be part of the prevention process, including the whereabouts of such a resolution team. For example, one could think of a virtual team comprising analysts involved in the resolution planning, plus a number of seconded experts from consultancy firms, banks and other authorities. Alternatively, or additionally, one could think of an "Ex-experts brigade", a voluntary group of experienced ex-bankers that qualify for a background advisory team, building on their recent experiences in the industry. Such a "brigade" would be a cost-efficient way to dispose of a highly qualified group of specialists at any time. Conflict of interest issues would presumably be relatively small, given that these experts would not target any further career in the industry.

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²⁶ See Davies (2013) for a discussion of regulators' incentives to delay resolution as well as Article 3 BRRD which stipulates that supervision and resolution activities need to be structurally separated.

6. Conclusions

The BRRD represents an important step to protect the financial system. The situation in the European Union is complicated because banking systems vary across European countries and political interests of these countries are divergent. So far, the empirical basis for designing a 'good' resolution regime is very limited²⁷. We discuss normal and crisis times.

Absent concrete long-term experience with the operation of the BRRD, it seems to be an art, rather than a science, to optimize the extent to which precautionary measures, as envisaged in the regulation, are enforced during normal times. It has to be considered that precautionary measures may be very costly, and therefore need to be balanced against the potential resolution losses incurred in the absence of such measures. Contingent resolution plans and their implications for running the business in normal times illustrate this point.

In crisis times, the implementation of the resolution mechanism raises several issues as well:

- Clear and transparent criteria in designing resolution triggers need to be implemented.
- The trigger design may have an impact on investor behavior under some circumstances it could even cause a bank run. These anticipative effects need to be taken into account at the design stage.
- Once resolution has started, the resolution authority should have limited discretion at best, given that it cannot collect lots of information in a short time anyway, to neutralize lobbying pressure from interested parties.
- During the execution phase, the resolution authority should have sufficient discretion
 to handle the idiosyncratic nature of each individual case. In this phase there is
 enough time to implement sensible decisions and to monitor them from the outside
 so as to constrain rent seeking.

²⁷ Experiences made by the Orderly Liquidation Authority in the USA may be helpful to fill this gap.

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