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Bail-in between Liquidity and Solvency

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Abstract.

The concept of "bailing in" a distressed bank's creditors to avoid a taxpayer-financed public rescue is commonly accepted as one of the most significant regulatory achievements in the post-crisis efforts to end the problem of "Too Big To Fail". Yet behind the political slogan, surprising uncertainties remain as to the viability of the concept and its optimal legal design. This paper traces the development of the bail-in concept since it was first conceived in 2010 and demonstrates that it has undergone an important conceptual metamorphosis. Bail-in, first understood as fulfilling the "redistributory" purpose of sparing taxpayers from rescuing banks, has more recently been promoted as additionally serving a "market stabilizing" function: to stem a panic and to avoid run risks.

Whilst this trend is to be welcomed, it requires a number of changes to the present legal frameworks that are in place in many jurisdictions around the world. Issues to be addressed include, *inter alia*, to formulate appropriate criteria to trigger bail-in measures and to overcome a natural reluctance by resolution authorities to intervene and apply bail-in powers. This paper makes the case for early intervention triggers and demonstrates that liquidity provision by a lender of last resort during resolution is crucial to make bail-in credible. The paper places bail-in as a conceptual tool into the broader debate of how to deal with distressed banks and derives a number of concrete regulatory proposals.

Keywords: Bail-in, bailout, too big to fail, bank resolution, liquidity, solvency, lender of last resort

JEL codes: E58, G28, K29

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Introduction

The concept of "bail-in" is increasingly understood as the most significant regulatory achievement in post-crisis efforts to end "Too Big To Fail". First articulated by Paul Calello and Wilson Ervin in 2010,[1] it describes regulatory efforts to impose losses on a failing financial institution's creditors, with the more fundamental objective of avoiding taxpayers' rescue of banks that are too big to fail. Bail-in can be understood as the modern alternative to the two traditional crisis-fighting tools that were famously described by 19th century economist Walter Bagehot. In his influential book *Lombard Street*, Bagehot famously distinguished two alternatives: to provide central bank liquidity for banks that are illiquid, and to wind down insolvent ones.[2] Bail-in is the "third way" to handle a failing institution by seeking to *self-insure* banks so that a rescue with public money becomes unnecessary. Over the past several years, this concept has won over a startling number of supporters across the world.

Yet, five years since the concept was first conceived, surprising uncertainties remain as to the precise regulatory objective of bail-in, as well as its trigger and the requirements for applying bail-in powers. Further, broad scepticism is voiced as to decisiveness of regulators to make use of their bail-in powers. In short, serious doubts persist as to the credibility of the concept, in particular relating to the fear that regulators may shy away from taking bail-in action in the decisive moment of rescue operations. Regulatory frameworks are ambivalent about the precise trigger requirements and substantial conditions for applying it. At the bottom of this vagueness is a surprising uncertainty about the precise purpose of bail-in.

This paper seeks to place the bail-in idea into the broader debate around the different operational tools that regulators and central banks have when dealing with a troubled global financial institution. It argues that the objective of bail-in has changed over time, developing from a purely redistributory goal (to avoid taxpayer liability) to a market confidence purpose (to stem panic by avoiding value-destroying runs). From this insight, the paper derives a number of

[1] Paul Calello & Wilson Ervin, *From bail-out to bail-in*, THE ECONOMIST, January 28, 2010.
[2] Walter Bagehot, LOMBARD STREET: A DESCRIPTION OF THE MONEY MARKET (1873).

regulatory implications. Chiefly, it is argued that bail-in can and should be applied to both insolvent and illiquid financial institutions, and that the regulatory framework should encourage making use of bail-in powers probably even earlier than that. Further, the paper makes the case for providing liquidity to a resolved financial institution by a robust lender of last resort, as bail-in in itself only addresses the recapitalization of an institution, but fails to make provision for ensuring its liquidity.

The remainder of this paper is structured as follows. Section I. introduces the emergence of the bail-in concept in the context of post-crisis regulatory thinking and demonstrates the regulatory learning process over the past five years. Subsequently, section II. evaluates bail-in in the context of alternative rescue methods and demonstrates that the purpose of bail-in has been redefined: the original purpose was mainly to internalize the costs of bank failure instead of threatening the public purse; since then, however, bail-in has become a contributor to market stability and to address potential bank runs. This development has important ramifications for both the appropriate trigger for bail-ins and the question of incentivizing resolution authorities to intervene early. Section III. turns to liquidity provision by the lender of last resort and makes the case for enhanced central bank involvement in the post-resolution phase to restore the institution's viability. Section IV. concludes.

I. Resolution, Bail-in and Single Point of Entry

The post-crisis learning process on handling distressed systemically important financial institutions (SIFIs) so far has been a play in four acts. First, the immediate post-crisis experience showed that special powers were required in order to orderly wind down large financial institutions, and that existing insolvency (or bankruptcy) laws were inadequate. This was the basis for developing "resolution" powers for state regulators, as a *de facto* specific bankruptcy regime for banks.[3] These resolution powers were refined further, and the second step was to equip resolution authorities with "bail-in" powers, to force creditors to pay for a failing

[3] See Robert R. Bliss & George G. Kaufman, *Resolving Insolvent Large Complex Financial Institutions: A Better Way*, 128 BANKING L. J. 339 (2011); ENDING GOVERNMENT BAILOUTS AS WE KNOW THEM (Kenneth E. Scott, George P. Shultz & John B. Taylor, eds., 2010); BANKRUPTCY NOT BAILOUT: A SPECIAL CHAPTER 14 (Kenneth Scott & John B. Taylor, eds., 2012).

institution's losses. The major driver for granting regulators such powers was not so much the specific nature of banks or banking business, but rather the political will to end taxpayer-funded bailouts. The third phase in the post-crisis agenda is the gradual emergence of a specific strategy of using such bail-in powers in a global context. International consensus is growing to apply resolution and bail-in powers with the so-called "Single Point of Entry" approach, meaning that the institution's home regulator is responsible for an international banking group at the group's holding company level. Based on this approach, the fourth step required was to adopt rules that guarantee the availability of sufficient bail-in debt at the holding company level. This is the current state of the regulatory process, and the Financial Stability Board recently published its principles for prescribing a certain "Total Loss Absorbing Capacity" (TLAC) that financial institutions are required to hold.[4]

1. Step 1: Resolution instead of bankruptcy

At the outset, it is important to reconsider the importance of "resolution" as opposed to the traditional bankruptcy alternative for banks and other financial institutions.[5] It is fair to say that a post-crisis consensus has emerged that traditional bankruptcy does not offer an appropriate legal framework for dealing with failing global financial institutions.

Bankruptcy has, firstly, turned out to be too complicated to handle, and to require an extended timeframe for dealing with a failing bank. In practice, this has proven to undermine market confidence and risks destabilizing the financial system.[6] SIFIs are typically characterized by comprising a myriad of different entities, subsidiaries with different roles – such as retail banking units, broker dealers, asset management funds, money market funds, insurance

[4] Financial Stability Board, *Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution – Total Loss-absorbing Capacity (TLAC) Term Sheet* (9 November 2015), available at <http://www.fsb.org/2015/11/total-loss-absorbing-capacity-tlac-principles-and-term-sheet/>.

[5] On the difference between the SPOE strategy and ordinary bankruptcy, see Douglas G. Baird & Edward R. Morrison, *Dodd-Frank for Bankruptcy Lawyers*, 19 AM. BANKR. INST. L. REV. 287, 299–302 (2011) (comparing Chapter 11 bankruptcy process with Dodd-Frank Title II receivership); David A. Skeel, Jr., *Single Point of Entry and the Bankruptcy Alternative*, in ACROSS THE GREAT DIVIDE: NEW PERSPECTIVES ON THE FINANCIAL CRISIS 311, 321–26, 329–33 (Martin Neil Baily & John B. Taylor eds., 2014).

[6] Gary Gorton & Andrew Metrick, *Regulating the Shadow Banking System*, 41 BROOKINGS PAPERS ON ECONOMIC ACTIVITY 261 (2010); Andrei Shleifer & Robert Vishny, *Fire Sales in Finance and Macroeconomics*, 25 JOURNAL OF ECONOMIC PERSPECTIVES 29 (2011).

companies, etc. Using the traditional framework for insolvencies would be far too complex, costly, and time-consuming.

Bankruptcy entails a court-supervised process that is designed to protect the substantive and procedural rights of all creditors without particular regard for broader public interests. It entails the immediate cessation of payments to any particular class of creditors (e.g. depositors or other short-term funders). It triggers default provisions in various counterparty credit agreements that may permit the seizing of collateral and the termination of relationships. It brings an abrupt halt to the trading in financial claims that is the lifeblood of a financial firm. Because of the nature of financial assets and relationships in the financial sector, in the absence of immediate "debtor-in-possession" financing that would keep the firm afloat and guarantee its undertakings while a reorganization is negotiated, bankruptcy intervention will produce severe erosion in the franchise value of a failed financial firm and will deepen the losses for creditors.[7] The financial sector conditions that produce the bankruptcy of a large firm also make it unlikely that other financial institutions could provide such large-scale financing and guarantees; instead, they will hoard liquidity. The consequence of bankruptcy, then, is likely to be disorderly liquidation, meaning the disposition of assets at fire-sale valuations and a value-destructive disassembly of the firm's business.[8] If the firm is systemically important, particularly if the firm is highly interconnected with other financial firms, the abrupt cessation of counterparty relationships, the expectation of large losses, and the gyrations in asset values will likely produce widespread systemic distress, which will magnify the losses that would otherwise occur.[9]

By contrast, "resolution" is an administrative process in which the goal is to protect the liquidity needs of short-term creditors, especially depositors, and to manage financial assets in a way that preserves their value and the franchise value of the failing institution.[10] A major

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[7] See Randall D. Guynn, *Are Bailouts Inevitable?*, 29 YALE J. ON REG. 121, 137–40 (2012) ("[B]ankruptcy is a slow and deliberate process that is not designed for preserving systemically important operations critical to the functioning of the economy as a whole.").

[8] The value loss includes significant social value, not just private value, because the assets commonly end up in the hands of parties who are not best positioned to maximize their value. For example, a loan officer with knowledge of the borrowers will be better positioned to manage the credit relationships than a hedge fund manager who has purchased a loan book. See Andrei Shleifer & Robert Vishny, *Fire Sales in Finance and Macroeconomics*, 25 J. ECON. PERSP. 29, 41–43 (2011) (surveying economics literature).

[9] See Heidi Schooner & Michael W. Taylor, GLOBAL BANK REGULATION: PRINCIPLES AND POLICIES 243 (2010) (noting placing large banks into an ordinary liquidation process would cause "very real economic damage").

[10] See John Armour, *Making Bank Resolution Credible* in: OXFORD HANDBOOK OF FINANCIAL REGULATION 453 (Niamh Moloney et al., eds., 2015).

objective of resolution is to avoid systemic distress in the financial sector, a social good that may not coincide with the private objective of protecting the equal treatment or absolute priority of creditor claims.[11] Along the goal of making financial institutions more resilient stood the objective of also making them resolvable without taxpayer solvency support. This two-sided consensus has been dubbed a "bookends' strategy".[12]

One critical element of resolution is the capacity of the administrator to offer liquidity to maintain the critical functions of the financial institution.[13] This is operationally equivalent to debtor-in-possession financing but has the advantage of assured availability in sufficient amount at a time of systemic distress. In comparing resolution under the Dodd-Frank-Act, Title II, with the outcome of bankruptcy, the FDIC projected that in the case of Lehman Brothers, a resolution would have produced losses of only 3 cents on the dollar versus bankruptcy losses of 79 cents on the dollar.[14] In short, the major losses in the failure of a large financial institution will result from disorderly failure; these losses can be avoided through an effective resolution process.

"Resolution" itself is an umbrella term that describes the process of handling a distress bank, based on the objective of minimizing the societal costs of a bank failure. Under this generic term, regulators usually understand a number of different tools, which may vary depending on the jurisdiction. Their precise availability, scope, and triggering requirements also vary, arguably producing slightly different outcomes. Typically, resolution powers include the authority to sell or merge the bank's business with another bank, to set up a new or bridge bank to operate critical functions of the failing institution, and to separate good assets from bad ones my moving them into different institutions.

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[11] See Guynn, *supra* note 7, at 141 (noting that the Bankruptcy Code does not have goals of considering "public confidence or systemic risk").

[12] Paul Tucker, *Regulatory Reform, Stability, and Central Banking*, Hutchins Center of Fiscal and Monetary Policy at Brookings (January 16, 2014), available at <www.brookings.edu/~/media/Research/Files/Papers/2014/01/16%20regulatory%20reform%20stability%20central%20banking%20tucker/16%20regulatory%20reform%20stability%20central%20banking%20tucker.pdf>.

[13] See Guynn, *supra* note 7, at 144.

[14] Press Release, FDIC, *FDIC Report Examines How an Orderly Resolution of Lehman Brothers Could Have Been Structured Under the Dodd-Frank Act* (11 April 2011) <http://www.fdic.gov/news/news/press/2011/pr11076.html>. For a detailed analysis of the Lehman bankruptcy, see generally Michael Fleming and Asani Sarkar, 'The Failure Resolution of Lehman Brothers' 20 FRBNY ECONOMIC POLICY REVIEW 175 (2014), available at <https://www.newyorkfed.org/medialibrary/media/research/epr/2014/1412flem.pdf>.

2. Step 2: Bail-in as a tool in the resolution toolbox

The most important resolution power, however, is the authority to write down the debt of a failing institution or to convert it to equity, the so-called "bail-in" tool. The corresponding rules entitle the resolution authority to cancel or reduce liabilities to long-term creditors or to convert such liabilities partially or fully into debt or equity securities of the institution or another entity. Such an operation aims at ensuring that the shareholders and unsecured creditors of a failing financial institution are bearing the losses and are thus ultimately responsible for the costs of the failure – shifting the taxpayer's responsibility to the firm's investors. The name "bail-in" emerged as a counterpart to "bail-out": this exemplifies the deeper objective to shift the costs from paying for banks' losses from the taxpayer to the firms' creditors. Bail-in powers differ along two aspects from the resolution mechanisms that were designed immediately after the crisis. First, they seek to yield a different allocation of the financial institution's losses, protecting the taxpayer and avoiding unpopular bailouts.[15] Secondly, in conceptual terms, the bail-in tool is a type of reorganisation procedure, as opposed to liquidation.[16] That is, its primary purpose is to keep the vital parts of a large banking group alive and running; the institution's debts are however markedly restructured.[17] Many positive side effects are expected as flowing from this double objective: for example, the allocation of losses to creditors is said to reinvigorate regular market forces to a bank's success and failure, and encourage greater monitoring by its creditors.[18]

Relying on the theoretical groundwork, the de facto policy starting point for bail-in was the adoption of the concept in the seminal 2011 *Key Attributes* for resolution, developed by the Financial Stability Board (FSB).[19] The FSB has developed into the *de facto* pacemaker for

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[15] Emilios Avgouleas & Charles Goodhart, *Critical Reflections on Bank Bail-ins*, 1 JOURNAL OF FINANCIAL REGULATION 3, 4 (2015).

[16] Armour, *supra* note 10, at 471-2.

[17] In the U.S., critics have argued that this character of bail-in appeared to conflict with the FDIC's mandate, granted under Title II of the Dodd-Frank-Act, which is restricted to liquidation. See Joe Adler, "Is the FDIC's 'Single Point' Resolution Plan a Stealth Bailout?," 178 (F348) AMERICAN BANKER 13 (Dec. 13, 2013); David A. Skeel, Jr., *Written Testimony Before the Subcommittee on Oversight and Investigations Committee on Financial Services (House of Representatives)*, May 15, 2013, at p. 3. More recently, see Arthur E. Wilmarth, Jr., *SPOE + TLAC = More Bailouts for Wall Street*, 35(3) BANKING & FIN. SERV. POL'Y REPORT 1, 3 (2016).

[18] John C. Coffee, *Systemic Risk after Dodd–Frank: Contingent Capital and the Need for Strategies Beyond Oversight* 111 COLUM. L. REV. 795 (2011).

[19] Financial Stability Board, *Key Attributes of Effective Resolution Regimes for Financial Institutions* (October 2011), available at <http://www.financialstabilityboard.org/wp-content/uploads/r_111104cc.pdf>. An update was published in 2014.

international coordination in financial markets reform post crisis, and its Key Attributes, updated in 2014, provided the blueprint for international best practice.

On a national level, the U.S. Dodd-Frank Act granted sweeping powers for resolving SIFIs, effectively creating a separate bankruptcy process for institutions whose resolution under the traditional bankruptcy law would pose systemic concerns.[20] The so-called Orderly Liquidation Authority (OLA) includes a broad set of powers for the FDIC, with the overarching objective of ending public bailouts.[21] Chief among these powers are discretionary bail-in powers – section 204(a)(1) of Dodd-Frank holds that creditors and shareholders are to bear all the losses of the financial company that has entered OLA. In 2013, the FDIC has elaborated on its strategy on how to use these new powers, and outlined its "Single Point of Entry" strategy.[22]

The European response is the 2014 Bank Recovery and Resolution Directive (BRRD), an instrument seeking to harmonize resolution powers across all 28 EU Member States.[23] This is a broad framework law, setting out a common approach to dealing with failing banks, and needs to be implemented and applied by all Member States. It includes detailed prescriptions on bail-in authority.[24] Specifically within the Eurozone, resolution authority has been centralized in the hands of the Single Resolution Board (SRB), which is responsible for handling large banks on a federal (EU) level as part of the Banking Union.[25]

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[20] Dodd-Frank Wall Street Reform and Consumer Protection Act (Pub.L. 111–203, H.R. 4173).

[21] Martin J. Gruenberg, FDIC Chairman, *A Progress Report on the Resolution of Systemically Important Financial Institutions to the Peterson Institute for International Economics; Washington, D.C.*, May 12, 2015, available at <https://fdic.gov/news/news/speeches/spmay1215.html>. For a recent summary, see Richard W. Nelson & George G. Kaufman, *Will DFA End TBTF?*, 35(4) BANKING & FIN. SERV. POL'Y REPORT 1, 6–9 (2016).

[22] The FDIC outlined the SPOE strategy in a request for public comments. FDIC, *Notice and Request for Comments, Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy*, 77 Federal Register 76614, at 76615–24 (2013). See *infra* section #I.3.

[23] Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No 1093/2010 and (EU) No 648/2012, of the European Parliament and of the Council, [2014] OJ L173/190.

[24] See BRRD articles 43-58.

[25] Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010, [2014] OJ L225/1.

3. Step 3: Towards Single Point of Entry

Despite these efforts, resolution authorities soon realized that fundamental challenges in resolving systemic banks remained. Even though they were entrusted with wide-ranging resolution tools, the resolution of a global bank involves substantial risks. Applying resolution powers might well disrupt the financial institution's balance sheet, which may lead to its expulsion from payment and clearing systems. Further, financial groups are usually commercially integrated, but their legal and geographical structures may not. Resolution may thus split up the banking group along artificial lines, depriving it of access to vital resources (such as treasury functions, staff, operations and central IP and IT resources that are organised globally). Finally, resolution action in one jurisdiction may not be recognised in another, mostly where resolution powers are applied to debt that is subject to a foreign law. These recognition problems may severely hamper successful resolution. In short, the resolution of a global banking group was still perceived as fraught with many uncertainties and legal risks.

Against this backdrop, the Financial Stability Board (FSB) was set to develop a common international approach to address these problems. Its 2013 guidance, the FSB endorsed the "Single Point of Entry" (SPOE) approach to handle global banking groups.[26] It was roughly at the same time that the U.S. FDIC put forward its intellectual framework for applying the new powers granted by the Dodd Frank Act, also championing SPOE.[27] According to this approach, the most promising strategy is to resolve the banking group at the level of its ultimate parent, rather than the operating subsidiaries that are in difficulty. Resolution powers (and, in particular, bail-in powers) would thus be applied at the top-tier level of a group's holding company by a single resolution authority.

SPOE has a number of distinct advantages. First, it makes resolution more transparent and credible, as the bail-in-able debt at the holding company level is earmarked and effectively

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[26] Financial Stability Board, *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Developing Effective Resolution Strategies* (16 July 2013), available at <http://www.financialstabilityboard.org/wp-content/uploads/r_130716b.pdf>.

[27] On the SPOE approach in detail, see John F. Bovenzi, Randall D. Guynn & Thomas H. Jackson, TOO BIG TO FAIL: THE PATH TO A SOLUTION – A REPORT OF THE FAILURE RESOLUTION TASK FORCE OF THE FINANCIAL REGULATORY REFORM INITIATIVE OF THE BIPARTISAN POLICY CENTER 23–32 (Washington, DC: Bipartisan Policy Center, 2013), available at <http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/TooBigToFail.pdf>. For a general account, see Randall D. Guynn, *Framing the TBTF Problem: The Path to a Solution*, in ACROSS THE GREAT DIVIDE, supra note 5, at 281, 281–301, available at <http://www.hoover.org/sites/default/files/across-the-great-divide-ch13.pdf>.

available for regulatory activation. Unlike under competitor approaches, the financial institution, market participants, and the regulator would be aware of the liabilities available for bail-in, which would enhance transparency and foreseeability of resolution effects; besides, their specific separation for resolution purposes would make assets across the banking group more valuable for their specific purposes.[28] Secondly, SPOE works much better in cross-border situations, facilitating an effective regulatory solution by one resolution authority and bundling the responsibility in one centre of control. This would also mitigate the cross-border recognition problem. Indeed, one of the main points of critique of an alternative "Multipl Point of Entry" (MPOE) approach is that it would empower several regulators in various jurisdictions and thus create coordination problems, frictions, and a race to grab assets for the purpose of protecting national creditors.[29] Finally, and most importantly, the SPOE approach ensures that the operating subsidiaries can carry on their business and thus avoids fatal disruptions, destructive runs that can produce fire sale liquidations, negative asset valuation spirals and other knock-on effects. The double advantage of this last point is that because of the large savings anticipated by an SPOE regulatory framework, the overall creditor losses associated with the resolution will be much less than in an uncoordinated resolution, let alone ordinary bankruptcy proceedings. This in turn will reduce the level bail-in-able debt required to achieve systemic stability.

It is obvious that, given these advantages, the SPOE approach appears highly attractive for any resolution authority. Regulators around the world have increasingly spoken out in favour of the SPOE approach. It received a major boost with the adoption of a joint position paper by the U.S. FDIC and the Bank of England in December 2012.[30] A May 2013 report by the Bipartisan Policy Center concluded that the SPOE approach would the best strategy to allow a SIFI to fail 'without resorting to taxpayer-funded bailouts or a collapse of the financial system'.[31]

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[28] This may be part of the explanation for why the rating of the holding company would normally not be much different from the rating of an integrated banking structure. See Scope Ratings, *Holding Companies: The Right Vehicle for European Bank's SPE Resolution?*, 11 September 2014, available at <http://www.scoperatings.com/>.

[29] European Parliament, Directorate General for Internal Policies, SINGLE RESOLUTION MECHANISM—NOTE, February 2013, p. 13.

[30] FDIC and Bank of England, *Resolving Globally Active, Systemically Important, Financial Institutions* (10 December 2012), available at <http://www.fdic.gov/about/srac/2012/gsifi.pdf>. For additional U.S. support, see FDIC, *supra* note 27, at 76615; Martin J Gruenberg, FDIC Chairman, *Remarks to the Volcker Alliance Program*, (Washington DC, 13 October 2013), available at <https://www.fdic.gov/news/news/speeches/archives/2013/spoct1313.html>.

[31] Bovenzi et al., *supra* n. 27.

Since then, support has been voiced by regulators worldwide, including the FSB,[32] the European Parliament,[33] and regulators in Switzerland[34] and Germany, amongst others.[35] The strongest endorser is certainly the FDIC, which in 2013 released its substantial roadmap on SPOE within the operation of the Dodd-Frank Act, and in particular the Title II resolution framework (OLA).[36]

One crucial requirement for SPOE to work is that the financial institutions in question must be organized in such a way as to permit debt conversion without putting core financial constituents through a bankruptcy.[37] This is very important to assure the ongoing, non-disrupted operation of important financial activity that is organized in legally and contractually complex forms. Avoiding bankruptcy of the operating subsidiaries also facilitates resolution of banks with important cross-border activities; if the subsidiaries are not put into bankruptcy, many difficult cross-border resolution problems can be avoided. The goal, after all, in resolution of a SIFI is to minimize own-firm losses, to minimize other-firm losses because of systemic distress, and thus to avoid damage to the real economy. Effective resolution also minimizes the necessary amount of bail-in-able funds. Thus, an effective central resolution mechanism would require banks to adopt these structural characteristics if they have not already done so.

One key problem is that many banking groups outside the United States are organized in a structure that does not lend itself easily to implementing an SPOE strategy. Most large U.S. financial institutions operate in a holding company structure, largely for historical reasons.[38] By contrast, European counterparts are typically organized as "universal banks" and have a complex organizational structure in which various financial services are provided by divisions of the bank or through subsidiaries of the bank.[39]

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[32] FSB, *supra* n. 26.
[33] European Parliament, *supra* n. 29.
[34] Eidgenössische Finanzmarktaufsicht (Finma), RESOLUTION OF GLOBAL SYSTEMICALLY IMPORTANT BANKS – FINMA POSITION PAPER ON RESOLUTION OF G-SIBS (August 7, 2013), available at <https://www.finma.ch/en/news/2013/08/mm-pos-sanierung-abwicklung-20130807/>.
[35] For a helpful overview, see Scope Ratings, *supra* n. 28.
[36] FDIC, *supra* note 27.
[37] For a more detailed discussion of this argument, see Jeffrey N. Gordon & Wolf-Georg Ringe, *Bank Resolution in Europe: The Unfinished Agenda of Structural Reform* (ECGI Working Paper Series in Law, Paper No. 282, January 2015), <http://ssrn.com/abstract=2548251>.
[38] Jeffrey N. Gordon & Wolf-Georg Ringe, *Bank Resolution in the European Banking Union: A Transatlantic Perspective on what it Would Take*, 115 COLUM. L. REV. 1297, 1330 ff. (2015).
[39] On the European universal banking model, see Jordi Canals, UNIVERSAL BANKING: INTERNATIONAL COMPARISONS AND THEORETICAL PERSPECTIVES (1997) 6-11. The typical U.S. "holding company" group model is

There is a rich debate ongoing on how (and if) to require European banks to adopt a holding company structure to facilitate SPOE.[40] Several European regulators have begun to set incentives accordingly. For example, Swiss rules on banks' capital requirements lower those requirements for banks that adjust their organizational structure to make the bank more easily resolvable. This move has prompted the two Swiss SIFIs (UBS and Credit Suisse) to change their structure in a way similar to the U.S. holding company structure.[41] Once the new structure is in place, Credit Suisse plans to issue ample bail-in-able debt from its group holding company, in order to facilitate the SPOE approach.[42] Following new regulation in the UK, British banks are also beginning to issue debt at the holding company level.[43] And more recently, Italian SIFI

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not popular on the European side of the Atlantic, see High-Level Expert Group on Reforming the Structure of the EU Banking Sector, FINAL REPORT 137 (2012), (the so-called "Liikanen Report"), available at <http://ec.europa.eu/internal_market/bank/docs/high-level_expert_group/report_en.pdf>; see also Inst. of Int'l Fin., *Making Resolution Robust—Completing the Legal and Institutional Frameworks for Effective Cross-Border Resolution of Financial Institutions* 52 (2012), available at <https://www.iif.com/file/5160/download?token=tKH8xs-E> (noting holding company model "is not uncommon in the United States"); Bob Penn, *Single point of entry resolution: a milestone for regulators: a millstone for banks?*, available at <http://www.allenovery.com/publications/en-gb/lrrfs/uk/Pages/Single-point-of-entry-resolution.aspx>. See also James R. Barth et al., *Banking Structure, Regulation, and Supervision in 1993 and 2013: Comparisons Across Countries and Over Time*, 13 J. INT'L BUS. & L. 231, 251-54 tbl.4 (2014) (illustrating differences in bank structure across jurisdictions); James R. Barth et al., *Commercial Banking Structure, Regulation, and Performance: An International Comparison* tbls.5, 6a, 6b (Office of the Comptroller of the Currency, OCC Working Paper No. 97-6, 1997), <www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/working-paper-1997-6.html> (click "Tables") (reviewing bank regulations across various jurisdictions); World Bank, *Bank Regulation and Supervision* (2011), <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20345037~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html> (providing database to survey banks and regulatory agencies across many different countries); see also Richard J. Herring & Anthony M. Santomero, *The Corporate Structure of Financial Conglomerates*, 4 J. FIN. SERVICES RES. 471, 481-89 (1990) (comparing various models of corporate structure); Richard Herring & Jacopo Carmassi, *The Corporate Structure of International Financial Conglomerates: Complexity and Its Implications for Safety and Soundness*, in: THE OXFORD HANDBOOK OF BANKING 195, 217–21 (Allen N. Berger et al. eds., 1st ed. 2010) (describing implications of banks' complex corporate structures for stability).c

[40] See Gordon & Ringe, *supra* note 37; Jeffrey N. Gordon & Wolf-Georg Ringe, *Bank Resolution in the European Banking Union: A Transatlantic Perspective on what it Would Take*, 115 COLUM. L. REV. 1297, 1365 ff. (2015).

[41] James Shotter, *Credit Suisse to Overhaul Structure*, FIN. TIMES (Nov. 21, 2013), <http://www.ft.com/intl/cms/s/0/45d5a706-527d-11e3-8586-00144feabdc0.html>; James Shotter, *Swiss Bank Creditors Face Bail-in Risk*, FIN. TIMES (Aug. 8, 2013), <http://www.ft.com/intl/cms/s/0/48ab28a0-ff6e-11e2-919a-00144feab7de.html>. According to rating agency Fitch, it is likely that other European banks are under pressure to follow the example. Shotter, *Credit Suisse*, *supra*; see also James Shotter, *UBS Plans Dividend as Part of Overhaul to Ease a Crisis Break-up*, FIN. TIMES (May 6, 2014), <http://www.ft.com/intl/cms/s/0/7c5ffa50-d4d8-11e3-8f77-00144feabdc0.html> ("UBS is to overhaul its legal structure to make it easier to break up the bank in a crisis, in a move designed to lower its capital requirements and enable it to pay a special dividend.").

[42] Shotter, *Credit Suisse*, *supra* note 41.

[43] Sam Fleming, *Banks Address "Too Big to Fail" Question with Debt Shift*, FIN. TIMES (December 26, 2013), <http://www.ft.com/cms/s/0/df877896-6c7e-11e3-ad36-00144feabdc0.html>.

Unicredit has announced plans to reorganize its operations in a holding structure more amenable to resolution.[44]

4. Step 4: Providing for sufficient bail-in-able debt

It lies in the logic of bail-in that banks and other financial institutions need to have "something to be bailed in", otherwise bail-in will not work. Regulators have thus in the most recent initiative begun to specify an array of standards to prescribe financial institutions to hold a certain minimum of debt that will be subject to bail-in powers.[45]

The European answer to this issue is the new "minimum requirement of own funds and eligible liabilities" (MREL) for all EU banks in line with the BRRD requirements, further specified by European Banking Authority (EBA) Regulatory Technical Standards (RTS).[46] A rival global approach has been developed by the FSB and is known as the Total Loss-Absorbing Capacity (TLAC) standard. At the November 2014 summit meeting of the G-20 leaders, the Financial Stability Board, in its role as post-crisis agenda setter, submitted a proposal for TLAC, meaning capital plus loss-absorbing debt, equal to at least twice the amount of required equity capital on both risk-weighted and leverage measures.[47] The firm-specific required level of TLAC will vary, depending on the particular institution, from at least 16% up to 25% of risk-weighted assets.[48] The TLAC principle however only applies to G-SIBs, whereas MREL theoretically covers all EU banks and investment firms. For European G-SIBs, MREL requirements will thus need to be set consistently with TLAC. For U.S. financial institutions, the Federal Reserve

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[44] Fitch Ratings, *New UniCredit Structure Would Simplify A Resolution*, 20 November 2015, available at <https://www.fitchratings.com/site/fitch-home/pressrelease?id=994472>.

[45] For a recent in-depth examination, see James McAndrews, Donald P. Morgan, João A. C. Santos & Tanju Yorulmazer, *What Makes Large Bank Failures So Messy and What Should Be Done about It?*, 20 FRBNY ECONOMIC POLICY REVIEW 229 (2014).

[46] There is presently disagreement between EBA and the Commission on these RTS. See European Banking Authority, *Opinion on the Commission's Intention to Amend the Draft Regulatory Technical Standards Specifying Criteria Relating to the Methodology for Setting Minimum Requirement for Own Funds and Eligible Liabilities According to Article 45(2) of Directive 2014/59/EU*, EBA/Op/2016/02 (9 February 2016). See Christian M. Stiefmüller, *TLAC/MREL: Making failure possible?*, FINANCEWATCH POLICY BRIEF 8-9 (March 2016).

[47] FSB, *Consultative Document: Adequacy of Loss-Absorbing Capacity of Global Systemically Important Banks in Resolution* (November 10, 2014) 6, available at <www.financialstabilityboard.org/wp-content/uploads/TLAC-Condoc-6-Nov-2014-FINAL.pdf>.

[48] ibid 13. The threshold limits were based on calculation of losses during the recent financial crisis in an earlier consultation document. See FSB, *Memorandum to the Steering Committee, Issues for Consideration in the Development of a Proposal on Adequacy of Loss Absorbing Capacity in Resolution, SC/2013/45* (18 December 2013), Annex 26-31.

recently proposed its own version of TLAC, which is however broadly similar to the FSB variant.[49]

Although some differences remain, all three approaches are not inconsistent, but may rather complement each other.[50]

5. Open issues

Even though the four steps outlined above testify of a significant intellectual development in the steps to achieving of a credible resolution strategy, many issues remain unresolved. The following sketches out just a few of them.

One very problematic concern is that SPOE bail-in depends on a high degree of trust between regulators worldwide, in particular between the resolution authorities of each jurisdiction in which a global banking group has an entity, subsidiary, or just assets. Some commentators are sceptical that such trust exists already *ex ante*, and even more so that resolution authorities will honour each other's commitments by respecting their respective decisions and actions *ex post*.[51] Specifically, concerns are growing that the U.S. authorities will accept the resolution power of foreign resolution procedures, in particular where it concerns global banking groups with a U.S. presence.[52] The only feasible strategy appears to continue seeking regulatory dialogue, and probably ultimately promoting the adoption of binding international agreements.

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[49] Board of Governors of Federal Reserve System, *Notice of proposed rulemaking: "Total Loss-Absorbing Capacity, Long-Term Debt, and Clean Holding Company Requirements for Systemically Important U.S. Bank Holding Companies and Intermediate Holding Companies of Systemically Important Foreign Banking Organizations,"* 80 FEDERAL REGISTER 74,926 (Nov. 30, 2015).

[50] Andrew Gracie, *TLAC and MREL: From design to implementation*, Speech at BBA loss absorbing capacity forum, London, 17 July 2015, available at <http://www.bankofengland.co.uk/publications/Documents/speeches/2015/speech834.pdf>. See also Stiefmüller, *supra* note 46.

[51] Patrick Bolton & Martin Oehmke, *Bank Resolution and the Structure of Global Banks*, Columbia Business School Working Paper, October 2015. See also Mathias Dewatripont et al., BALANCING THE BANKS: GLOBAL LESSONS FROM THE FINANCIAL CRISIS 122-30 (2010); Federico Lupo-Pasini & Ross P. Buckley, *International Coordination in Cross-Border Bank Bail-ins: Problems and Prospects*, 16 EUROPEAN BUSINESS ORGANIZATION LAW REVIEW 203 (2015).

[52] Bob Penn, 'Single point of entry resolution: a milestone for regulators: a millstone for banks?', available at <http://www.allenovery.com/publications/en-gb/lrrfs/uk/Pages/Single-point-of-entry-resolution.aspx>; Paul Kupiec & Peter Wallison, *Can the "Single Point of Entry" strategy be used to recapitalize a systemically important failing bank?*, 20 Journal of Financial Stability 184 (2015). See also Avgouleas & Goodhart, *supra* note 15, at 24-5.

Some have questioned whether bail-in can work in a systemic crisis at all, and rather put their trust in bail-in providing an answer to an individual bank crisis only.[53] It is true that bail-in will probably work best for individual banks' failures, where no serious risks of contagion or sector panic exist. But bail-in should also yield good results in systemic risk scenarios, such as the financial crisis of 2008-09.[54] Bail-in builds on the idea of self-insurance, so it makes the bank's failure independent from the strength or the viability of the state. The losses are allocated at the creditor level, not the state level, which should ease the regulatory efforts to deal with the crisis.[55] This is particularly true for the efforts to build a European Banking Union, which is precisely aimed at breaking the state-bank nexus.

A related problem concerns the degree of interconnectedness between financial firms. Traditionally, banks tend to hold a significant portion of each other's debt. It is obvious from this that bailing in the claims from one firm that is held by another will be a source of rapid contagion. Whereas this would not be a problem for industrial firms, the special character of financial services and interconnectedness in the financial sector means that such cross-participations could be a new source of systemic risk. The Basel Committee on Banking Supervision is currently developing a regime that restricts financial institutions' possibility to invest in the loss-absorbing capacity of other institutions, precisely so that a shock experienced by one firm is not automatically transmitted to another one.[56]

One can easily see that the framework surrounding bail-in is continuously extended and refined – and every regulatory step into one direction appears to require a follow-up step into another.[57]

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[53] Skeel, *supra* note 5, at 325. See also Neel Kashkari, Minneapolis Fed President, *Lessons from the Crisis: Ending Too Big to Fail*, Speech at the Brookings Institution, Washington, DC, Feb. 16, 2016, available at <https://www.minneapolisfed.org/news-and-events/presidents-speeches/lessons-from-the-crisis-ending-too-big-to-fail>.

[54] See, for example, FDIC Press Release, *FDIC Report Examines How an Orderly Resolution of Lehman Brothers Could Have Been Structured Under the Dodd-Frank Act* (Apr. 11, 2011), available at <http://www.fdic.gov/news/news/press/2011/pr11076.html>.

[55] Joseph H. Sommer, *Why Bail-In? And How!*, 20 FRBNY Economic Policy Review 207, 222 (2014).

[56] Lucy Chennells & Venetia Wingfield, *Bank failure and bail-in: an introduction*, 55 QUARTERLY BULLETIN OF THE BANK OF ENGLAND 228, 237 (2015).

[57] For example, once such holding restrictions are implemented, the next question arises on who is left to typically hold the bail-in-able debt. Sceptics point out that, realistically, hedge funds and other professional non-bank holders are likely to hold the lion share of bail-in debt in the future, a scenario that many policymakers do not seem to see without reservation.

II. Credibility of Bail-in

Whilst the theoretical and intellectual underpinnings for bail-in suggest that a sound and robust framework for bank resolution has ultimately been found, its success crucially depends on the practical implementation and the specific design of any bail-in powers. That is an even greater concern due to the unpredictability of financial markets and the high degree of psychology in accounting for the success of regulatory activities. Just as Mario Draghi famously calmed down the markets with his one single sentence on the future strategy of the European Central Bank, the installation of bail-in tools must equally first and foremost send a robust signal to the markets.[58] *Credibility* of the bail-in strategy is thus paramount if it is to fulfil its purpose.

The practical operability of the bail-in mechanisms that have been adopted is, however, very much in doubt. Commentators from different quarters raise serious doubts on whether the legal frameworks enacted now will accomplish their envisaged purpose.

Chief among the concerns is the problem of whether bail-in will actually be triggered at the right moment. This problem includes two related questions. First, have we set the legal trigger for bail-in right – in other words, do the legal requirements for the application of bail-in powers adequately respond to the policy objective we seek to achieve? And secondly: even if the answer to the first question is yes, will regulators actually make use of their bail-in powers, or will their incentives work against timely intervention? As we shall see, the answer to both questions lies in the conceptual role we want bail-in to play and the traditional bankruptcy categories of solvency and liquidity. The other worry is that bail-in may fall short of bringing a distressed bank back on track due to its focus on restoring the solvency of an institution, and not its liquidity needs.

All these concerns share the deeper question of what function we assign to bail-in on the timeline of a failing financial institution. This and the following section explore these issues in more detail.

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[58] On July 25, 2012, Draghi single-handedly resolved the Eurozone sovereign debt crisis by announcing that "Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough." Speech by Mario Draghi, President of the European Central Bank, at the Global Investment Conference in London, 26 July 2012, available at <https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html>.

1. Bail-in between insolvency and early intervention

Conceptually, bail-in has changed its primary objective over the past few years. Early accounts depict bail-in as a substitute for liquidation, receivership or bail-outs, essentially arguing with redistributory concerns. Bail-in was thus originally perceived as a "fairer" solution to the bank failure problem, where losses are not shouldered by the taxpayer, but by creditors. Thus, early commentators characterized the purpose of bail-in to "provide a mechanism to return an insufficiently solvent bank to balance sheet stability".[59] The emphasis was put on the fact that such recapitalisation should be achieved without the recourse to taxpayers' money.[60] The bail-in tool has thus been hailed as "epitomiz[ing] the policy response to the issue of financing of resolution with a view to avoiding or minimizing the problem of social costs".[61] This *ex post* purpose of avoiding publicly funded rescues is obviously intended to produce the *ex ante* effect of introducing market discipline and reducing banks' moral hazard.[62]

Since the early days of conceptualizing bail-in, the strategy has come a long way. Already early on in the debate, some commentators perceived bail-in as something more than just a burden-sharing strategy: practitioners argued that bail-in is or should be an approach that lies somewhere between early-intervention type measures (such as "recovery plans") and resolution.[63] As we shall see below, the more recent thinking clearly depicts and designs bail-in as an early intervention measure.

The confusion around the proper role of bail-ins originates in traditional beliefs on how to deal with deteriorating banks. For a long time, our convictions were shaped by the Bagehot rule, relying on the seminal work by British economist Walter Bagehot. The intellectual father of central banking shaped the recipe for dealing with distressed bank by famously instructing central banks to lend to institutions with liquidity problems only (provided that they put up good

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[59] Chris Bates & Simon Gleeson, *Legal aspects of bank bail-ins*, LAW AND FINANCIAL MARKETS REVIEW 264 (2011).
[60] ibid.
[61] Anna Gardella, 'Bail-in and the Financing of Resolution within the SRM Framework' in EUROPEAN BANKING UNION 373, para 11.03 (Danny Busch & Guido Ferrarini, eds., 2015).
[62] Gardella ibid para 11.33.
[63] Association for Financial Markets in Europe, PREVENTION AND CURE: SECURING FINANCIAL STABILITY AFTER THE CRISIS 30 (2010).

collateral, and pay high interest rates), but not to insolvent ones.[64] To this day, the difference between a liquidity crisis and an insolvency crisis is of vital importance for all aspects of rescue efforts when it comes to a banking crisis, and yet very difficult to establish in reality, be it for political or economic reasons. Against this backdrop, regulators and central bankers around the globe have subscribed to the policy to provide government funding to banks with perceived short-term liquidity problems, but to let insolvent institutions fail. The main justification for this justification is precisely the risk of moral hazard. Were central banks to print money for the rescue of insolvent institutions, the argument goes, such institutions would be encouraged to enter into imprudent risks *ex ante* – knowing that the central bank would eventually come to their rescue.

This traditional dichotomy explains the confusion over the proper place for bail-in as an autonomous self-insurance mechanism. The first crisis years were still characterised by doctrinal thinking. Illiquidity appeared as a matter for the lender of last resort. Insolvency, but contrast, would be associated with state bail-out activities that were taxpayer funded. If, as we saw above, bail-in originally appeared as an innovative strategy to ensure that taxpayers would never again be compelled to rescue banks, then that explains that "bail-in" was perceived as a substitute to "bail-out" – beyond the intended linguistic similarities.

Over time, however, the acceptance grew that bail-in can and should help much earlier than at the insolvency stage.[65] That is evidenced for example by the fact that it is increasingly seen as a tool to overcome run risks. The learning process from the early days of conceptual resolution design to the most recent adoption of statutory frameworks using a single point of entry strategy exhibit an intellectual shift from the "redistribution" focus (investors rather than taxpayer) to a "stabilization" function, based on the understanding that bail-in is capable to address investor panic. To a certain extent, bail-in has thus been reinterpreted as a tool not only contributing to end the implicit "public subsidy" of assumed government support for systemic banks, but also to mitigate run risks.

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[64] See the explanations by Charles Goodhart, *Myths about the lender of last resort*, 2 INTERNATIONAL FINANCE 339 (1999).
[65] See, for example, Avgouleas & Goodhart, *supra* note 15, at 10.

This development is reinforced by supportive measures and innovative designs of bail-in regimes. Consider the development from the relatively thin outline of bail-in in the 2010 Dodd-Frank Act towards the detailed SPOE calibration as implemented by the FDIC on the basis of the Act.[66] It is arguably only this additional layer of SPOE strategy that makes bail-in fully operational and credible in the U.S. context.[67] The support of bail-in powers by structural subordination of earmarked bail-in debt facilitates not only the redistributory goal but is understood as avoiding destructive runs, fire sales, and contagion: in short, any transmission of the shock to the real economy.[68] Long-term subordinated debt effectively insures short-term depositors. Also in Europe, there is now a growing consensus that regulators need to apply their bail-in powers well in advance of the moment when the bank's problems become pressing, so as to avoid run risks.[69] The global consensus on initiatives that prescribe banks or bank holding companies a certain minimum bail-in-able debt further reflects this trend: only where sufficient bail-in debt is still available, can we expect that bail-in operations will be successful. Thus the international push for global standards on such requirements, culminating in the FSB's agreement on TLAC.[70]

[66] Skeel, *supra* note 5.
[67] ibid. See also Gordon & Ringe, *supra* note 40.
[68] Gordon & Ringe, *supra* note 40.
[69] Tim Skeet, 'Europe's bank bail-in rules change the game', *Financial Times* (11 September 2014) 30.
[70] Financial Stability Board, *Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution – Total Loss-absorbing Capacity (TLAC) Term Sheet* (9 November 2015), available at <http://www.financialstabilityboard.org/wp-content/uploads/TLAC-Principles-and-Term-Sheet-for-publication-final.pdf>.

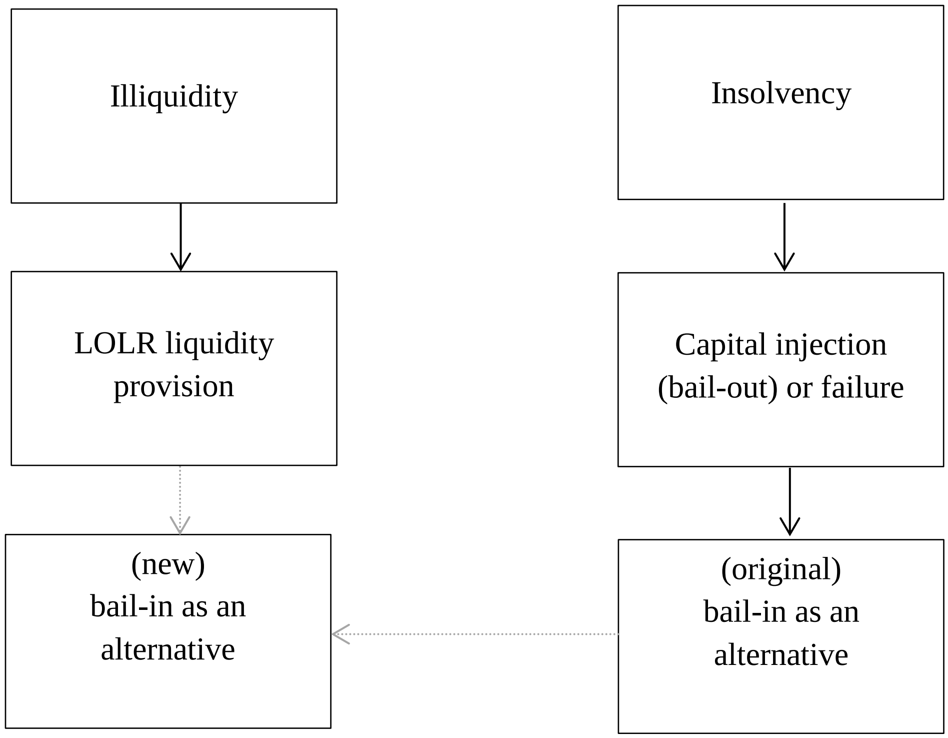

Figure 1. Bail-in in the context of insolvency and illiquidity.

Returning to Bagehot's dichotomy between illiquidity and insolvency, the learning process on how to apply bail-in has arguably moved from the insolvency stage to the (typically earlier) illiquidity stage, if not earlier (see figure 1). Whereas in Bagehot's framework, stemming the panic was an obligation of the Lender of Last Resort, this task has now been assigned to resolution authorities. Nowhere better can this connection be seen than in the U.S., where the adoption of generous bail-in powers under OLA to the FDIC went hand in hand with the severe curtailing of central bank lending powers to troubled institutions, culminating in the adoption of new section 13(3) of the Federal Reserve Act.[71] This latter provision makes it exceedingly

[71] The recently proposed Bailout Prevention Act of 2015 ("Warren-Vitter Act") would further restrict the Fed's emergency powers. See S.1320 – Bailout Prevention Act of 2015, available at <https://www.congress.gov/bill/114th-congress/senate-bill/1320/text>.

difficult for institutions to borrow from the Federal Reserve and would have made many actions the Fed took during the crisis illegal, such as the funding provided to AIG.[72]

The development of bail-in towards a panic fighting tool is to be welcomed. Further intellectual support for this new interpretation of bail-in may be found in the difficulty to distinguish a liquidity crisis from an insolvency situation. Experts assert that insolvency and illiquidity are virtually indistinguishable during crisis times,[73] or that their distinction is at least difficult to apply in practice[74] or that illiquidity is always a manifestation of a lurking insolvency problem.[75] Even banking regulators and resolution authorities have only limited access to data and the institution's accounts, as well as cognitive biases, and most of the data they receive are historical. The possibilities of carrying out a comprehensive evaluation are usually limited, due to time pressure.[76] In consequence, the lines between a temporary liquidity obstacle and a serious solvency problem are becoming increasingly blurred. Other commentators point out that banks typically fail due to liquidity issues, and only very rarely with regards to a full-blown solvency crisis.[77]

2. Trigger for bail-in

The broader debate on the appropriate goals of bail-in is mirrored in the parallel discussion on its appropriate trigger events. It is obvious that the determination of what should trigger bail-in

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[72] According to Bernanke, the revised section 13(3) was introduced as a quid pro quo for Title II of the Dodd-Frank Act. See Ben S. Bernanke, *Warren-Vitter and the lender of last resort* (May 15, 2015), BROOKINGS INSTITUTION BLOG, available at <http://www.brookings.edu/blogs/ben-bernanke/posts/2015/05/15-warren-vitter-proposal>.

[73] John H. Cochrane, *Toward a Run-Free Financial System*, in ACROSS THE GREAT DIVIDE: NEW PERSPECTIVES ON THE FINANCIAL CRISIS 197, 205 (Martin Neil Baily & John B. Taylor eds., 2014): "illiquidity and insolvency are essentially indistinguishable in a crisis"; Donald Kohn, *Panel Contribution*, as mentioned by Simon Hilpert, *Summary of the Commentary*, in THE GREAT DIVIDE, ibid., at 370. Paul Davies, *Liquidity Safety Nets for Banks*, 13 JOURNAL OF CORPORATE LAW STUDIES 287, 290-1 (2013), describes how banks' liquidity problems can readily translate into solvency problems.

[74] Xavier Freixas et al., *Lender of Last Resort: What Have We Learned Since Bagehot?*, 18 JOURNAL OF FINANCIAL SERVICES RESEARCH 64 (2000).

[75] Charles W. Calomiris, panel contribution to *Liquidity and the Role of the Lender of Last Resort*, Brookings Institution, April 30, 2014, available at <http://www.brookings.edu/events/2014/04/30-liquidity-role-lender-of-last-resort>: "So, what liquidity crises are, and always have been, is insolvency crises". See also Joshua Mitts, *Systemic Risk and Managerial Incentives in the Dodd-Frank Orderly Liquidation Authority*, 1 J. FIN. REG. 51, 52 (2015), who provides three examples where banks that were considered illiquid were in fact insolvent.

[76] Charles Goodhart, 'Myths about the Lender of Last Resort' (1999) 2 INTERNATIONAL FINANCE 339.

[77] Wilson Ervin, *Bail-in: Origins & Implementation*, Presentation, May 2015, available at <https://www.riksgalden.se/Dokument_eng/fsnc/Presentationer/fsnc2015-wilson-ervin-presentation.pdf>.

needs to strike a balance between legal certainty and early intervention to maximize the likelihood of restoring a distressed financial institution's viability.

Those advocating an insolvency test as a trigger argue that bail-in power should be initiated at a stage when a financial institution is close to being either balance-sheet or cash-flow insolvent. The principal argument in support of this approach is that bail-in implies such a substantial interference with the rights of stakeholders that it should only be possible when the bank is insolvent and in danger of liquidation. However, a key disadvantage is that this may be too late for the bail-in to achieve its intended purpose of restoring the bank to viability.

Others have argued for a substantial shift towards earlier intervention. One triggering point could be the initiation of official administration itself. Official administration is generally triggered by either qualitative (e.g., repeated breach of regulatory standards) or quantitative triggers, such as capital adequacy ratios falling below a certain level (e.g., below 50 percent or 75 percent of the norm). In some jurisdictions, a "public interest" finding may also be required. Pre-insolvency triggers would generally allow for a prompt and effective response to a bank's difficulties. The disadvantage is that, in some legal systems, the pre-solvency triggers could raise legal questions as to the position of senior creditors relative to other stakeholders (including shareholders), official interference with contractual rights, and non-discrimination, which may, as with other resolution tools, require compensation to debt holders that are adversely affected.

An influential paper by IMF staff argued that the optimal trigger for bail-in power to apply should be "close to but before balance-sheet insolvency".[78] The trigger could be based on a combination of quantitative and qualitative assessments, such as a combination of a breach of regulatory minima (e.g., minimum capital adequacy ratio) and concerns about the distressed institution's liquidity problems. The triggers, although discretionary, should not be seen as arbitrary, which means that the resolution authority should be able to decide to initiate the process of bail-in only when the trigger criteria are met.

Real-world examples of bail-in regimes provide an ambivalent picture. The statutory text appears to be undecided on the exact criteria for triggering bail-in powers, and rather provides

[78] Jianping Zhou, Virginia Rutledge, Wouter Bossu, Marc Dobler, Nadege Jassaud, and Michael Moore, *From Bail-out to Bail-in: Mandatory Debt Restructuring of Systemic Financial Institutions, IMF Staff Discussion Note SDN/12/03*, April 24, 2012, at 11.

for a number of alternatives that may equally be relied on for bail-in intervention.[79] Whether a bank is put into resolution and whether bail-in powers are used remains a discretionary decision for the authorities under most systems.[80]

For example, under Section 203(c)(4) of the Dodd-Frank Act, a financial company shall be considered to be "in default or in danger of default" (and therefore subject to OLA) if

> (a) a case has been, or likely will promptly be, commenced with respect to the financial company under the Bankruptcy Code;
>
> (b) the financial company has incurred, or is likely to incur, losses that will deplete all or substantially all of its capital, and there is no reasonable prospect for the company to avoid such depletion;
>
> (c) the assets of the financial company are, or are likely to be, less than its obligations to creditors and others; or
>
> (d) the financial company is, or is likely to be, unable to pay its obligations (other than those subject to a bona fide dispute) in the normal course of business.

The European approach is not much different. The BRRD provides for the decisive test in article 32(4),[81] where it says that

> an institution shall be deemed to be <u>failing or likely to fail</u> in one or more of the following circumstances:
>
> (a) the institution infringes or there are objective elements to support a determination that the institution will, in the near future, infringe the requirements for continuing authorisation in a way that would justify the withdrawal of the authorisation by the competent authority including but not limited to because the institution has incurred or is likely to incur losses that will deplete all or a significant amount of its own funds;

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[79] Tim Skeet, *'Bail-in' framework puts investors at risk yet much still unclear*, FIN. TIMES 30 (March 3, 2015): "As for the point of non-viability and where this point might be, regulators are not transparent on how they fix this. The complexity and vagueness of current proposed regulations makes its exact position, and identifying what might trigger it, hard to pinpoint. There are risks in all this."

[80] Simon Gleeson, *The Architecture of the BRRD – A UK Perspective* in EUROPEAN BANKING UNION 408, para 12.10 (Danny Busch & Guido Ferrarini, eds., 2015).

[81] BRRD (*supra* note 23) and SRM Regulation (*supra* note 25) have an almost identical approach. According to article 18 of the SRM Regulation, the conditions for resolvability under the SRM are similar to Article 32 BRRD. According to Article 5(2) and recital 18 SRM Regulation, the EBA guidelines also apply for the SRM.

(b) the assets of the institution are or there are objective elements to support a determination that the assets of the institution will, in the near future, be less than its liabilities;

(c) the institution is or there are objective elements to support a determination that the institution will, in the near future, be unable to pay its debts or other liabilities as they fall due;

(d) extraordinary public financial support is required except when, in order to remedy a serious disturbance in the economy of a Member State and preserve financial stability, the extraordinary public financial support takes any of the following forms: […]

(*emphases added*).

This combination of a balance sheet and a cash-flow insolvency test is combined with the careful hint ("in the near future") that *ex ante* measures would be permissible, without being compulsory. To be sure, the European framework pays lip service to the fact that "[t]he decision to place an entity under resolution should be taken before a financial entity is balance sheet insolvent and before all equity has been fully wiped out."[82] Legal certainty is however missing, and also the additional guidelines from the European Banking Authority do not add significant clarification to the question.[83] The difficulty to decide the conflict sketched out above becomes apparent in the European Commission's explanations on the first draft of the BRRD from 2012, where the Commission explained that

"The proposal establishes common parameter for triggering the application of resolution tools. The authorities shall be able to take an action when an institution is insolvent or very close to insolvency to the extent that if no action is taken the institution will be insolvent in the near future. At the same time, it is necessary to ensure that intrusive measures are triggered only when interference with the rights of stakeholders is justified. Therefore resolution measures should be implemented only if the institution is failing or likely to fail, and there is no other solution that would restore the institution within an appropriate timeframe.[84]

[82] SRM Regulation, *supra* note 25, recital 57.
[83] European Banking Authority, *Guidelines on the interpretation of the different circumstances when an institution shall be considered as failing or likely to fail under Article 32(6) of Directive 2014/59/EU*, EBA/GL/2015/07 (Aug. 6, 2015).
[84] European Commission, Document COM(2012) 280 of June 6, 2012, on art 27 of the draft BRRD (which corresponds to final article 32).

This statement exactly reflects the two conflicting sides as described above. Reportedly, during the legislative process to draft the BRRD, the issue of the triggering moment had been one of the very controversial issues, requiring prolonged negotiations between the different lawmaking bodies and Member States.[85] Another problem is that the BRRD allows resolution authorities to exclude certain liabilities from the scope of bail-in in a number of circumstances, including inter alia where they fear the risk of contagion.[86] These exceptions might well be misused as excuses for shying away from more decisive and holistic action.

The academic debate that accompanied these early regulatory attempts pushed in favour of rather earlier trigger dates. An IMF team, led by Jianping Zhou, made the case for applying bail-in before balance-sheet insolvency. In 2012, this was considered as an "extreme version" of bail in: practitioner comment found the step to apply bail-in before the actual point of insolvency innovative.[87]

Since then, however, consensus has grown that bail-in powers must be applied even earlier than that. This reflects the trend, as discussed above, that bail-in was increasingly understood as a potent tool that may be able stymie investor panics and address run risks, rather than just shifting the financial responsibility for bank failures to bondholders. The working group on bail-in at the International Capital Markets Association (ICMA) summarized the state of the art thinking in 2014 with explaining that "[r]egulators will want to be able to conduct an orderly bail-in or resolution *well before investors start the panic*".[88] In a similar vein, Larry Wall,

[85] Alex Barker and Peter Spiegel, *ECB policy maker calls for currency bloc bank crisis plan*, FIN. TIMES 6 (March 31, 2012); Brooke Masters, *IMF looks at pros and cons of 'bail-in' regimes for banks*, FIN. TIMES 8 (April 25, 2012).

[86] Recital 72 of the BRRD states that "Resolution authorities should be able to exclude or partially exclude liabilities in a number of circumstances including where it is not possible to bail-in such liabilities within a reasonable timeframe, the exclusion is strictly necessary and is proportionate to achieving the continuity of critical functions and core business lines or the application of the bail-in tool to liabilities would cause a destruction in value such that losses borne by other creditors would be higher than if those liabilities were not excluded from bail-in. Resolution authorities should be able to exclude or partially exclude liabilities where necessary to avoid the spreading of contagion and financial instability which may cause serious disturbance to the economy of a Member State. When carrying out those assessments, resolution authorities should give consideration to the consequences of a potential bail-in of liabilities stemming from eligible deposits held by natural persons and micro, small and medium-sized enterprises above the coverage level provided for in Directive 2014/49/EU".

[87] Masters, *supra* note 85, quotes Barney Reynolds, partner at Shearman & Sterling. "In their view governments should step in when a bank fell short of regulatory capital requirements – rather than having to wait until a bank got to the point of actual insolvency. The authors also call for wiping out equity shareholders and limiting the ability of courts to intervene to the question of determining damages after the fact".

[88] Tim Skeet, chairman of the ICMA working group on bail-in, in a 2014 article for the Financial Times. 'Europe's bank bail-in rules change the game', FIN. TIMES 30 (Sept. 11, 2014).

Executive Director at the Fed, draws attention to the fact the timely intervention is paramount for the achievement of a successful bail-in operation.[89]

Both contributions essentially rely on the insight that bail-in can only work if sufficient bail-in-able debt is available to cover the losses. If instead the triggering moment is set too late, losses may have reached the point where the bail-in debt is inadequate, jeopardizing the prospect of a credible resolution.[90] To the extent that bail-in debt is long-term and thus not runnable, sufficient financial liabilities remain that are runnable (typically, the non-insured financial liabilities are the starting point).[91] This, in turn, may lead to an additional acceleration of a downward spiral as creditors and other stakeholders will lose their faith in the institution and seek to withdraw their exposure, causing further liquidity problems.[92] In contrast, if an institution is resolved in a timely manner, then other investors (who are not at risk of being bailed in) would be fully protected. In fact, this is the precise goal of the SPOE strategy: intervene at the holding company only, and let critical subsidiaries, transferred to a bridge bank, be unaffected and continue to operate normally.[93] Where this succeeds, most of these regular creditors and other stakeholders will continue normal operations with their subsidiary even if they anticipate that the banking group may soon be put into resolution. The willingness of these other parties to continue their business greatly facilitates the reorganization of the failing banking group into a new, viable operation.

Drawing these different issues together, there is a strong case for early intervention and applying bail-in early in order to make maximum use of its potential. Legislation should reflect this strategy, and the requirements for intervention should be revised to become clearer and leave less discretion as to the point of intervention.

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[89] Larry D. Wall, *Bail-in Debt: Will the Supervisors Pull the Trigger in Time?*, FEDERAL RESERVE BANK OF ATLANTA, CENFIS PUBLICATION, August 2014, available at <https://www.frbatlanta.org/cenfis/publications/notesfromthevault/1408.aspx>.
[90] Wall ibid.
[91] This point is emphasized by McAndrews et al., *supra* note 45.
[92] Wall ibid. See also McAndrews et al., *supra* note 45, at p. 243, pointing out the run risk of holders of uninsured financial liabilities in the presence of deposit insurance. “As a result, early intervention by the regulator is even more important.”
[93] Gordon & Ringe, *supra* notes 37 and 40.

3. Will they intervene?

The discussion so far has led to the two-fold result that the conceptual understanding of bank bail-ins has developed from an insolvency-based restructuring mechanism to a useful practice that may help overcome investor panic and run risks. As we saw, this should be reflected in setting an early intervention trigger for regulatory powers to apply bail-in.

Even where this is the case, however, doubts do remain. Critical comment maintains that regulators have powerful incentives to delay intervention and to make use of their bail-in powers due to behavioural biases.

For example, Anat Admati and Martin Hellwig claim that the complications associated with complex international banking groups will make regulators and resolution authorities reluctant to trigger bail-in powers to deal with them.[94] Thomas Hoenig, now vice chairman of the FDIC, noted in 2011 that "there are important weaknesses with this framework. In particular, the final decision on solvency is not market driven but rests with different regulatory agencies and finally with the Secretary of the Treasury, which will bring political considerations into what should be a financial determination".[95] This argument is made with regard to the U.S. system, but could be used *a fortiori* for the even more complicated and opaque decision-making process in Europe too.[96]

This argument gains even more force when supported with behavioural insights and findings from psychology. Thus, it has been claimed that public authorities when faced with a failing giant banking group would alternate between stages of denial and superficial bargaining,

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[94] Anat Admati & Martin Hellwig, THE BANKERS' NEW CLOTHES. WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT (Princeton University Press, 2013) 77.

[95] Quoted according to the Written Testimony of Deniz Anginer for the hearing "Examining the GAO Report on Government Support for Bank Holding Companies" before the Senate Subcommittee on Financial Institutions and Consumer Protection United States Senate, 31 July 2014, available at <http://www.denizanginer.com/wp-content/uploads/2014/08/Senate-Testimony.pdf>. See also Editorial Comment, *Still Too Big, Still Can't Fail*, WALL STREET JOURNAL EUROPE (March 7, 2011) 11. At the time, Mr Hoenig was chief executive of the Tenth District Federal Reserve Bank in Kansas City.

[96] See, for example, Martin Hellwig, *Yes Virginia, There is a European Banking Union! But It May Not Make Your Wishes Come True*, Preprints of the Max Planck Institute for Research on Collective Goods Bonn 2014/12 (August 2014) 23: "given the uncertainties about how systemically important functions are to be maintained and funded, I expect that, in a clutch, most governments will decide that it is better to avoid a resolution procedure altogether".

rather than decisive action.[97] Behavioural research confirms that public servants, faced with complex decisions and unknown risks, are highly risk averse and tend to underestimate these risks.[98] Regulatory capture and cognitive biases aggravate this problem. Whilst for now, in the immediate time period after the serious crisis, the threats and risks of banking failure are still very present, memories are already beginning to fade. The longer the time lag between the actual need to deal with a failing global SIFI and the last banking crisis, the more difficult it will be for the civil servant in question to properly estimate the potential costs of the SIFI's failure.[99]

First experiences with the new European framework for bank bail-ins, the BRRD, confirm a reluctance of regulators to apply the new rules. This concerns in particular Italy, where confidence in the strength of the banking sector has faded in recent months. A number of smaller banks exposed serious weaknesses, but the government designed alternative ways of how to deal with them – instead of applying the bail-in rules mandated by BRRD. First, four local lenders were placed in resolution in November 2015.[100] The operation relied on substantial state guarantees and was obviously pushed through quickly in order to avoid the tougher BRRD bail-in rules that only came in effect on January 1, 2016.[101] A similar operation was pushed through in Portugal, concerning Novo Banco, the good bank created out of failed lender Banco Espírito Santo, as late as December 29, 2015.[102] In March 2016, the high pile of non-performing loans on their balance sheets put two other Italian banks under serious stress. Despite the bail-in rules now being fully applicable, the Italian government found another way of bypassing them: it "encouraged" a private solution, namely the creation of Atlas, a private bank rescue fund, which

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[97] Admati & Hellwig, *supra* note 94, here rely on Edward J. Kane, *Missing elements in US financial reform: A Kübler-Ross interpretation of the inadequacy of the Dodd-Frank Act*, 36 JOURNAL OF BANKING & FINANCE 654, 655 (2012), who in turn relies on Swiss psychiatrist Elisabeth Kübler-Ross and her 1969 book, ON DEATH AND DYING.
[98] Eldar Shafir (ed), THE BEHAVIORAL FOUNDATIONS OF PUBLIC POLICY (Princeton University Press 2012)
[99] David A. Skeel, Jr., 'Single Point of Entry and the Bankruptcy Alternative' in Martin Neil Baily and John B. Taylor (eds), *Across the Great Divide: New Perspectives on the Financial Crisis* (Hoover Institution Press, 2014) 311, 323; see already Kenneth Ayotte & David A. Skeel, Jr., *Bankruptcy or Bailouts?*, 35 JOURNAL OF CORPORATION LAW 469, 497 (2010).
[100] See Banca d'Italia, *Information on resolution of Banca Marche, Banca Popolare dell'Etruria e del Lazio, Cassa di Risparmio di Chieti, and Cassa di Risparmio di Ferrara crises* (Nov. 22, 2015), available at <https://www.bancaditalia.it/media/approfondimenti/2015/info-soluzione-crisi/index.html>.
[101] Rachel Sanderson & James Mackintosh, *Rome Rushes Through Bank Rescues Before EU Bail-In Rules Start*, FIN. TIMES 6 (Nov. 24, 2015); James Politi, *Bail-in tremors reverberate beyond Italy*, FIN. TIMES 3 (Dec. 23, 2015).
[102] Martin Arnold & Thomas Hale, *Bondholders cry foul over bank bail-ins*, FIN. TIMES, Jan. 8, 2016.

was to underwrite the capital increases of Banca Popolare di Vicenza and Veneto Banca.[103] These few examples demonstrate the reluctance of regulators to actually apply bail-in rules over fears of imposing losses on retail investors.

It is readily understandable that powerful incentives push regulators towards no-action, avoidance action or, at best, slow action.[104] In a complex world with many uncertainties and imponderable risks, nobody wants to be the one "beginning the war" or, more to the point, pulling the plug of a banking group. Where the decision later turns out to have been premature, the civil servant herself – or the state, as the case may be – may face liability risks and subsequent public condemnation due to hindsight biases. Moreover, links between powerful banks and the state are legendary: preserving banks means keeping a strong business factor, employment, and a source of local finance.[105] Political motivations also play a role: where retail investors would be affected by bail-in, politicians fear public anger and backlash.[106]

All of this may account for the fact that in the past, states have invariably resorted to bail-outs, frequently without any creditor involvement.[107] Further, looking at previous banking crises, David Skeel demonstrates that "regulators have rarely if ever intervened in a timely fashion".[108] In fact, as he shows, the lack of public authority's decisiveness already was already a problem during the 1980s U.S. savings and loan crisis.[109] As a consequence, lawmakers enacted the so-called "prompt corrective action" rules, requiring early regulatory intervention, precisely to

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[103] Rachel Sanderson & Martin Arnold, *Atlas struggles to support weight of Italy's languid banks*, FIN. TIMES 6 (May 5, 2016); Tyler Davies, *Who's afraid of the big bad bail-in?*, GLOBALCAPITAL, May 10, 2016, available at <http://www.globalcapital.com/article/xqrdfvpw1jv9/who-is-afraid-of-the-big-bad-bail-in>.

[104] McAndrews et al., *supra* note 45, at p. 230, "plausibly" assume that the resolution authority "is 'slow' in the sense that it will shut down and resolve a firm only once its (book) equity capital is exhausted." See also ibid. footnote 16.

[105] This problem has nicely been summed up by Mike Mayo, EXILE ON WALL STREET – ONE ANALYST'S FIGHT TO SAVE THE BIG BANKS FROM THEMSELVES 148 (John Wiley, 2012): "The pain of letting one of these institutions go under is almost always too much for politicians and our government to bear".

[106] Reportedly, a pensioner who held subordinated debt in one of the four Italian banks restructured in November 2015 committed suicide in the immediate aftermath. This episode was widely reported and created a downright hostility towards bail-in in Italy.

[107] Ayotte & Skeel, *supra* note 99.

[108] David A Skeel, Jr., *Single Point of Entry and the Bankruptcy Alternative*, in ACROSS THE GREAT DIVIDE: NEW PERSPECTIVES ON THE FINANCIAL CRISIS 311, 323 (Martin Neil Baily & John B. Taylor, eds., Hoover Institution Press, 2014).

[109] ibid.

address this problem. Even this step has arguably left room for regulatory discretion and ultimately not produced a satisfactory regulatory response.[110]

To be sure, much has been done to improve these problems. The Dodd-Frank rules and the SPOE approach provide for a much more credible and realistic prospect of appropriately handling a distressed banking group than before, and international agreements on coordinated approaches are currently being developed.[111] And in Europe, the emergence of the Banking Union and its federalized "Single Resolution Mechanism" have taken the decision to resolve the largest banks out of the hands of the EU Member States, thereby hopefully overcoming most national biases and any potential for regulatory forbearance. And to the extent that contagion is the greatest source of worry, we mentioned above that rules are in the making that restrict the possibility of banks to hold each other's bail-in-able debt.[112]

Nevertheless, this problem should be taken seriously. One way how lawmakers could contribute to more legal certainty and ensure that resolution authorities do intervene would be to clarify the bail-in triggering conditions, to make them mandatory, and to restrict any potential loopholes that remain. Right now, as we saw above, the conditions for bail-in are all relatively fuzzy and discretionary. A further avenue of improvement would be to reduce the number of regulatory agencies or bodies that are involved in the process. These steps are currently underway.

III. Liquidity provision in and post resolution

We saw above that the role of bail-in and bank resolution has changed over time, from when it was first conceived. The metamorphosis is one from a purely redistributory tool that shifts the

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[110] See the roundtable contribution by William Lang, Office of the Comptroller of the Currency, in THE SAVINGS AND LOAN CRISIS: LESSONS FROM A REGULATORY FAILURE 340 (James R. Barth, Susanne Trimbath & Glenn Yago, eds., Kluwer Academic Publishers and Milken Institute 2004).

[111] See, for example, the accord between FDIC and Bank of England, *Resolving Globally Active, Systemically Important, Financial Institutions* (Dec. 10, 2012), available at <http://www.fdic.gov/about/srac/2012/gsifi.pdf>. The FDIC is currently negotiating with other regulators worldwide. See Bloomberg Business, *FDIC's Gruenberg on Resolution Strategy for Banks* (Nov. 21, 2013), available at <http://www.bloomberg.com/video/fdic-s-gruenberg-on-resolution-strategy-forbanks-g5YN2PiESFyCrIsIuANWJQ.html> (explaining ongoing international negotiations in pursuit of US–UK model).

[112] See *supra* text accompanying note 56.

bank's loss allocation from the taxpayer to the investors, towards a solution that is capable of addressing additional goals in resolution, mostly the avoidance of market panics and run risks. The argument so far has been that this refined objective of the bail-in strategy should be accompanied by earlier intervention triggers and clearer and less discretionary intervention instructions.

This section looks at the question of what the changed role of bail-in means for the role of liquidity provision by the Lender of Last Resort during and after resolution. The main argument developed here is that the re-defined objective of the bail-in strategy requires extended liquidity provision powers for lender of last resort during and after resolution. This relies on the insight that for bail-in to effectively address market panics, resolution authorities require significant amounts of liquidity at their disposal. The design of bail-in may have changed in its objective, but the possibility or the mandate of providing liquidity has not kept pace with the redefined objective.

To unpack this argument, I will first discuss the current status of liquidity provision during and post resolution. Subsequently, I will make suggestions as to how this could be improved in order for bail-in to live up to its redefined objectives.

1. Liquidity in resolution

The starting point is that liquidity is not a key priority for bail-in at present, at least not under its original design. Remember that bail-in was originally conceived as a redistribution tool that would shift the loss allocation to the bank's creditors in order to avoid taxpayer rescues.

All that bail-in does, technically, is to write down the firm's losses, and to convert long-term unsecured credit claims of the failed SIFI into equity in the new institution, via administrative action under law.[113]

The basic philosophy of bail-in is thus that the financial firm is being *recapitalized*, but crucially not *reliquidized*. A sufficiently recapitalized firm, so the theory goes, will be able to access funding on the market. This is very much the thinking of the FDIC, which noted in its

[113] See FDIC, *Notice and Request for Comments, Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy*, (2013) 78 FEDERAL REGISTER 76614, 76616 ("[Long-term] debt in the failed company would be converted into equity that would serve to ensure that the new operations would be well-capitalized.").

2013 concept release on single point entry that "[i]t is anticipated that funding the bridge financial company would initially be the top priority for its new management. In raising new funds the bridge would have some substantial advantages over its predecessor. The bridge financial company would have a strong balance sheet with assets significantly greater than liabilities since unsecured debt obligations would be left as claims in the receivership while all assets will be transferred. As a result, the FDIC expects the bridge financial company and its subsidiaries to be in a position to borrow from customary sources in the private markets in order to meet liquidity needs".[114]

However, alongside accessing funding on its own, a limited amount of funding would be available through the Orderly Liquidation Fund ("OLF"), if necessary, for the brief transitional period of reorganisation. As this process is unfolding, the FDIC can supply liquidity to the newly capitalized bank, either through a direct cash infusion from the OLF, generated through a drawdown on a Treasury line of credit, or through the guarantee of new debt obligations issued by the bank.[115] The FDIC has repeatedly stressed that such funding would not be loss-absorbing and may not be used to provide capital support to the institution, but only for liquidity purposes.[116]

This liquidity could come from the central bank's published schemes, or be provided on a bilateral, individually tailored basis. Within the EU, the issue of liquidity through a lender of last resort is not address at all. Any liquidity provided from public sources would need to comply with the EU state aid framework so that any distorting of the Internal Market can be avoided. And the financial firm would be expected to make a gradual return to using private sector sources of funding, as soon as confidence in it returns.

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[114] FDIC, *supra* note 113, at 76617.

[115] See DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT, Pub. L. No. 111-203, §§ 204(d), 210(n)(8)(B), 124 Stat. 1376, 1455, 1598 (2010) (codified at 12 U.S.C. §§ 5384(d), 5390(n)(8)(B)) (identifying how FDIC may supply "funds for the orderly liquidation of a covered financial company" and noting FDIC may issue contingent liabilities during receivership). As Bridgeco is incorporated and operated by the FDIC, these obligations are full faith and credit obligations of the U.S. government.

[116] Henry Engler, *FDIC adds more flesh to "single point of entry" resolution plans, but questions remain*, REUTERS FINANCIAL REGULATORY FORUM, Dec. 18, 2013, available at <http://blogs.reuters.com/financial-regulatory-forum/2013/12/18/fdic-adds-more-flesh-to-single-point-of-entry-resolution-plans-but-questions-remain/>.

2. The case for Lender of Last Resort funding in resolution

Such resolution funding and liquidity provision is badly needed. To see why, we need to revisit the underlying theory. After a successful reorganization following resolution and applying bail-in powers, the bank should be fully capitalized and thus solvent. It is however important to note once more the difference between capital and liquidity. Assets need to have real and measurable value to provide capital, but they do not have to be liquid to do so (both liquid and illiquid assets may count as capital). Consequently, a recapitalization operation as done by bail-in does not necessarily entail that the new assets received are fully liquid.

Bail-in powers and resolution as a whole will however not be successful unless the recapitalized institution has access to sufficient liquidity. A recapitalized bank needs to announce a credible liquidity program by "Sunday night" of the crucial resolution weekend before markets open again. According to standard theory, there should be no need to provide additional funding to such an entity. If the market players have sufficient trust in the newly capitalized bank, the solvent institution should be able to convert any illiquid assets into cash and thus continue its business unaffected. But, crucially, the financial crisis bore witness to the fact that this is not a realistic assumption in a situation of general market panic. Where markets become dysfunctional, even healthy and solid banks may not get enough liquidity from the private sector.[117]

In consequence, there is a strong case for why bail-in needs to be supported by a robust lender of last resort. If we agree that a bail-in strategy pursues not only redistributory goals but should also be able to calm down investor panic, such liquidity provision is essential for bail-in to work.

In the U.S. context, as long as we are within the scope of Dodd-Frank Title II, the OLF has access to a credit line at the Treasury, so sufficient liquidity is ensured. In other proceedings, such as under the regular Bankruptcy Code, the existence of a LOLR is less clear, and the ability of the Federal Reserve to provide liquidity to individual non-bank institutions has been

[117] See Lucy Chennells & Venetia Wingfield, *Bank failure and bail-in: an introduction*, 55 QUARTERLY BULLETIN OF THE BANK OF ENGLAND 228, 236 (2015): "[…] it may be the case that, in the short term, a firm requires liquidity as a temporary backstop if market participants are not immediately willing to lend to it." In fact, the need for LOLR functions during normal times and bank financing through discount window (Fed) or Emergency Liquidity Assistance (ECB) is proof for this proposition.

dramatically curtailed following the implementation of the Dodd-Frank Act.[118] Commentators have severely criticized these restrictions as politically and symbolically motivated.[119] Very much in line with the line of thought pursued here, some have called for the installation of a strong LOLR in such situations.[120]

In Europe, the situation is even less well organized. Resolution funding is to be provided in the Eurozone by a Single Resolution Fund (SRF), which is financed by annual contributions from the banks protected by it. Under the BRRD, which applies also to the other EU Member States that are not part of the Banking Union, the issue of liquidity provision is not mentioned at all.[121] The SRF will be built up during the transitional period of eight years (2016-2023) and shall reach at least 1% of covered deposits of all credit institutions authorized in the participating Member States, currently estimated at roughly EUR 55 billion.[122] The resolution authority would use the SRF to ensure the operability of the failing bank in the short run; the Commission emphasizes that it is not a bailout fund designed to take losses.[123] The creation of the SRF proved to be one of the most politically controversial aspects of building the Banking Union.[124]

There is wide agreement that the main problem with the SRF is that its target size in the region of just EUR 55 billion is way too small.[125] This was even noted by the ECB.[126] To

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118 Section 13(3) of the Federal Reserve Act.
119 See, e.g., Peter R. Fisher, *Mistakes Made and Lessons (Being) Learned – Implications for the Fed's Mandate*, in ACROSS THE GREAT DIVIDE: NEW PERSPECTIVES ON THE FINANCIAL CRISIS 127, 131 ff. (Martin Neil Baily & John B. Taylor eds., 2014).
120 Randall D. Guynn, panel contribution to *Liquidity and the Role of the Lender of Last Resort*, Brookings Institution, April 30, 2014, available at <http://www.brookings.edu/events/2014/04/30-liquidity-role-lender-of-last-resort>.
121 Hellwig, *supra* note 96, at 20.
122 Single Resolution Board, Banking Union – Single Resolution Board fully operational as of 1 January 2016, Press Release of 30 November 2015, available at <http://srb.europa.eu/docs/20151130-press-release_en.pdf>. On the target level of the SRF, see SRM Regulation, *supra* note 25, recital 105. However, the Commission will decide whether a percentage of total liabilities of financial institutions would be "a more appropriate basis" (ibid).
123 SRM Proposal, supra note 21, at 13.
124 For more detail, see Gordon & Ringe, *supra* note 40, at 1347. See for example Benjamin Fox, 'Brussels on Collision Course with Germany on Banking Union' EU Observer (10 July 2013), available at <https://euobserver.com/economic/120822> ("Just as controversial is the concept of a single bank resolution fund…").
125 See for example, Hellwig, *supra* note 96, at 19. Mark Wall, Deutsche Bank's chief Eurozone economist, and academic economist Paul De Grauwe have both considered the Fund insufficient: see See John O'Donnell & Tom Körkemeier, *Europe Strikes Deal to Complete Banking Union*, REUTERS (March 20, 2014), available at <http://uk.reuters.com/article/2014/03/20/uk-eu-bankingunion-idUKBREA2J0IW20140320>. For a more optimistic view, see Thomas Huertas & María J. Nieto, *How much is enough? The case of the Resolution Fund in Europe*, Vox CEPR Policy Portal 18 March 2014, available at <http://www.voxeu.org/article/ensuring-european-resolution-fund-

partially remedy this problem, the European Parliament succeeded to push through that SRF may borrow on the capital markets to augment its capacity.[127] Further, the Parliament pushed forward the target date for full funding to eight years instead of ten years after the SRM's coming into force by insisting on an earlier date for the mutualization of existing national resolution schemes.[128] Despite these changes, the SRF, as it has been adopted, cannot credibly support the resolution of a SIFI. The capital market borrowing option is insufficient – governments will not endorse such loans, and the Fund may be able to tap the European Stability Mechanism (ESM) only in exceptional circumstances.[129] Finally, the eight-year transition period means that the Fund will not have any clout at all during its first years. This messy arrangement is not what we can call a reliable lender of last resort. The EU Banking Union framework desperately needs a more reliable source of liquidity, as Mario Draghi himself argued.[130]

The most straightforward way of addressing the problem would be to follow the line of thought developed in this paper: providing liquidity to a bank in and after resolution through a lender of last resort is crucial for the success of bail-in to work, and liquidity provision would thus appear to be a key objective of the central bank. The emergence of a recapitalized bank after resolution is a true "Bagehot moment", where the institution is undoubtedly solvent, but very likely to be illiquid. In one word, it is a problem that should be entrusted to the central bank.

It is in this logic that the newly imposed restrictions to section 13(3) of the Federal Reserve Act and its new lack of flexibility for central bank funding should be reconsidered. Driven by the desire to reduce public support for profligate banks, the Dodd Frank Act severely

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large-enough>; Willem Pieter De Groen & Daniel Gros, *Estimating the Bridge Financing Needs of the Single Resolution Fund: How expensive is it to resolve a bank?*, CEPS Special Report No. 122 (November 2015).

[126] See John O'Donnell & Tom Körkemeier, 'Europe Strikes Deal to Complete Banking Union' Reuters (20 March 2014), available at <http://uk.reuters.com/article/2014/03/20/uk-eu-bankingunion-idUKBREA2J0IW20140320> (noting ECB's view).

[127] See SRM Regulation, *supra* note 25, art. 74, at 79 ("The Board shall contract for the Fund financial arrangements, including, where possible, public financial arrangements . . . ."); see also Press Release, Parliament Negotiators, supra note 198, at 1 ("[A] system will be established, before the regulation enters into force, which will enable the bank-financed single resolution fund to borrow.").

[128] See European Parliament, *Parliament Negotiators Rescue Seriously Damaged Bank Resolution System* (Press Release, Mar. 20, 2014), available at <http://www.europarl.europa.eu/pdfs/news/expert/infopress/20140319IPR39310/20140319IPR39310_en.pdf>.

[129] See Statement of Eurogroup and ECOFIN Ministers on the SRM Backstop (Dec. 18, 2013), available at <http://www.eurozone.europa.eu/media/502738/20131218-SRMbackstop-statement.pdf> ("In the transition period, bridge financing will be available either from national sources, backed by bank levies, or from the ESM in line with agreed procedures.").

[130] Benjamin Fox, *Eurozone bank fund needs credit line, Draghi says*, EU OBSERVER (September 24, 2013), available at <https://euobserver.com/economic/121545>.

curtailed the possibility of the Fed to provide liquidity assistance to non-bank institutions. Key protagonists of the crisis years such as former Fed Chairman Ben Bernanke maintain however that the availability of flexibility for liquidity provision was a crucial component for the successful restoration of market confidence.[131] The economic case for an overly restrictive section 13(3) is therefore questionable.[132] A related point is that the identity of a lender of last resort for financial institutions that have been recapitalized under Title I of the Dodd-Frank Act is unclear. Both issues would have to be addressed to make the U.S. framework for failing financial institutions robust and coherent.

In the European context, all eyes should be on the ECB to fill the gap and provide liquidity with the objective of ensuring a smooth transition of the recovered bank to return to regular business operations.[133] The ECB is the only player in the European context with access to unlimited resources and thus the only credible provider of a liquidity backstop. At the same time, the ECB must be prohibited from taking losses: What is required is quick access to liquidity without loss-bearing obligation. The ECB would thus have to demand that the institution pledge any unencumbered asset it may have. Further, to ensure that the central bank does not incur any losses, the already established SRF could be made useful. It could be redesigned to provide collateral to ECB liquidity provision against any losses the latter might suffer if the resolved bank were to default in repaying the received funds and if the collateral is insufficient.[134] The SRF might also be utilized to guarantee private provision of liquidity.

In case this is politically not consensual, a second-best alternative would be to use the European Stability Mechanism (ESM) as a backstop, as currently proposed by the French government.[135] Originally set up as the European bail-out fund to provide financial assistance to Eurozone states in financing difficulties, it responded to the sovereign debt crisis. After completion of the Banking Union, the ESM's mandate was expanded by the "Direct Recapitalisation Instrument" (DRI), which allows direct lending to systemically important

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[131] Bernanke, *supra* note 72.
[132] Kohn, *supra* note 73.
[133] See for this argument in a different context Gordon & Ringe, *supra* note 40, at 1354 ff. There is nothing in the BRRD or the SRM Regulation that would rule out provision of liquidity by the central bank in the event of resolution.
[134] Similar Huertas & Nieta, *supra* note 125.
[135] Jim Brunsden, *A Franco-German Amsterdam clash on banking union music*, FT BRUSSELS BLOG (Apr. 22, 2016), <https://next.ft.com/content/3a8609b2-771b-34d9-b5e3-49f7a42fe41d>.

financial institutions under certain circumstances.[136] In some way, the ESM thus already plays the role of a backstop.[137] ECB funding would nevertheless be preferable, since ESM funds are limited, and the maximum lending capacity amounts to EUR 500 billion. That is substantially more reassuring than the volume of the SRF, but not sufficient for a systemic crisis where not one, but several SIFIs may be at risk simultaneously. Further, funding from the ECB is easier deployable than the politically controlled ESM.

This paper does not intend to work out the details. The more modest purpose of this contribution is to demonstrate the need to provide ample amounts of liquidity in and immediately after a resolution. Bail-in, as we said initially, under the current design only ensures the recapitalization of the financial institution, with the goal of restoring the bank's solvency. As soon as we intend to employ bail-in beyond this to stem investor panic, bail-in must also cater for liquidity. In other words, the reinterpretation of the purpose that we seek to achieve with bail-in requires additional measures to ensure the institution's liquidity.

Intuitively, this becomes clear by comparing bail-in to its competitors, namely chapter 11: recapitalizations under chapter 11 typically include both, a solvency component and a liquidity provision element. The absence of a liquidity program under bail-in thus needs to be ensured.[138] The need may be amplified by potential reputational problems in resolution.[139] A strong lender of last resort is the only credible player to accommodate such situations.

IV. Conclusion

This paper has revisited the concept of bail-in, which has gained support with regulators and policy makers around the globe. We saw that bail-in and its purpose have developed over the few

[136] European Stability Mechanism, *ESM direct bank recapitalisation instrument adopted*, Press Release, Dec. 8, 2014, available at <http://www.esm.europa.eu/press/releases/esm-direct-bank-recapitalisation-instrument-adopted.htm?lang=-en>. See also European Stability Mechanism, *FAQ on the ESM direct recapitalisation instrument*, available at <http://www.esm.europa.eu/pdf/2014-12-08%20FAQ%20DRI.pdf>.

[137] However, at present, DRI funding is subject to a number of requirements, which may have to be reconsidered for the purposes proposed here. See Christos Hadjiemmanuil, *Bank Resolution Financing in the Banking Union*, LSE Law, Society and Economy Working Papers 6/2015, p. 30 ff., available at <https://www.lse.ac.uk/collections/law/wps/WPS2015-06_Hadjiemmanuil.pdf>.

[138] Liquidity is normally provided by a banking group after a solvency plan is agreed (DIP financing).

[139] Avgouleas & Goodhart, *supra* note 15, at 9. See also ibid. at 23: "a group in resolution may require considerable official liquidity support".

years that it has been implemented, moving from a "redistributory" purpose of sparing taxpayers from rescuing banks to a "market stabilizing" function of stemming panics and avoiding run risks.

Whilst this trend is to be welcomed, it requires a number of changes to the present legal frameworks that are in place in many jurisdictions. Issues to be addressed include, *inter alia*, to formulate appropriate criteria to trigger bail-in measures and to overcome a natural reluctance by resolution authorities to intervene and apply bail-in powers. There is a strong case for early intervention triggers. Further, liquidity provision during resolution is crucial to make bail-in credible and should be provided by a robust lender of last resort. The paper places bail-in as a conceptual tool into the broader debate of how to deal with distressed banks and derives from there a number of concrete regulatory proposals.