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Tobias H. Tröger

Why MREL Won't Help Much

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House of Finance | Goethe University
Theodor-W.-Adorno-Platz 3 | 60323 Frankfurt am Main

Tel. +49 69 798 34006 | Fax +49 69 798 33910
info@safe-frankfurt.de | www.safe-frankfurt.de

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Tobias H. Tröger

Why MREL Won't Help Much: Minimum requirements for bail -in capital as insufficient remedy for defunct private sector involvement under the European bank resolution framework

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Why MREL Won't Help Much

Minimum requirements for bail-in capital as an insufficient remedy for defunct private sector involvement under the European bank resolution framework

(January 28, 2018)

Tobias H. Tröger
Professor of Private Law, Trade and Business Law, Jurisprudence
Goethe-University, Frankfurt am Main, Department of Law
Theodor-W.-Adorno Platz 3
60629 Frankfurt am Main
Germany
Phone +49 69 798 34236
Fax +49 69 798 34536
troeger@jur.uni-frankfurt.de

Abstract: *The bail-in tool as implemented in the European bank resolution framework suffers from severe shortcomings. To some extent, the regulatory framework can remove the impediments to the desirable incentive effect of private sector involvement (PSI) emanating from a lack of predictability of outcomes, if it compels banks to issue a sufficient minimum of high-quality, easy to bail-in (subordinated) liabilities. Yet, even the limited improvements any prescription of bail-in capital can offer for PSI's operational effectiveness seem compromised in important respects.*

The main problem, echoing the general concerns scholars voiced against the European bail-in regime, is that the specifications for minimum requirements for own funds and eligible liabilities (MREL) are also highly detailed and discretionary and thus fail to fully alleviate the predicament of investors in bail-in debt. Quite importantly, given the character of typical MREL instruments as non-runnable long-term debt, even if investors are able to correctly gauge the relevant risk of PSI in a bank's failure at the time of purchase, subsequent adjustments of MREL prescriptions by competent or resolution authorities potentially change the risk profile of the pertinent instruments. Therefore, original pricing decisions, and the market discipline that follows from them may prove inadequate and so may.

The pending European legislation aims to implement the already complex specifications of the Financial Stability Board (FSB) for Total Loss-Absorbing Capacity (TLAC) by making very detailed and case-specific amendments to both the regulatory capital and the resolution regime with an exorbitant emphasis on proportionality and technical fine-tuning. Omitted from this approach, *however, is the key policy objective of enhanced market discipline through predictable PSI: it is barely conceivable that the pricing of MREL instruments reflects an accurate risk assessment of investors because of the many discretionary choices a multitude of agencies are supposed to make and revisit in the administration of the new regime. To prove this conclusion, this paper looks in detail at the regulatory objectives of the BRRD's prescriptions for MREL and their implementation in the prospectively amended European supervisory and resolution framework. It concludes with policy recommendations based on the prior analysis.*

JEL classification: G01, G18, G21, G28, K22, K23.

Keywords: MREL, TLAC, G-SIB, bail-in, bank resolution

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Why MREL Won’t Help Much

Minimum requirements for bail-in capital as an insufficient remedy for defunct private sector involvement under the European bank resolution framework

Tobias H. Tröger*

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I. Introduction

1. Problems of the bail-in tool

The bail-in tool as implemented in the European bank resolution framework suffers from severe shortcomings.[1] The Bank Resolution and Recovery Directive (BRRD)[2] and its identical twin in the Single

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* Professor of Private Law, Trade and Business Law, Jurisprudence, Goethe University Frankfurt am Main, Program Director Research Center Sustainable Architecture for Finance in Europe (SAFE). Associated Professor Institute of Monetary and Financial Stability (IMFS). The author gratefully acknowledges financial support of the LOEWE Research Center Sustainable Architecture for Finance in Europe (SAFE).

[1] See Tobias H. Tröger ‘Too Complex to Work’ (2017) SAFE Working Paper No. 179 <http://ssrn.com/abstract=2478647> accessed 17 March 2018; for a more fundamental critique of bail-in as an *a priori*-deficient regulatory concept see Emilios Avgouleas and Charles Goodhart, ‘A Critical Evaluation of Bail-Ins as Bank Recapitalisation Mechanisms’ (2014) Centre for Economic Policy Research (CEPR) Discussion Paper 10065, 1 <http://ssrn.com/abstract=2478647> accessed 17 March 2018.

[2] 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,

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Resolution Mechanism Regulation (SRM Regulation)[3] provide for a highly complicated and detailed regulatory framework that embeds the bail-in tool intricately into the resolution process and gives ample discretion to a multitude of authorities in compelling private sector involvement (PSI), i.e. bearing the losses of a failed bank. The institutional setup requires significant inter-agency cooperation and information sharing. This publicly administered ad hoc bail-in tool under the BRRD/SRM Regulation complicates the prediction of outcomes dramatically. It impairs the optimal implementation of a key policy objective pursued by legislators in the regulatory overhaul in response to the financial and sovereign debt crises. In particular, compelling investors in bank capital to bear the losses incurred by the failed institution should ensure that banks' funding is sensitive to the risks institutions run and should put an end to excessive risk-taking and overinvestment etc. induced by moral hazard.[4] To be sure, bank resolution and the bail-in tool as a fundamental building block in the regulatory framework do not exclusively aim at instilling market discipline.[5] Yet it should not be overlooked that the discretionary implementation of resolution tools, according to a strategy devised on a case-by-case basis by an empowered resolution authority to achieve *ex post*-efficient outcomes, has inefficient *ex ante* effects following from uncertainty which—*in extremis*—may compromise the statutory bail-in tool as an adequate mechanism for PSI *in toto*.[6] At the very least, the regulatory framework should attempt to minimize the trade-off.

2. Minimum requirements for own funds and eligible liabilities (MREL) as partial and insufficient remedy

To some extent, the regulatory framework can remove the impediments to the desirable incentive effect of PSI emanating from a lack of predictability of outcomes, if it compels banks to issue a sufficient minimum of high-quality, easy to bail-in (subordinated) liabilities. If these instruments provide sufficient loss-bearing capacity in resolution, neither the specific exemptions for certain liabilities nor the no-creditor-worse-off (NCWO) principle are crucial in determining the likely outcomes from an investor's perspective.[7] To be sure, the need to predict the trigger for PSI, the specific application of

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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, art. 44, [2014] OJ L173/190.

[3] 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, art. 27, [2014] OJ L225/1.

[4] For a description of this policy rationale that underpins bail-in regulation see John C. Coffee, Jr., 'Bail-Ins Versus Bail-Outs: Using Contingent Capital to Mitigate Systemic Risk', (2010) Columbia Law and Economics Working Paper No. 380, 35 <http://ssrn.com/abstract=1675015> accessed 17 March 2018; Jianping Zhou et al., 'From Bail-out to Bail-in: Mandatory Debt Restructuring of Systemic Financial Institutions', (2012) International Monetary Fund (IMF) Staff Discussion Note SDN/12/03, 5, 20 <https://www.imf.org/~/media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/sdn/2012/_sdn1203.ashx> accessed 17 March 2018; Thomas F. Huertas, 'The Case for Bail-ins' in Andreas Dombret and Patrick S. Kenadjian (eds.), *The Bank Recovery and Resolution Directive – Europe's Solution for "Too Big To Fail"?* (de Gruyter 2013) 167, 168; Avgouleas and Goodhart (n 1) 2; Karl-Philipp Wojcik, 'Bail-in in the Banking Union' (2016) 53 CMLR 91, 107 On the precise mechanism of the regulatory intervention see also Tobias H. Tröger, 'Regulatory Influence on Market Conditions in the Banking Union: the Cases of Macro-Prudential Instruments and the Bail-in Tool' (2015) 16 EBOR 575, 588 figure 3.

[5] On the manifold resolution objectives that do not follow a clear hierarchy, see BRRD, art. 31(2). For a detailed description see Jens Hinrich Binder, 'Resolution: Concepts, Requirements and Tools' in Jens Hinrich Binder and Dalvinder Singh (eds.), *Bank Resolution: The European Regime* (Oxford OUP 2016) paras. 2.26-2.37.

[6] For an extensive discussion see Tröger (n 1). For the radical view, based on similar considerations, that any non-equity loss-absorbing capital is inferior to the prescription of more equity see Anat Admati and Martin Hellwig, *The Bankers' New Clothes* (Princeton University Press 2013), 187-8.

[7] On the specific uncertainties that are associated with these determinants in the absence of a prescribed minimum bail-in capital see Tröger (n 1) 20-22, 24-25.

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the bail-in tool in every single resolution case, and the valuation of the resolved institution bring difficulties for risk assessment[8] that remain despite prescriptions of high-quality bail-in capital.

Yet, even the limited improvements any prescription of bail-in capital can offer for PSI's operational effectiveness seem compromised in important respects. The main problem, echoing the general concerns scholars voiced against the European bail-in regime, is that MREL specifications are also highly detailed and discretionary and thus do not fully alleviate the predicament of investors in bail-in debt. Quite importantly, given the character of typical MREL instruments as non-runnable[9] long-term debt, even if investors are able to correctly gauge the relevant risk of PSI in a bank's failure at the time of purchase, subsequent adjustments of MREL prescriptions by competent or resolution authorities potentially change the risk profile of the pertinent instruments. Therefore, original pricing decisions, and the market discipline that follows from them, may prove inadequate. Depending on the level of MREL set, the loss-participation of an investor *ceteris paribus* changes and so too should the risk-adjusted interest rate charged in reaction. As a result, if adjustments in MREL calibration are not predictable (and interest rates are not floating in perfect correlation to the changes in the instrument's risk profile), the original price of bail-in capital is either too low (if MREL prescriptions are reduced and thus loss given default (LGD) increases) or too high (if MREL prescriptions are raised and thus LGD decreases). Both forms of mispricing are undesirable from a public policy point of view: while underprizing of risk creates moral hazard, overprizing hampers banks' lending capacity as a consequence of overly unfavorable refinancing costs and therefore impairs growth. Table 1 illustrates the aforementioned scenarios with a simple numerical example.

Table 1 – numerical example

A fully rational, risk-neutral investor buys MREL instruments with value 10 from a bank that issues only one type of *pari passu* eligible debt security. Market participants treat the instrument as a pure write-off bond and attach no value to a potential upside from conversion into equity.[a.] Failure of the bank may occur with a 50% likelihood and will lead to resolution with bail-in of 30. After setting MREL levels at 50, competent and/or resolution authorities agree on a 10-point up- or downward adjustment from original MREL levels and the bank adapts its balance sheet accordingly (i.e. either issues new MREL instruments or does not rollover existing ones).

[a.] The intuition behind this simplification is that investors base their calculation on a worst case scenario and disregard any potential gains post resolution. This also reduces some of the complexity in pricing.

	MREL	LGD	Risk-adjusted rate
Original	50	6	30%
Adjustment I	40	7.5	37.5%
Adjustment II	60	5	25%

[8] On these see Tröger (n 1) 12-20, 22-24.

[9] The concept of runnable debt instruments refers to those liabilities—like for instance demand deposits—that the bank has to repay on short notice if creditors so ask. They make banks susceptible to rationally motivated or panic driven withdrawals of liquidity if creditors' trust in the viability of an institution or the sector dwindles and are thus a source of fragility for the term and liquidity transforming institutions, for the seminal model see Douglas W. Diamond and Philip H. Dybvig, 'Bank Runs, Deposit Insurance, and Liquidity', (1983) 91 JPE 401. For an extension that shows that modern bank runs do not only occur at deposit-taking credit institutions but also at similarly financed commercial and investment banks see Gary Gorton, 'The Panic of 2007' in Federal Reserve Bank of Kansas City (ed), *Maintaining Stability in a Changing Financial System* (Federal Reserve of Kansas City, 2009) 131, 199-231; Gary Gorton, 'Information, Liquidity, and the (Ongoing) Panic of 2007', (2009) 99 AER Papers & Proceedings 567-72.

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Pending European legislation aims to implement the already complex specifications of the Financial Stability Board (FSB) for Total Loss Absorbing Capacity (TLAC)[10] through very detailed and case-specific amendments to both the regulatory capital and the resolution regime with an exorbitant emphasis on proportionality and technical fine-tuning. Omitted from this approach, however, is the key policy objective of enhanced market discipline through predictable PSI: it is hardly conceivable that the pricing of MREL instruments reflects an accurate risk assessment of investors because of the many discretionary choices a multitude of agencies are supposed to make and revisit in the administration of the new regime.[11]

To prove this conclusion, this paper looks in detail at the regulatory objectives of the BRRD's prescriptions for MREL (infra II) and their implementation in the prospectively amended European supervisory and resolution framework[12] (infra III). It concludes with policy recommendations based on the prior analysis (infra IV).

II. Policy rationale underpinning MREL/TLAC prescriptions

The way in which any prescription for loss-bearing capital can improve the proper functioning of the bail-in tool is determined by one main objective of PSI (supra I. 1). If investors in bank capital shall be compelled to price the relevant instruments according to the risk of them incurring losses in the event of the institution's failure, the certainty with which outcomes can be predicted is important. Hence, if resolution authorities require banks to issue debt instruments that are clearly designated to bear losses in an amount that will typically suffice to orderly resolve an ailing bank,[13] investors in these instruments can be sure to foot the bill in the event of failure. Accordingly, they would have to gauge "only" the likelihood of the occurrence and scope of such an event.

[10] On TLAC see FSB, 'Total Loss-Absorbing Capacity (TLAC) Principles and Term Sheet' (2015) [hereinafter TLAC Principles and Term Sheet] <http://www.fsb.org/wp-content/uploads/TLAC-Principles-and-Term-Sheet-for-publication-final.pdf> accessed 17 March 2018.

[11] It is indicative, that the investment community – at least in its lobbying efforts – is indeed concerned with uncertainty introduced specifically by the regulatory framework, see for instance International Capital Markets Association (ICMA), *Bail-in Workshop: joining the dots* (2017), 2 <https://www.icmagroup.org/assets/documents/Regulatory/Bank_Capital/Bail-in-summary-May-2017-KTK-v4-020517.pdf> accessed 17 Jan 2018; Letter from Tim Skeet to Thomas Jorgenson (20 Dec 2017) <https://www.icmagroup.org/assets/documents/Regulatory/Bank_Capital/BIWG-Letter-ECB-20-December-2016-201216.pdf> accessed 17 Jan 2018.

[12] Commission, 'Proposal for a Directive of the European Parliament and of the Council amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements and amending Regulation (EU) No 648/2012' COM (2016) 850 final [hereinafter: CRR amendment proposal]; Commission, 'Proposal for a Directive of the European Parliament and of the Council amending Directive 2014/59/EU on loss-absorbing and recapitalisation capacity of credit institutions and investment firms and amending Directive 98/26/EC, Directive 2002/47/EC, Directive 2012/30/EU, Directive 2011/35/EU, Directive 2005/56/EC, Directive 2004/25/EC and Directive 2007/36/EC' COM (2016) 852 final [BRRD TLAC implementation proposal].

[13] As a further consequence, MREL/TLAC prescriptions reassure investors that PSI can sufficiently recapitalize the failed institution and thus prevent runs, see Zhou et al. (n 4) 21-22; James McAndrews et al.,'What Makes Large Banks Failures So Messy and What to Do about It?' (2014) FRBNY Econ Pol Rev 229, 236-240; Joseph H Sommer, 'Why Bail-In? And How!', (2014) Federal Reserve Bank of New York Economic Policy Review 20(2) 207, 220.

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It is a prerequisite or means to achieve this goal that the failing institution itself at all times[14] disposes of sufficient stand-alone recapitalization capacity so that its failure has no impact on interconnected financial firms. Only then would it be unnecessary to resort to taxpayers' money to limit systemic effects and continue critical functions through resolution[15]—the institution is effectively self-insured.[16] Under this precondition, a bail-in can indeed facilitate a large bank's (or financial conglomerate's) swift recapitalization that prevents liquidity stress and thus averts fire sales and the disorderly liquidation of financial contracts,[17] whereas compelled PSI amplifies the incentives to run if banks hold insufficient levels of bail-in capital. Only insofar as PSI can plausibly achieve the required recapitalization of the failing institution, does loss bearing become a realistic scenario for investors that drives pricing of bail-in capital.[18]

Clearly, even if regulation prescribes a sufficient layer of high-quality bail-in capital, the task of investors will remain difficult in light of the many uncertainties caused by the high degree of administrative discretion within the regulatory framework for PSI under the BRRD. Moreover, the positive incentives for enhanced debt governance only arise if the holders of bail-in capital are indeed in a position to conduct a risk-sensitive pricing of bank debt and can take the pounding once the risks realize.[19]

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[14] Subjecting particularly subordinated term debt to bail-in increases roll-over risk for these instruments, Zhou et al. (n 4) 7, which requires an adequate maturity structure of TLAC/MREL. Such a prescription also limits arbitrage options, BRRD, recital 79.

[15] See for instance TLAC Principle (i) stating that the main guiding principle for the determination of TLAC is that "[t]here must be sufficient loss-absorbing and recapitalisation capacity available in resolution to implement an orderly resolution that minimises any impact on financial stability, ensures the continuity of critical functions, and avoids exposing taxpayers (that is, public funds) to loss with a high degree of confidence"; similarly BRRD recital 79 states that MREL is supposed to prevent a liability structure that "impedes the effectiveness of the bail-in tool". More specifically, the European Commission states that MREL ensures that banks "at all times hold easily 'bail-inable' instruments in order to ensure that losses are absorbed and banks are recapitalised once they get into financial difficulty" and shows that this rationale tallies with the objectives of TLAC, European Commission, *Frequently Asked Questions: Capital requirements (CRR/CRD IV) and resolution framework (BRRD/SRM) amendments* (2016) 8 and 9 <http://europa.eu/rapid/press-release_MEMO-16-3840_en.pdf> accessed 17 March 2018.

[16] On the idea that bail-in can be understood as insurance provided by subordinated term debtors see Zhou et al. (n 4) 7; Jeffrey N. Gordon and Wolf Georg Ringe, 'Bank Resolution in the European Banking Union: A Transatlantic Perspective on What it Would Take' (2015) 115 Colum. L. Rev. 1297, 1355-6.

[17] For this view see Zhou (n 4) 5, 7; Sommer (n 13) 217-223; Wojcik (n 4) 92, 107; see also Binder (n 5) para 2.57 (emphasizing that bail-in preserves the incentives attributed to insolvency proceedings but avoids disruptive effects).

[18] If these preconditions are not met, bail-ins lead to a flight of bank creditors that extends to other banks as well and thus has contagious effects, see Stefano Micossi, Ginevra Bruzzone, and Miriam Cassella, 'Bail-in Provisions in State Aid and Resolution Procedures: Are they consistent with systemic stability' (2014) Centre for European Policy Studies (CEPS) Policy Brief N. 318, 9 <https://www.ceps.eu/system/files/PB%20318%20SM%20et%20al%20Bail-in%20Provisions%20in%20State%20Aid%20and%20Resolution%20Procedures%20final_0.pdf> accessed 17 March 2018; Avgouleas and Goodhart (n 1) 17-18.

[19] On the importance of investors' loss bearing-capacity for bail-in to work see eg Zhou et al. (n 4) 22; Jan Pieter Krahnen and Laura Morretti, 'Bail-In Clauses' in Esther Faia, Andreas Hackethal, Michalis Halliassos, Katja Langenbucher (eds), *Financial Regulation* (CUP 2015) 125, 140; Tröger (n 4) 589; Martin R. Götz and Tobias H. Tröger, 'Should the Marketing of Subordinated Debt Be Ristricted/Different in One Way or the Other? What to Do in the Case of Mis-selling?' In-Depth Analysis for the Economics and Monetary Affairs Committee of the European Parliament (2016), 6 <http://www.europarl.europa.eu/RegData/etudes/IDAN/2016/497723/IPOL_IDA(2016)497723_EN.pdf> last accessed 17 March 2018.

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III. Implementation of policy rationale in MREL prescriptions

The implementation of the regulatory strategy to bolster PSI requires the setting of appropriate qualitative requirements for eligible liabilities (infra III. 1) and adequate levels for bail-in capital (infra III. 2). At the European level, the BRRD's prescriptions for MREL basically seek to achieve these objectives for any credit institution and investment firm subject to its resolution regime,[20] whereas the FSB confines its standards to globally systemically important banks (G-SIBs).[21] Yet, the pending European implementation of TLAC strives for a coherent approach that does not create a sharp divide between G-SIBs and other financial institutions,[22] while retaining the built-in tension between regulatory capital prescriptions on the one hand and the resolution framework on the other.[23] The uniform G-SIB minimum that directly implements the FSB prescription of additional regulatory capital[24] will remain formally separate from the institution-specific minimum codified in the resolution framework,[25] although in substance both regulatory instruments are strongly interrelated.

The qualitative requirements for eligible liabilities are relatively easy to establish *ex ante*. Yet, some uncertainty remains in this regard as a result of the significant discretion granted to authorities (infra III. 1). However, the quantitative specifications ultimately have to be determined on a case-by-case basis for each institution and in close coordination with supervisory authorities (infra III. 2). The challenges faced by resolution authorities in this regard are particularly daunting for cross-border banking groups (infra III. 3). Finally, the prescription of high-quality debt instruments available for bail-in is, in principle, capable of limiting the likelihood of bail-in capital being held by investors without sufficient loss-bearing capacity, albeit some challenges also remain in this respect (infra III. 4).

1. Qualitative requirements for eligible liabilities

a) General characteristics

The prescription of an extended layer of capital available for bail-in requires that the relevant liabilities are of such a high quality that their write-down or conversion delivers a significant contribution to the restoration of the bank's balance sheet.[26] Furthermore, the liabilities must have characteristics that limit the negative consequences of PSI for the holders of the relevant instruments. For instance, bail-in must not create liquidity stress in the short-term,[27] destroy hedges bought by firms outside of the

[20] See BRRD arts. 45(1), 1(23). For

[21] See TLAC Term Sheet, Section 2.

[22] Commisson (n 15) 9.

[23] On the resulting division of competences between supervisory and resolution authorities see also infra III.2.

[24] CRR amendment proposal, art. 92a.

[25] BRRD TLAC implementation proposal, art. 45c, 45d. For a more detailed analysis of the interaction see infra III. 2. a).

[26] BRRD, art. 45(4)(a) - (c) require that MREL instruments are issued and fully paid-in, not held, secured or guaranteed by the institution, and were not purchased with financial assistance from the institution. Similarly, TLAC Term Sheet Section 9 (a) and (f). The TLAC-implementation will foresee the respective prescriptions in CRR amendment proposal, 72a(1), 72b(2)(a)-(c) and (f), BRRD TLAC implementation proposal, art. 45b(1).

[27] According to BRRD, art. 45(5)(d) eligible liabilities have to have a remaining maturity of at least one year. Similarly, TLAC term sheet Section 9 (d) and (e). After the implementation of TLAC similar requirements will be stipulated in CRR amendment proposal, art. 72c (BRRD TLAC implementation proposal, art 45b(1) does not reference to CRR amendment proposal, art. 72c, yet this seems to be an unintended mistake).

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financial sector,[28] or negatively affect socially vulnerable creditors.[29] Consistent with, yet not necessarily linked to, the rationale of regulatory loss-absorbing capacity is the recognition of private solutions, such as bail-in bonds that allow for a more clearly predetermined PSI.

■■■ Insert Table 2 here ■■■

In a qualitative regard, both the MREL and the TLAC prescriptions define high-quality loss-absorbing capital that, if written-down or converted in a bail-in, can ensure significant PSI in resolution. Currently, the main difference between the European regulation and the FSB standard follows from the regulatory technique that either defines some of the characteristics in a negative manner (MREL) or stipulates exemptions if liabilities exhibit the unwanted characteristics (TLAC). Yet, these differences have no impact on practical results and will largely disappear after the European implementation of the FSB standards (see Table 2 for more detail).

However, under the current framework, the predictability of investors' loss exposure is still sub-optimal. While those liabilities that are generally exempt from bail-in according to art. 44(2) of the BRRD[30] never count towards fulfilling MREL requirements,[31] those liabilities, which the resolution authority can spare at its discretion,[32] are only excluded if their exemption is already foreseen in the institution's resolution plan.[33] Hence, it remains difficult for investors in plain vanilla bail-in capital to predict at the time of their investment the extent of their loss exposure, because they cannot easily predict who will participate in PSI alongside themselves if the bank fails. This is particularly true if resolution planning changes *ex post*.

b) Subordination

While the BRRD currently does not explicitly mandate the subordination of MREL instruments, TLAC standard Section 11 requires that eligible instruments must be subordinated to any liabilities that are ineligible, in other words that eligible instruments absorb losses prior to ineligible instruments. This rule, which seeks to prevent a violation of the NCWO principle that restricts bail-in powers,[34] will also be implemented in EU law.

In theory, there are three viable ways to achieve such an outcome. Banks can either: insert clauses into their bond indentures under which excluded liabilities rank higher than TLAC instruments in insolvency (contractual subordination); capitalize on statutory creditor hierarchy by issuing debt instruments that rank junior to excluded liabilities (statutory subordination); or issue TLAC instruments

[28] To avoid difficulties in distinguishing between hedging and trading activities, art. 45(4)(e) of the BRRD declares any liability arising from a derivative to be ineligible for counting towards MREL fulfillment. Similarly, TLAC Term Sheet Section 10 (c) and (d).

[29] While covered deposits are excluded from bail-in anyway (see BRRD art. 44(2)(a)), other deposits that benefit from a preference in national insolvency laws are also excluded from counting towards the fulfillment of MREL, BRRD art. 45(4)(f). The TLAC Term Sheet (Section 10(a)) only foresees the exclusion of insured deposits, which is superfluous under the BRRD, except if MREL is supposed to have a shielding function also in ordinary insolvency proceedings where covered deposits can be haircut.

[30] For an analysis see Tröger (n 1) 20-21; for brief overviews of the provision see Michael Schillig, Resolution and Insolvency of Banks and Financial Institutions (OUP 2016) para 11.13; Mathias Haentjens, 'Titles V and VI: Cross-border Group Resolution and Third Countries' in Gabriel Moss, Bob Wessels, and Matthias Haentjens, EU Banking and Insurance Insolvency (OUP 2017) para 7.46.

[31] BRRD, art. 2(1)(71).

[32] BRRD, art. 44(3).

[33] BRRD, art. 45(6)(c). The substance of the rule will be carried over to BRRD TLAC implementation proposal, art. 45c(5) because the then relevant expectation of resolution authorities on an exemption under BRRD, art. 44(3) will typically be formed in resolution planning.

[34] BRRD art. 34(1)(g), 73. For a critical discussion of the policy rationale underpinning the provision see Tröger (n 1) 24-25.

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through an entity (e.g. a holding company) that has no *pari passu* or junior ranking excluded liabilities on its balance sheet (structural subordination). Wherever the hierarchy of claims comes from, its validity hinges on the recognition of the relevant arrangements, which is particularly doubtful in cross-border contexts.

Within the EU, proposed reforms would bolster the robustness of statutory solutions, as harmonized insolvency laws in the Member States will provide for subordination of eligible debt instruments that are issued with explicit reference to the respective ranking under national implementing provisions.[35] Certainly, there are some challenges ahead as implementing Member States will have to ensure that the new statutory hierarchy of claims also applies retroactively to prior-ranking unsecured claims that were issued before the promulgation of the BRRD amendments[36] without triggering adverse effects for banks' refinancing operations in general.

More importantly, the subordination requirement is not without exceptions. Their exact scope hinges on decisions of supervisory or resolution authorities. Investors have to forecast how the relevant agencies will exercise their discretion. These built-in prognoses create uncertainty that affects the capacity of investors to predict their precise LGD. Even for globally systemically important institutions (G-SIIs), the subordination requirement does not apply for an MREL amount of up to 3.5% of risk-weighted-assets if the included liabilities rank *pari passu* only with the lowest ranking ineligible instrument and their inclusion "does not have a material adverse effect on the resolvability of the institution."[37] Alternatively, even liabilities that rank *pari passu* or senior to the lowest ranking ineligible liabilities can be included in a G-SII's MREL if the *pari passu* or junior ineligible liabilities are equal to, or less than, 5% of the institution's own funds and eligible liabilities and if the inclusion "does not have a material adverse effect on the resolvability of the institution."[38] To be sure, the regime aims for a high degree of transparency.[39] Yet, this is not particularly helpful where a reevaluation of prior decisions affects existing investors' risk calculation.

The subordination requirement does not generally apply for institution-specific MREL.[40] However, the resolution authority can request that the institution-specific MREL is fulfilled with subordinated instruments if this is needed to "ensure that the resolution entity can be resolved in a manner suitable to achieve the resolution objectives."[41] This applies, in particular, if a bail-in of *pari passu* or senior ranking liabilities would violate the NCWO principle: the subordination requirement then allows for the imposition of losses in resolution that go beyond losses that investors in bank capital would incur in insolvency proceedings under the existing balance sheet composition. Importantly, the subordination request from the resolution authority does not override the exemptions granted for G-SIIs.[42]

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[35] BRRD 108(2) according to the Proposal for a Directive of the European Parliament and of the Council on amending Directive 2014/59/EU of the European Parliament and of the Council as regards the ranking of unsecured debt instruments in insolvency hierarchy COM (2016) 853 final [hereinafter: BRRD amendment proposal].

[36] BRRD amendment proposal, art. 108(4).

[37] CRR amendment proposal, art. 72b(3).

[38] CRR amendment proposal, art. 72b(4).

[39] CRR amendment proposal, art. 72b(5) subpara 2.

[40] See BRRD TLAC implementation proposal, art. 45b(1) which explicitly exempts the subordination requirement in art. 72b(2)(d) of the CRR from the reference to the G-SII requirements under art. 72a of the CRR. On the general distinction between G-SII-minimum and institutions specific MREL see III.2.a).

[41] BRRD TLAC implementation proposal, art. 45b(3).

[42] BRRD TLAC implementation proposal, art. 45b(3) allows only to request that the institution specific MREL is fulfilled with instruments eligible under CRR, art. 72a, which incorporated the exemptions granted from the subordination requirement.

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Consequently, the momentum of the subordination requirement largely hinges on the stance that supervisory authorities (G-SII minimum) and resolution authorities (institution-specific MREL) take on the issue. Without established practice and a seasoned reputation, investors will find it difficult to predict the relevant agencies' behavior at the time of investment. Of course, the resolution framework provides for a high degree of transparency with regard to the exact characteristics of MREL instruments.[43] However, this disclosure only represents a snapshot for investors and is by no means a guarantee that resolution authorities would not re-assess their prior decisions at a later stage. This scenario corrupts investment decisions based on a specific stacking order. If, for instance, investors buy MREL instruments at a time when all relevant instruments are subordinated and, later, senior liabilities are counted towards fulfilling MREL, loss-participation of the original investment increases *ceteris paribus*. In the opposite scenario, where resolution authorities demand subordination, investors in now non-eligible MREL instruments receive a windfall profit, as their LGD decreases without adequate downward adjustment of the instrument's payout. Both cases show that discretionary decisions of resolution authorities impair market discipline that could evolve from risk-adequate pricing of bank capital.

2. MREL calibration

The calibration of MREL also involves institution-specific choices of supervisory and resolution authorities. These do not create issues of predictability if agencies coordinate without friction in a fully time-consistent manner in both setting MREL levels (infra III. 2. a)) and sanctioning breaches (infra III. 2. b)). In both instances, *ex post* alterations of administrative decisions and practices may prove particularly problematic for investors in MREL instruments.

a) Setting MREL levels

Obviously, the momentum of MREL prescriptions hinges on the levels at which the requirements are set for each individual resolution entity.

The BRRD currently pursues a highly individualistic concept, which requires a specification for each entity on a case-by-case basis that is only guided by general principles set forth in the directive[44] and a more detailed level 2-measure.[45] In particular, under the current regime, the calibration of MREL relies on the resolution strategy devised by the relevant authorities.[46] If MREL only covers the loss-absorption amount because the resolution strategy for the failing institution provides for its liquidation, MREL can still be set higher[47] or lower[48] than the prudential capital requirements.[49] If MREL also comprises a recapitalization amount,[50] because resolution objectives can only be achieved outside of liquidation, MREL levels will automatically exceed the levels of regulatory capital. For systemically

[43] See BRRD TLAC implementation proposal, art. 45i(2) requiring institutions to disclose *inter alia* the level of MREL items and their ranking in insolvency proceedings.

[44] BRRD, arts. 45, 17; SRMR, art. 12. The relevant determination comes as a ratio of own funds and eligible liabilities to own funds and total liabilities.

[45] Commission Delegated Regulation (EU) 2016/1450 of 23 May 2016 supplementing Directive 2014/59/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying the criteria relating to the methodology for setting the minimum requirement for own funds and eligible liabilities, [2016] OJ L237/1.

[46] For a detailed discussion, World Bank, *Understanding Bank Recovery and Resolution in the EU: A Guidebook to the BRRD* (World Bank Group, 2016) 85-87.

[47] For instance if resolution authorities deem certain capital components as ineligible for loss absorption.

[48] For instance if macro-risks covered by applicable buffers are considered irrelevant for the individual institution.

[49] BRRD, art. 45(6)(a).

[50] BRRD, art. 45(6)(b).

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important institutions, MREL levels might be further increased.[51] Insofar as deposit guarantee schemes (DGSs) assume the losses that covered depositors would have incurred if they were not exempt from bail-in and contribute to resolution financing under art. 109(1)(a) of the BRRD, MREL requirements can be reduced. MREL levels thus hinge on the fraction of covered deposits of total liabilities and the contributions envisioned for a DGS in resolution planning. The key insight with regard to this paper's focus is that changes in resolution planning may once again materially shift MREL prescriptions. Most importantly, MREL is composed of a loss-absorption and a recapitalization component, with the magnitude of the latter depending critically on the alterable resolution strategy. In sum, the prescriptions for setting MREL levels create counterproductive forecasting problems for long-term investors who seek to price relevant risks at the time of the purchase of MREL instruments.

The FSB provides for a floor but permits adjustments for individual institutions or groups,[52] a concept which is followed by the EU banking reform package.[53] Yet, the revised BRRD continues to adhere to the idea that prescribing a minimum of high-quality instruments available for bail-in comprehensively for all institutions represents sound banking policy.[54] At first glance, this seems at odds with the notion that bail-in—as part of the special resolution regime—does not apply for institutions that can be wound-down in ordinary insolvency without triggering financial stability implications.[55] From this perspective, even if institution-specific MREL for non-systemic institutions only covers the loss-absorption amount,[56] it remains unclear why bank-creditors of small institutions who hold ineligible claims (but can be bailed-in) have to be shielded at all costs from PSI. Even haircutting (and reimbursing) depositors in insolvency should not be excluded, if the respective bank's failure is a non-systemic event that is dealt with in ordinary insolvency proceedings and the DGS are effective. The only plausible explanation for the BRRD's approach seems to be that after a transition period during which a sufficiently large cushion is built-up, PSI should never, not even in ordinary insolvency proceedings, extend to liabilities senior to MREL instruments. Such a restriction can be justified with the objective of preventing runs (see II) that loom with regard to some positions (cash-reserves of large non-financial firms; short-term assets of institutional investors; and short-term interbank-liabilities). A more obvious solution would be to clearly exempt these runnable liabilities from bail-in in general and provide a public backstop for these non-MREL liabilities.

Nevertheless, the attempt to reconcile the FSB prescriptions with the far more expansive European approach potentially entails cliff effects. As the G-SII minimum in the CRR will only attach to the designated institutions,[57] all other institutions, including the other systemically important

[51] BRRD, art. 45(6)(d).

[52] TLAC Term Sheet, Section 4 prescribes a TLAC minimum calculated as a ratio of own funds and eligible liabilities to either risk-weighted assets (RWA) or the leverage ratio denominator (LRE), the amounts increasing as of January 1, 2022.

RWA Minimum	**LRE Minimum**
$\frac{\text{own funds} + \text{eligible liabilities}}{\text{RWA}} = 0{,}16\ (0{,}18)$	$\frac{\text{own funds} + \text{eligible liabilities}}{\text{LRE}} = 0{,}06\ (0{,}0675)$

Art. 92a(1) of the CRR amendment proposal implements this concept and prescribes the higher fractions of risk-based or non-risk based MREL for G-SIIs.

[53] See CRR amendment proposal, art. 92a(1), and BRRD TLAC implementation proposal, art. 45d(1).

[54] BRRD TLAC implementation proposal, art. 45(1). BRRD TLAC implementation proposal, art. 45a only exempts mortgage credit institutions.

[55] BRRD, art. 32(1)(c), (5). On the policy rationale see Wojcik (n 4) 100.

[56] See BRRD TLAC implementation proposal, art. 45c(2)(b) subpara. 2.

[57] See Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L176/338

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institutions (O-SIIs)[58] that fall just below the threshold, are subject only to the MREL regime under the BRRD. This is not entirely convincing, because the EU's 14th largest bank might not look very different from its 13th largest institution. Ultimately, the substantive prescriptions may not differ dramatically, as resolution authorities can easily duplicate the CRD IV minima. In particular, they can prescribe identical MREL levels for similarly situated G-SIIs and O-SIIs[59] that can only be fulfilled with instruments eligible for G-SII MREL.[60] Yet, achieving this outcome requires consistency in the approaches of supervisory and resolution authorities which have to continuously coordinate for that purpose.

Moreover, the procedural implications of MREL being a combination of prudential capital prescriptions and resolution planning stretch beyond problems at the margin and generally occur when institution-specific MREL goes beyond supervisory requirements.[61] Setting MREL levels involves various interfaces that require inter-agency coordination. First, the determination of minimum loss-absorbing capacity generally requires coordination with Basel III/CRR capital requirements.[62] Institutionally, this means that both supervisory and resolution authorities have to liaise with each other in order to work out a consistent approach.[63] Indeed, resolution authorities can even influence the inventory of Core Equity Tier 1 (CET1) instruments by requiring that institutions make the necessary preparations (authorized shares) to issue such capital instruments to facilitate the conversion of bail-in debt.[64] Clearly, such 'shadow-capital' that—as a function of corporate law[65]—will be earmarked as conversion-currency, will immediately influence the pricing and marketability of other CET1 instruments. Second, in cross-border groups, several resolution authorities will be involved in

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[hereinafter: CRD IV], art. 131(1) tasking Member States' designated authorities with identifying relevant G-SIIs in accordance with the methodology sketched in the directive. For a list of banks currently considered to be of global systemic relevance, see FSB, *2016 list of global systemically important banks (G-SIBs)* (FSB, 2016) <http://www.fsb.org/wp-content/uploads/2016-list-of-global-systemically-important-banks-G-SIBs.pdf> accessed 17 March 2018.

[58] See CRD IV, art. 131(1) and (3)

[59] This is particularly true where resolution authorities prescribe institution specific add-ons according to art. 45d of the BRRD TLAC implementation proposal.

[60] On the possibility to require subordination of eligible instruments to count towards fulfilling institution specific MREL see supra III. 1. b).

[61] Depending on the resolution strategy, art. 45c(2) of the BRRD TLAC implementation proposal requires MREL to be either the sum of the loss absorption and recapitalization amount or – if the resolution plan foresees the institutions' liquidation – funds to absorb the losses incurred by the institution.

[62] See in this regard TLAC Term Sheet, Section 6 (a) which tries to keep the issues largely separate: CET1 required to fill mandatory capital buffers under Basel III cannot be counted for purposes of TLAC. On the stacking order see also infra III. 2. c).

[63] BRRD art. 45(6)(1) instructs resolution authorities to consult the institution's supervisor before specifying individual MREL requirements. On the tensions of MREL with CRR capital requirements and the resulting overlap of competences see Bart Joosen, 'Bail-in Mechanism in the Bank Recovery and Resolution Directive', University of Amsterdam Working Paper (2014) 12 <https://ssrn.com/abstract=2511886> accessed 17 March 2018; Bart Joosen, 'Regulatory Capital Requirements and Bail in Mechanism', University of Amsterdam Working Paper (2014) 12 <https://ssrn.com/abstract=2586682> accessed 17 March 2018.

[64] BRRD arts. 54(1), 60(4).

[65] Authorization has to be given by the shareholder meeting, see Directive 2012/30/EU of the European Parliament and of the Council of 25 October 2012 on coordination of safeguards which, for the protection of the interests of members and others, are required by Member States of companies within the meaning of the second paragraph of Article 54 of the Treaty on the Functioning of the European Union, in respect of the formation of public limited liability companies and the maintenance and alteration of their capital, with a view to making such safeguards art. 29(2), [2012] OJ L 315/74 [hereinafter: Capital Directive]. During the preparation of the necessary resolution all material information on the intended use of the capital instruments will automatically be disclosed.

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resolution planning. Hence, the setting of adequate MREL levels for each entity will depend on the reconciliation of these agencies' specific interests.[66]

To be sure, even if investors were in a position to accurately predict the outcomes of these inter-agency co-ordinations, their position would remain doubtful. Given the fact that prototypical MREL instruments are long-dated securities, any alteration of the initial compromises found will influence the loss exposure of already issued instruments. Once again, the relevant determination will influence who is in the line of fire once failure occurs, because existing holders of MREL instruments will incur a higher (lower) fraction of the losses if the overall level of MREL for their institution is reduced (increased) after the time of investment.

b) Additional institution-specific MREL prescriptions ("guidance")

The BRRD TLAC implementation proposal introduces the concept of guidance to give resolution authorities the power to request an additional layer of high-quality bail-in capital needed in off-standard resolution scenarios.[67] As a consequence, the institution-specific MREL – just like the own funds requirements of banks under the reformed CRR/CRD IV rules – will consist of two building blocks: a standard layer adjusted to regular resolution planning; and a buffer for exceptional circumstances. The latter component is strongly linked to regulatory capital prescriptions supervised by competent authorities. In particular, MREL guidance may only be set if the competent authority, after stress testing, has issued capital guidance for additional own funds to cover exceptional losses (pillar 2 guidance, P2G).[68] Moreover, the loss absorption part of MREL guidance should not go beyond the levels of competent authorities' capital guidance.[69] Similarly, the recapitalization amount of MREL guidance that can be requested in order to shore-up market confidence by allowing for a sustainable reorganization as a result of PSI,[70] is typically limited to the combined buffer requirements (CBRs) under CRD IV[71] unless additional MREL is needed to guarantee the failed institution's continued authorization post resolution in the medium-term.[72]

Therefore, the determination of the ultimate amount of MREL instruments an institution has to hold depends on a highly complicated interplay of agency decisions on complex, non-linear factual issues. Even where the G-SII minimum and/or the institution-specific (add-on) level of MREL is finally determined by competent and resolution authorities, the competent authority, by issuing pillar 2 guidance to enhance the resilience of the bank as a going conern, may open up extra maneuvering space for resolution authorities to require yet another layer of high-quality bail-in capital for gone concern scenarios.

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[66] See BRRD arts. 45(9) and (10) and BRRD TLAC implementation proposal, art. 45h. For a pessimistic view see Wojcik (n 4) 115. For a delineation of the conflicting interests see infra III. 3. a).

[67] BRRD TLAC implementation proposal, art. 45e. The concept will also be introduced in the capital regulation for additional own funds, see art. 104b of Commission 'Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures' COM (2016) 854 final [hereinafter: CRD IV amendment proposal].

[68] BRRD TLAC implementation proposal, art. 45e(2) subpara. 1.

[69] BRRD TLAC implementation proposal, art. 45e(2) subpara. 1.

[70] The resolution framework stipulates that a bail-in should recapitalize the failed institution in a way that it can fulfil the pertinent capital requirements for at least a year and garner sufficient market confidence for that period, see BRRD, art. 46(2). For an example see Wojcik (n 4) 111.

[71] CRD IV, art. 128.

[72] BRRD TLAC implementation proposal, art. 45e(2) subpara. 2. The SRB currently sets the default market confidence charge at the combined buffer requirement minus 125 basis points, see SRB, *Minimum Requirements for Own Funds and Eligible Liabilities (MREL) – SRB Policy and Next Steps* (2017) 11 <https://srb.europa.eu/sites/srbsite/files/item_1_-_public_version_mrel_policy_-_annex_i_-_plenary_session.pdf> accessed 17 March 2018.

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c) Reactions to breaches of MREL prescriptions

If an institution undercuts “hard” MREL requirements, the consequences are straightforward: competent and resolution authorities are vested with incisive powers to achieve higher MREL levels as soon as possible.[73] Moreover, under a stacking order approach that puts MREL below the CBR, any failure to issue or rollover sufficient MREL instruments may lead to a violation of the CBR because the institution needs excess CET1 to fulfill MREL requirements, and these capital instruments are consequently unavailable for the buffers.[74] An important indirect consequence of MREL violations thus follows from the framework for maximum distributable amounts (MDA) that stipulates automatic restrictions on payouts in relation to CET1 and AT1 instruments as well as variable remuneration components.[75] In order to avoid this, the additional institution-specific MREL prescriptions demanded under the “guidance” regime shall be excluded from the MDA framework and subject to a more flexible, barely predetermined, enforcement mechanism.[76]

Even if one is willing to accept the notion that certain MREL components are necessary but less urgent to implement, it should be noted that the taxonomy of regulatory capital (broadly understood) is further complicated by the additional distinction between hard MREL and MREL guidance. In fact, MREL consists of “hard” MREL and MREL guidance with both elements composed of loss absorption and recapitalization components, which hinge not only on the current resolution strategy devised for the institution by resolution authorities but also on the regulatory capital prescriptions set by competent authorities. Against this background, investors in MREL instruments will find it difficult to predict which levels of capital reserved for burden sharing in PSI will be available at a particular time. Moreover, the criticism commentators leveled against the MDA framework that may constitute a crisis accelerator due to its signaling effect is of a more general nature. Therefore, it cannot be tackled satisfactorily by moving its trigger in specific circumstances anyway.

3. MREL in (cross-border) groups

Any realistic prescription of a meaningful lower bound for the capital available for bail-in has to strike a balance between two conflicting goals: potential intra-group transactions constitute a source of stability and should not be neglected altogether, because otherwise the costs of capital for the group become inefficiently high;[77] and the regime should not naively rely on the unrestricted availability of transfers once a crisis hits, because competent authorities have a tendency to ring-fence in response to a crisis (infra III. 3. a)).

The current EU framework follows a rather rigid, potentially cost-hiking, approach in this regard (infra III. 3. b)). By and large, this assessment holds with a view to the proposed amendments

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[73] Under art. 45k(1), 17, 18 of the BRRD TLAC implementation proposal resolution authorities may *inter alia* accelerate procedures to remove impediments to resolvability and demand alterations to the maturity profiles of eligible liabilities as well as plans to achieve higher MREL levels.

[74] See European Banking Authority (EBA), *Interim Report on MREL* (2016) 41-42 <https://www.eba.europa.eu/documents/10180/1360107/EBA+Interim+report+on+MREL> accessed 17 March 2018.

[75] CRD IV, art. 141.

[76] BRRD TLAC implementation proposal, art. 41e(3) and (4).

[77] For a stylized model to gauge the additional costs that accrue if group-affiliates have to refinance themselves autonomously see Eugenio Cerrutti et al., ‘Bankers Without Borders? Implications of Ring-Fencing for Cross-Border Banks’, (2011) International Monetary Fund Working Paper WP/10/247 <https://www.imf.org/~/media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/wp/2010/_wp10247.ashx> accessed 17 March 2018; see also Ata Can Bertay, Asli Demirguc-Kunt, and Harry Huizinga, ‘Is the financial safety net a Barrier to Cross-Border Banking?’ (2012) World Bank Policy Research Working Paper No. 5948, 2 <https://ssrn.com/abstract=1988035> accessed 17 March 2018 (showing that the costs increase by 1.5-2.4% if funds are raised through a foreign subsidiary).

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to the BRRD, which deviate significantly from the FSB approach. The latter standard is more geared towards a group-specific application of TLAC requirements. To be sure, the FSB does not harbor unrealistic expectations with regard to cross-border transfers of funds in crisis. Hence, the TLAC standard also requires considerable funds to be committed to institutions that are not necessarily at the center of PSI in the resolution strategy for the cross-border group. Yet, the key difference compared to the European legislator is that the TLAC standard limits intra-group pre-positioning to those scenarios where material conflicts between national resolution authorities are likely. Therefore, the TLAC standard avoids much of the uncertainty that stems from the procedurally complex involvement of a multitude of resolution authorities as the default for setting MREL in cross-border groups under the BRRD (III. 3. c)).

a) Intra-group support and national interest

Banks typically operate through a dense network of affiliated legal entities across jurisdictions.[78] One of the key benefits of this is that, potentially, the capital and liquidity available in the group may serve to stabilize affiliated institutions under stress.[79] Legal barriers to the intra-group movement of funds to avert the failure of affiliated institutions are less grounded in corporate law (capital maintenance requirements[80]), because providing intra-group "support" from guaranteed capital would arguably spread rather than contain the problems anyway. The transfer of excess funds and liquidity that are not required to preserve an institution's soundness typically serves the interest of parent institutions[81] but may be impeded by (national) competent and resolution authorities who typically have diverging preferences that hinge on the costs and benefits the respective economies are bound to incur in resolution.[82] In scenarios that motivate agency behavior, the banking group, by definition, has ceased

[78] See for instance Richard Herring and Jacopo Carmassi, 'Complexity and Systemic Risk', in Allen N. Berger, Phillip Molyneux & John O. S. Wilson (eds.), *The Oxford Handbook of Banking* (2nd edn, OUP 2015) 77, 82 (table 4.1.) showing that the world's 28 largest banks on average (median) have 964 (782) subsidiaries, 60% (61%) of which are registered in foreign jurisdictions. On the social benefits of cross-border banking in general see Michael H. Moskow, 'Cross-Border Banking: Forces Driving Change and Resulting Regulatory Challenges' in Gerard Caprio, Jr., Douglas D. Evanoff and George G. Kaufman (eds), *Cross-Border Banking: Regulatory Challenges* (World Scientific Publishing Company 2006) 3, 4–5.

[79] The benefits from intra-group support are easier to achieve if cross-border operations are conducted under a branch-structure but also accrue if they are executed through legally separate affiliates (subsidiary structure), for a general discussion see Jonathan Fiechter et al., 'Subsidiaries or Branches: Does One Size Fit All?' (2011) International Monetary Fund Staff Discussion Note SDN/11/04, 8-9 <https://www.imf.org/~/media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/sdn/2011/_sdn1104.ashx> accessed 17 March 2018; Tobias H. Tröger, 'Organizational Choices of Banks and the Effective Supervision of Transnational Financial Institutions' (2013) 48 Tex.Int'l L.J. 178, 193-199.

[80] Where banks are organised as stock corporations, European law prescribes that no funds may be distributed to shareholders if the company's net assets are or would become lower than the subscribed capital plus the statutory reserve, Capital Directive art. 17(1).

[81] Typically, banks have strong incentives to cover the losses of (foreign) subsidiaries because markets would interpret it as a sign of financial weakness of the parent institution if it cut affiliates loose with the ensuing reputational damage creating severe confidence problems for the parent itself, see Thomas C. Baxter and Joseph H. Sommer, 'Breaking Up is Hard to Do: An Essay on Cross-Border Challenges in Resolving Financial Groups', in Douglas D. Evanoff and George G. Kaufmann (eds.), *Systemic Financial Crises, Resolving Large Bank Insolvencies* (Singapore: World Scientific, 2005) 175, 187; for examples where banks could send subsidiaries into insolvency because their business was only very loosely interrelated with the group's other operations see Richard Herring and Til Schuermann, 'The Regulation of Position Risk in Banks, Securities Firms and Insurance Companies', in: Hal S. Scott (ed.), *Capital Adequacy Beyond Basel, Banking, Securities Insurance* (Oxford: OUP, 2005) 15, 23; Jean Dermine, 'European Banking Integration: Don't Put the Cart before the Horse' (2006) Financial Markets, Institutions & Instruments 15, 57.

[82] For theoretical models on these aspects see Cornelia Holthausen and Thomas Rønde, 'Cooperation in International Banking Supervision', (2004) ECB Working Paper No. 316 <http://www.fsb.org/wp-

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to be a viable going concern and the preservation of the group's franchise value becomes a second-order concern for most national supervisors.

The BRRD attempts to facilitate intra-group support by allowing affiliates of a cross-border banking group to enter into voluntary agreements that need approval from competent authorities and are supposed to limit the potential for ring-fencing in the wake of a crisis.[83] Yet, the right of the providing institution's competent authority to veto any actual granting of support[84] largely devalues the advantages of the rather complicated procedure because it preserves the opportunity for home-biased action.

To be sure, the conflict of interests diminishes considerably if the authorities involved are credibly committed to a single point of entry (SPE) approach: if resolution and PSI occur only at the level of the holding company and leave the operating affiliates largely unaffected,[85] fears that sub-groups would stop providing their essential services to the economy are, in principle, unjustified. However, neither the FSB nor EU legislation prescribe or favor a SPE regime, leaving the multiple point of entry (MPE) approach as the default regime in case of failure of a cross-border banking group.[86] Therefore, alternative institutional arrangements have to mitigate the trade-off.

b) MREL for individual group members under the current framework

The European regime is currently agnostic to the integration of entities in (cross-border) banking groups because it applies, by default, to individual institutions (parent and all affiliated companies).[87] For the (EU) parent undertaking, MREL requirements are calculated on a consolidated basis.[88] In most instances, concerns that the implementation of resolution strategies might disadvantage host jurisdictions in which the operations of affiliated companies of a cross-border banking group are significant for the domestic economy are unwarranted under this regime. This is because every institution has to hold sufficient loss-absorbing capital by itself. Resolution authorities may grant an exemption under very narrow conditions for subsidiaries that belong to a sub-consolidated group within one Member State.[89] Quite importantly, resolution authorities enjoy this discretion only where the competent authority of the subsidiary has fully waived the application of prudential capital requirements to the subsidiary under Art. 7(1) of the CRR.[90] MREL determinations for subsidiaries and consequentially loss exposures for other group affiliates thus depend on multiple agencies'

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content/uploads/TLAC-Principles-and-Term-Sheet-for-publication-final.pdf> accessed 17 March 2018; Patrick Bolton and Martin Oehmke, 'Bank Resolution and the Structure of Global Banks' (2016) Working Paper <http://financetheory.org/wp-content/uploads/gravity_forms/1-70ba24ead09917a027e3e47d3324b973/2016/12/BoltonOehmke_BankResolution.pdf>; Elena Carletti, Giovanni Dell'Ariccia, and Robert Marquez, 'Supervisory Incentives in a Banking Union', (2016) IMF Working Paper WP/16/186 <https://www.imf.org/~/media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/wp/2016/_wp16186.ashx> accessed 17 March 2018. For anecdotal evidence see Thomas Philippon and Aude Salord, *Bail-in and Bank Resolution in Europe* (International Center for Monetary and Banking Studies 2017) 49-50 (particularly pointing to "trapped liquidity").

[83] BRRD, arts. 19-22.

[84] BRRD, art. 25(2).

[85] On these key advantages of SPE regime see for instance Sommer (n 13) 217, 221; Gordon and Ringe (n 16) 1366-1368; for some doubts that hinge on (irrational) panics among investors of the operating subsidiaries that are triggered by reputational contagion, Avgouleas and Goodhart (n 1) 18.

[86] On the reasons why the pre-commitments needed for a proper SPE approach to work in cross-border contexts are hard to achieve in practice see Avgouleas and Goodhart (n 1) 18. The BRRD itself allows EU resolution authorities to apply resolution tools to branches of non-EU institutions, BRRD, arts. 95, 96, which is ample evidence for regulators (realistic) mistrust in international cooperation in times of crisis.

[87] BRRD, art. 45(7) and (10).

[88] BRRD, art. 45(8).

[89] BRRD, art. 45(12).

[90] BRRD, art. 45(12)(h).

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discretionary choices. Investors' risk assessments are once again prone to misjudgments in light of adjustments over time.

In any event, the unfettered need to stabilize foreign subsidiaries through non-waivable, individual MREL prescriptions can be an extremely costly way of strengthening confidence in the domestic banking system. The underlying mistrust in national resolution authorities may be warranted by experience even in a common market with mutual recognition of certain supervisory decisions. It is certainly not very convincing where a supra-national authority like the SRB executes resolution. However, the extent to which EU legislation actually creates excessive burdens ultimately depends on how resolution authorities factor-in the consolidation requirement for the group in calculating MREL levels for its subsidiaries. In this regard, the legal framework currently leaves it unclear whether MREL requirements can be met by issuing bail-in capital internally (to an affiliate within the banking group) or whether eligible instruments always have to be issued to the market (externally).

c) Internal MREL in resolution groups after the banking reform package

The prospective amendments to the BRRD introduce a distinction between external MREL, issued to third parties, and internal MREL, issued within the group, taking inspiration from a concept devised by the FSB. However, the proposed amendments do not strictly implement the G-SIB standard but adapt it in a way that palpably puts less trust in foreign resolution authorities. As a consequence, both the implications of the consolidation requirement at the level of the resolution entity (infra III. 3. c) (1)) and the scope of internal MREL requirements (infra III. 3. c) (2)) show less reliance on remote loss-absorption capacity and provide for significantly more pre-positioning. Regardless of the cost-effects of such extra caution (infra III. 3. c) (3)), the main aspect once again is that the many adjustable screws that can be turned in inter-agency decision-making render the prediction of *ex post* adjustments of MREL requirements in the group context practically impossible (infra III. 3. c) (4)).

(1) Implications of consolidation requirements

Art. 45f(1) of the BRRD TLAC implementation proposal requires that institution-specific MREL – RWA or LRE minimum – for resolution entities be calculated on the basis of the consolidated balance sheet of the resolution group. The identical standard for G-SIBs[91] implies that subsidiaries of the world's biggest banks that are not themselves resolution entities in principle do not have to fulfill any TLAC requirements. Hence, with regard to TLAC, it is pivotal to determine which affiliated companies are resolution entities and which other companies belong to the same resolution group. A 'resolution entity' is defined as the entity to which resolution tools will be applied in accordance with the resolution strategy for the G-SIB,[92] or, more specifically with regard to PSI, the legal body whose creditors will be bailed-in; the entities that the resolution entity controls directly (subsidiaries) or indirectly (subsidiaries of subsidiaries, etc.) belong to the resolution group, but multiple attributions are excluded.[93] Depending on the point of entry for resolution, a banking group may have one (SPE) or multiple (MPE) resolution entities. Yet still, the TLAC prescriptions clearly aim to ensure that, in

[91] FSB TLAC Term Sheet, Section 3 para 4.

[92] Section 3 para. 2 of the TLAC Term Sheet; BRRD TLAC implementation proposal, art. 2(1)(83a); provides for a definition that is identical in substance under which resolution entities are those legal bodies established in the EU in respect of which resolution action will be taken according to the resolution plan; resolution entities (and groups) are identified in the group resolution plan, BRRD TLAC implementation proposal, art. 12(1) subpara. 2.

[93] TLAC Term Sheet, Section 3 para 3; see for an identical concept BRRD TLAC implementation proposal, art. 2(1)(83b).

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principle, sufficient bail-in capital to support the recapitalization of the group is only required on the balance sheet of the entities where PSI actually occurs in resolution.[94]

In stark contrast, the BRRD TLAC implementation proposal by default retains the notion that any subsidiary of a resolution entity has to comply with institution-specific MREL requirements[95] on an individual basis by issuing eligible instruments to third parties. It only allows resolution authorities—after consultation with competent authorities—to exempt group affiliates from the default obligation to issue external MREL and fulfill their obligations by selling MREL instruments to the group resolution entity instead.[96]

(2) Group affiliates

Significantly, however, the FSB also reflects that, in cross-border contexts, resolution at the level of a foreign entity may raise concerns from the perspective of jurisdictions who host subsidiaries or sub-groups that are significant for their respective economies. This is despite the fact that, in theory, resolution of a parent with sufficient loss-absorbing capacity should leave the operations of affiliated institutions largely unaffected, regardless of their location. Experience shows indeed that supervisory or resolution authorities generally prefer to abandon activities abroad to safeguard or shield the center located in their domestic economy.[97] Depending on the origins of the crisis, this may either lead: to pressure to pull back funds from abroad if the center experiences troubles (endogenous shock); or to a blockade of the transfer of funds if the periphery goes through an idiosyncratic crisis (exogenous shock).[98] To fend off these fears,[99] the FSB prescribes that material sub-groups[100] hold internal TLAC which represents 75-90% of the amount of external TLAC that was required if the material sub-group was a stand-alone resolution group, with the actual minimum requirement being set by the host

[94] On the precise calculation of external TLAC for resolution entities where the banking group has multiple material sub-groups that have mutual risk exposures see TLAC Term Sheet, Section 3 para. 5-7; see also BRRD TLAC implementation proposal, art. 45h(2)-(6). For a general description of the mechanism, how losses at the subsidiary level are pushed up to the resolution entity, see Simon Gleeson and Randall Guynn, *Bank Resolution and Crisis Management* (OUP 2016) para. 4.19.

[95] With regard to G-SIIs, the European implementation conforms fully with the FSB standards and thus only prescribes resolution entities to satisfy the relevant own funds and eligible liability requirements, CRR amendment proposal, art. 92a(1). Yet, this is largely irrelevant because, the institution specific MREL minimum applies regardless of the subsidiaries G-SII-affiliation, see also the top-up option for G-SII resolution entities themselves in art. 45d(1)(b) BRRD amendment proposal (supra III. 2. a)) which indicates that actual MREL levels are determined by the institution specific requirements.

[96] BRRD TLAC implementation proposal, art. 45g(1) subpara. 1.

[97] On illustrative events in Eastern Europe during the financial crisis of 2007 and 2008 see Thomas Dietz, Tetiana Protysk and Erich Keller, 'Similar but Different? The Financial Crisis in Matured Western and Emerging Eastern European Countries', (2008) 4 Banks and Bank Systems 20, 28; Ewald Nowotny, 'The Financial Crisis and the Role of Austrian Banks in Central, Eastern, and Southeastern Europe', (2010) 17 Econ and Fin Rev 3.

[98] For analyses of the various scenarios see Fiechter et al. (n. 79) 15-17; for a review of the literature see Franklin Allen et al., *Cross Border Banking in Europe: Implications for Financial Stability and Macroeconomic Policy*, (2011) 47-53.

[99] The FSB clearly states that internal TLAC-requirements serve "to facilitate co-operation between home and host authorities and the implementation of effective cross-border resolution strategies", TLAC Term Sheet, Section 16 para. 1. In other words, internal TLAC shall prevent socially costly resolutions of cross-border banking groups along national borders. For infamous examples see the for instance the case of Fortis (for a description of the resolution case see Schillig (n 30) paras. 11.44-11.48), and Dexia (Stijn Claessens et al., *A Safer World Financial System: Improving the Resolution of Systemic Institutions* (International Center for Monetary and Banking Studies 2010) 50-51; Dirk Schoenmaker, *Governance of International Banking* (OUP 2013) 81-82).

[100] The latter are defined in TLAC Term Sheet, Section 16(2) and 17: relevant sub-groups hence consist of affiliates of a resolution entity, typically from one specific foreign jurisdiction, that play an important role in the banking groups operations (assets, income, or leverage exposure >5% of the G-SIB group's respective consolidated total) or its infrastructure.

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authority of the material sub-group.[101] Typically, the host authority can make it obligatory that internal TLAC instruments[102] are pre-positioned on the balance sheet of the material sub-group,[103] that is, the instruments have to be issued to the resolution entity. Only under narrow preconditions can home and host authorities agree that internal TLAC can be provided in the form of collateralized guarantees.[104]

Despite terminological conformity, the European Commission draws only loosely on this concept in its BRRD TLAC implementation proposal. Most severely, the internal TLAC requirement constitutes an exception from the general rule that all group affiliates have to comply with institution-specific MREL requirements on an individual basis (see already supra III. 3. c) (1)). While internal TLAC requirements are an intervention that reverses the general rule that G-SIB group-members do not have to hold loss-absorbing capacity themselves and tightens the requirements in groups if (and only if) sub-groups as such are deemed to be of (local) systemic importance, internal MREL is a relief from requirements that are far more burdensome at the outset and, just like the general rule under the BRRD, applies regardless of the systemic relevance of group affiliates. Put differently, every group affiliate typically has to pre-position loss-absorbing capacity in the form of internal MREL, if not issue external MREL instruments itself. Only in very narrow circumstances can subsidiaries that are authorized and supervised by the same Member State be relieved from MREL requirements altogether, if (and only if) the competent authority has also fully waived the application of regulatory capital requirements for the subsidiary.[105] Once again, the very limited (purely domestic) exception hinges on a coordinated sequence of decisions by supervisory and resolution authorities.

(3) Implications for optimal resolution strategies

In sum, the pre-positioning of bail-in capital to support significant foreign operations of banking groups may bolster confidence in resolution strategies devised in cross-border scenarios because host authorities can rely on material sub-groups' own loss-absorbing and recapitalization capacity.

However, even the FSB standard strengthens trust only by serving specific national interests at the expense of optimal resolution strategies. The latter concentrate PSI in resolution entities regardless of where their affiliates actually operate and thereby automatically prevent resolution from breaking down along national borders. In a sense, the FSB distrusts the *bona fide* execution of such resolution strategies that seek to achieve the social optimum by being agnostic to the cross-border allocation of the activities of a G-SIB. Clearly, the antidote of massive pre-positioning adds at least to the social costs of bank distress. In fact, it represents an anticipated resolution along national borders. For G-SIBs, the operational costs may also rise because their resolution entities have to issue an amount of external TLAC equal to the pre-positioned internal TLAC in addition to the external TLAC instruments needed to cover the material risks on their own balance sheets.[106] The exposure of the resolution entities to the risks that stem from material sub-groups may be lower than those that determine TLAC levels for the material sub-group itself. Yet, the overriding logic behind internal TLAC requires a deviation from this perspective: if the criteria that define a material sub-group[107] capture the operations that are significant for the host country's economy,[108] the prescribed loss-absorbing

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[101] TLAC Term Sheet, Section 18 para 2.

[102] On the eligibility criteria that largely conform with those for external TLAC see TLAC Term Sheet, Section 19.

[103] TLAC Term Sheet, Section 18 para 4 makes an exemption only if host and home authority agree that it suffices that the TLAC instruments are readily available during a crisis.

[104] TLAC Term Sheet, Section 19 para 7.

[105] BRRD TLAC implementation proposal, art. 45g(5).

[106] TLAC Term Sheet, Section 18 para 5.

[107] See n. 100.

[108] The definition of materiality in TLAC Term Sheet, Section 17 a) - c) largely hinges on the relative size of the sub-groups operations within the G-SIB group (>5% of consolidated risk weighted assets, total operating

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capacity has to be sufficient to provide a recapitalization of the sub-group and thus allow the continuation of its critical functions. As a result, the obligation of resolution entities to issue external TLAC equal to the amount of pre-positioned internal TLAC may exceed the hypothetical levels for external TLAC if the latter were determined exclusively according to resolution entities' own risk exposures. Put differently, some of the instruments sold to investors may not be necessary to bolster the resolution entity's own loss-absorbing and recapitalization capacity: TLAC requirements calculated on a consolidated basis for the resolution group may be lower than the amounts actually issued externally, because the need to match internal TLAC inflates external TLAC. As a result, investors in external TLAC instruments who want to understand their risk exposure, have to look through the resolution strategy for the group that shapes MREL issuances.

Yet, the results should still tally with those achieved under a *bona fide* determination of TLAC for the resolution entity on a consolidated basis. An impartial consolidating authority would take the interest in the continuation of critical functions into account and would thus require the resolution entity to hold sufficient TLAC instruments to allow for the recapitalization of significant sub-groups (yet would not necessarily require pre-positioning) in order to facilitate a socially optimal resolution strategy. In fact, it seems rather dubious that Section 18 para 2 of the TLAC Term Sheet allows a 10-25% deduction from the levels of (virtual) external TLAC stipulated for material sub-groups on a stand-alone basis. Such a discount—although understandable as a cost-decreasing reaction to the group consolidation requirement[109]—might revive concerns from host resolution authorities that the viability of the material sub-group is not sufficiently secured. The continuation of critical functions will require a full recapitalization of the material sub-group as anticipated in (external) TLAC levels. The group center necessarily will have to supplement the lower pre-positioned amount with additional loss-absorbing capacity, the existence and cross-border transferability of which is far from certain when a crisis hits.

At its outset, the EU implementation is better attuned to these concerns. It does not provide for a discount on institution-specific MREL levels but only allows group affiliates that are not resolution entities to fulfill their (unreduced) institution-specific minimum with debt instruments issued and bought by the resolution entity.[110] Having said that, the only narrowly qualified (supra III. 3. c) (2)) requirement that applies to each institution regardless of their own or their sub-group's materiality, augments the cost-hiking effect of pre-positioning.

(4) Risk assessment by investors

Finally, from the perspective of investors, extensive pre-positioning determined in a cooperative, highly discretionary procedure among many agencies,[111] further aggravates the difficulties in projecting the outcomes of PSI. To be sure, if MREL requirements were also determined exclusively by resolution authorities at the level of the resolution entity on a consolidated basis, risks accruing from material sub-groups would have to be factored into the relevant determination and their assessment

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income, or total leverage exposures measure) which may not mean much with regard to the importance of these operations in a specific economy. The underlying assumption seems to be that sizeable operations of a G-SIB sub group have significance for almost all domestic economies, which neglects, inter alia, that certain financial services can be substituted more easily and less prone to contagion.

[109] On the rationale see for instance Bank of England, *Internal MREL - the Bank of England's approach to setting a minimum requirement for own funds and eligible liabilities (MREL) within groups, and further issues* (2017) para. 5.1 <https://www.bankofengland.co.uk/-/media/boe/files/financial-stability/resolution/internal-mrel-consultation-october-2017.pdf> accessed 17 March 2018.

[110] BRRD TLAC implementation proposal, art. 45g(3).

[111] For the complicated procedure to be followed by resolution authorities at the group and entity level in determining internal MREL for banking groups and the possibility of EBA mediation, BRRD TLAC implementation proposal, art. 45h.

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could change *ex post*.[112] However, in this scenario, investors would only have to gauge the time-consistency of a single authority, whereas the EU regime requires them to predict the diagram of forces involving the multiple nodes of resolution and competent authorities involved in the process.

4. Restrictions on Holdings

No-bail-out pledges are only plausible if the regulatory framework for PSI ensures sufficient loss-bearing capacity of those investors who hold capital instruments subject to bail-in. Otherwise, the rationale for bailing-out banks will re-arise, albeit with due variations, and will compromise the time-consistency of decision makers' behavior.[113]

To limit contagion in the financial sector because of PSI, other banks should not hold substantial amounts of TLAC and MREL instruments of their peers. In response to this policy demand, the Basel Committee on Banking Supervision (BCBS) foresees that TLAC instruments held on the asset side of a G-SIB's balance sheet be deducted from its own regulatory capital (Tier 2).[114] Hence, in order to fulfill the pertinent requirements, additional Tier 2 capital instruments have to be issued and sold on the market if a G-SIB decides to invest in other institutions' core bail-in capital. This creates a strong disincentive to build-up significant stakes in such instruments if the coupon a bank has to pay on its own Tier 2 instruments is higher than the return generated by the investment in another G-SIB's TLAC instruments.[115]

In contrast, MREL prescriptions currently do not explicitly address the treatment of holdings of other banks' core bail-in capital.[116] The implementation of the FSB deduction requirements in arts. 72h, 72i of the CRR amendment proposal only partly cures the deficiency. First, this is because it applies exclusively to G-SIIs, and thus contrasts with the general notion that underpins the BRRD, namely that sufficient MREL instruments are required for every financial institution. Second, because even for G-SIIs the regime does not foresee deductions with regard to institution-specific MREL that tops-up the G-SII-minimum. Therefore, even EU G-SIIs face no adverse consequences if they invest in other banks' TLAC instruments in amounts lower than, or equal to, the institution-specific additional MREL requirement set by resolution authorities. It would be a natural consequence of the European implementation approach to extend the deduction regime to institution-specific MREL.

Furthermore, a severe problem remains unresolved in all the regulatory frameworks. Neither TLAC nor MREL prescriptions address the problem of mis-selling core bail-in capital to retail investors. Leaving it to securities regulation and market supervisors seems sub-optimal because the available remedies work mainly *ex post* and thus typically burden an already ailing institution. More generally,

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[112] Rational investors will always charge risk premiums that reflect the exposure to the risk of the group.

[113] See already n 19. For a more comprehensive discussion see also Tröger (n 1) 30-31.

[114] For details see TLAC Term Sheet, Section 15 and BCBS, 'Standard TLAC holdings' (2016) [hereinafter TLAC holdings standard] < http://www.bis.org/bcbs/publ/d387.pdf> accessed 17 March 2018. See also Gleeson and Guynn (n 94) paras. 4.17, 4.56.

[115] The mechanism is well known from the Basel III accord that limits undesirable investments of banks in other banks' regulatory capital in the same manner, see BCBS, 'Basel III: A global regulatory regulatory framework for more resilient banks and banking systems' (2011), Section 79-86 <http://www.bis.org/publ/bcbs189.pdf> accessed 17 March 2018; for the EU implementation (regarding CET 1-holdings) see CRR, arts. 36(1) (g)-(i), 44-47.

[116] Resolution authorities can prohibit investments in MREL instruments of other banks only if they pose a threat to the institutions resolvability, BRRD arts. 44(2) subpara 5, 17(5), or violate large exposure limits, CRR art. 395. See also Wojcik (n 4) 113 (arguing that transparency alone sufficiently limits contagion risk).

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resolution authorities, due to their access to all relevant information in resolution planning, seem better positioned to police the adequate holdings of bail-in capital.[117]

IV. Conclusion and policy recommendations

The European resolution framework, particularly after the implementation of the banking reform package, frequently seems obsessed with the principle of proportionality and lusts for fine-tuning. It thus ends up with highly complex rules that require a great number of discretionary evaluations by supervisory and resolution authorities. Therefore, the resulting gauze of rules, exceptions, and counter-exceptions for MREL carries forward key weaknesses of the European bail-in regime.[118]

Although enhanced PSI is accepted as the guiding principle, its harsher implications for banks' funding costs are shunned and many softening relaxations are granted which amount to a tangled mass of regulation that precludes a reasonably certain prediction of outcomes by investors. This, in turn, impedes risk-sensitive pricing of bail-in debt and frustrates one of the key objectives of the regulatory overhaul: to reestablish market discipline. It can only be understood as a camouflaged form of state aid for the European banking sector as a whole that short-sighted policy makers are willing to grant,[119] instead of promulgating a simpler and clearer framework for PSI. Quite importantly, although MREL are supposed to provide a sufficiently large layer of high-quality, easy to identify bail-in capital, the many debt instruments that, after opaque and potentially fluctuating deliberations by competent and resolution authorities, might be eligible for their fulfillment actually increase the complexity of the regime.

If policy makers are not willing to shift paradigms, for instance by requiring banks to hold more plain vanilla equity,[120] they could instill more efficient market discipline through enhanced debt governance by disentangling TLAC/MREL as an essential precondition for PSI from the broader resolution process.[121] In order to accomplish this policy objective, the capital layer that absorbs losses does not have to be perfectly adjusted to an individual institution's precise recapitalization needs in resolution. Under this approach, the scope of PSI in non-viable banks could be determined *ex ante* with reasonable certainty. PSI would occur regardless of the strategy authorities envision for actual resolution and would therefore be less susceptible to subsequent alterations in these plans. With that in mind, much can be learned from the scholarship on contingent capital instruments (CoCo-bonds):[122]

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[117] For a discussion of the issue and a policy recommendation see Martin R. Götz and Tobias H. Tröger, 'Should the Marketing of Subordinated Debt Be Ristricted/Different in One Way or the Other? What to Do in the Case of Mis-selling?' In-Depth Analysis for the Economics and Monetary Affairs Committee of the European Parliament (2016), 14-15 <http://www.europarl.europa.eu/RegData/etudes/IDAN/2016/497723/IPOL_IDA(2016)497723_EN.pdf> accessed 17 March 2018.

[118] Tröger (n 1) 2-5, 29-30.

[119] Regardless of the estimations on how much funding costs would rise initially (see for instance Avgouleas and Goodhart (n 19) 15 purporting that ceteris paribus the price of bail-inable debt would be limited to 10 ot 30 basis points), the key benefit from significantly enhanced market discipline would be a more sustainable investment strategy of banks which in turn would translate into lower funding costs.

[120] For this policy proposal, which is at least partly motivated by concerns similar to those voiced in this paper, see Admati and Hellwig (n 6).

[121] For a discussion of the desirability of a regime for PSI that is 'resolution remote' in the sense that it unhitches bail-in from a failed institution's restructuring, see Tröger (n 1) 33-34 (arguing that achieving ex post efficient results necessarily requires the exercise of case specific discretion, for instance in the sale of assets or the reconfiguration of business lines, and is therefore inherently uncertain from an ex ante perspective).

[122] For a discussion of the policy rationale that underpins contingent capital see Darell Duffie, 'A Contractual Approach to Restructuring Financial Institutions' in George P. Schultz, Ken E. Scott, and John B. Taylor (eds.), *Ending Government Bailouts as We Know Them* (Hoover Institution Press, 2010), 109, 109-110; Ceyla

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one important feature of CoCo-bonds and similar instruments is their potential to kick-in relatively remote from resolution.[123] If they define an early trigger-event and determine the conversion consequences (ratio) without ambiguity, they allow a substantial contribution to a fragile bank's recapitalization before, and independent of, a subsequent workout.[124] Assessing the risk in optimally designed contingent capital does not require an exact predetermination of resolution outcomes and the potentially time-varying strategies implemented to achieve them. Quite importantly, such resolution detached CoCos should be understood as the pivotal layer of bank capital that brings about desirable market discipline through more predictable PSI in going concern scenarios. Hence, PSI would be significantly less fraught with the uncertainty that is introduced by tying bail-in to idiosyncratic resolution strategies.[125] In principle, MREL (TLAC) should be conceptualized in exactly the same manner as a sufficiently large layer of bank capital that absorbs losses in crisis but is *not* custom-tailored to specific resolution outcomes achieved in accordance with time-varying resolution strategies. To be sure, this proposal sacrifices some granularity and proportionality, because the prescribed capital layer may go beyond the precise recapitalization needs in an individual resolution case. Yet, this can be justified on the grounds that only a less individualistic concept could achieve predictability and establish a workable solution in line with a critical policy goal. Conversely, a less customized prescription of MREL may prove insufficient to fulfill the recapitalization needs in a specific resolution case. However, such a shortfall may occur under any methodology for the determination of MREL and only requires a sound regulatory strategy on how to cope with the recapitalization gap – which may not necessarily imply bailing-in holders of other debt instruments.[126] Suffice it to say, for the purpose of this paper, the proposal put forward here does not advocate systematically reduced MREL levels, but rather the opposite.

Within the existing framework, including its path-dependent update in the Commission's banking package, MREL prescriptions can, at best, entail an incremental improvement if the authorities

Pazarbasioglu et al., 'Contigent Capital: Economic Rationale and Design Features' (2011) IMF Staff Discussion Note SDN/11/01, 7-8 <https://www.imf.org/external/pubs/ft/sdn/2011/sdn1101.pdf> accessed 20 August 2017; for the original vision, largely dwelling on the market-disciplining effect of contingent capital see Mark J. Flannery, 'No Pain, No Gain? Effecting Market Discipline via 'Reverse Convertible Debentures'' in: Hal S. Scott (ed.), *Capital Adequacy Beyond Basel: Banking: Securities, and Insurance* (OUP 2005), 171, 173, 175-182.

[123] See Enrico Perotti and Mark Flannery, 'CoCo bonds as a way of preventing risk', (2011) VOXEU policy contribution <http://voxeu.org/article/coco-bonds-way-preventing-risk> accessed 20 Aug. 2017.

[124] Much of the recent literature on CoCos argues for higher capital ratio triggers – that are remote from the point of non-viability/failure – in order to effectively curb bank risk taking, induced by adequate investor debt governance see for instance George Pennacchi, 'A Structural Model of Contingent Bank Capital' (2010) FRB of Cleveland Working Paper No. 10-04 <https://ssrn.com/abstract=1595080> accessed 17 January 2018; Charles W. Calomiris and Richard J. Herring, 'How to Design a Contingent Convertible Debt Requirement That Helps Solve Our Too-Big-to-Fail Problem' (2012) 25 J. Applied Corp. Fin. 39; Natalya Martynova and Enrico C. Perotti, 'Convertible bonds and bank risk-taking' (2015) De Nederlandsche Bank Working Paper No. 480 <https://ssrn.com/abstract=2643419> accessed 17 January 2018.

[125] The potential to achieve more efficient results with a resolution remote design of CoCo-bonds should not be blurred by the observation that the actual definitions of conversion triggers in the respective instruments largely forgoes this potential, because they only come into sight after resolution was initiated, see Paul Glasserman and Enrico C. Perotti, 'The Unconvertible CoCo Bonds' in: Douglas D. Evanoff et al. (eds.) *Achieving Financial Stability* (World Scientific 2017) 317, 319-331 (presenting evidence that currently used CoCo triggers, particularly in Europe, do not lead to conversion prior to resolution)..

[126] See Martin R. Götz, Jan Pieter Krahnen, and Tobias H. Tröger, 'Five Years after the Liikanen Report: What Have We Learned?', SAFE Policy White Paper No. 50 < http://safe-frankfurt.de/fileadmin/user_upload/editor_common/Policy_Center/SAFE_White_Paper_50.pdf> accessed 17 January 2018 (showing that the social benefit from bailing-in additional capital instruments to meet the recapitalization needs of a failed bank may be outweighed by heightened financial instability resulting from amplified run-risks).

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involved in the resolution process are as transparent and as time-consistent as possible in their stringent and impartial implementation of the BRRD and adhere to firm principles derived from policy objectives. More specifically, the resolution strategy and the MREL prescriptions that hinge critically on this strategy should be determined in accordance with rigid methodologies that draw on the business models and organizational structures of relevant institutions or groups. If resolution authorities adhere to this recommendation, the many discretionary choices ultimately depend on observable determinants and markets, assisted by information intermediaries,[127] may accumulate reliable information on the relevant resolution practice over time and carry out reasonably reliable risk assessments.[128]

[127] Rating agencies pay close attention to resolution practices (also) in Europe in order to reflect relevant patterns in their methodologies, see for instance Standard and Poors, 'Italian Bailouts Show EU Authorities Walk A Tightrope While Banks Transition Towards Bail-ins' <https://www.spratings.com/en_US/article?webURL=http%3A%2F%2Fratings.standardandpoors.com%2Farticle%3FarticleId%3D1878481%26SctArtId%3D430556%26from%3DCM%26nsl_code%3DLIME%26sourceObjectId%3D10159057%26sourceRevId%3D2%26fee_ind%3DY%26exp_date%3D> accessed 17 March 2018.

[128] For a very optimistic statement on markets ability to price bail-in debt accurately that implicitly presumes time-consistent and impartial exercise of discretion by resolution authorities, see Gleeson and Guynn (n 94) para. 10.17-10.23.

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Table 2 - characteristics of eligible liabilities

TLAC *G-SIBs*	MREL *credit institutions and investment firms*	MREL (proposal banking reform package) *credit institutions and investment firms*
Eligible instruments (Section 9) – Fully paid in – Unsecured – Not subject to set off or netting rights – Minimum remaining maturity of one year – Non-redeemable by holder prior to maturity – Not funded by resolution entity or related party (subject to waiver)	Eligible liabilities (BRRD, art. 45(4)) – Issued and fully paid-up – Not owed to, secured or guaranteed by institution – Purchase not funded directly or indirectly by institution – Remaining maturity of at least one year with maturity set at first date of early redemption right – Not arising from a derivative – Not arising from preferred deposits	Eligible liabilities (CRR, arts. 72a(1), 72b, 72c, BRRD, art. 45b) – Issued/raised and fully paid-up – Not purchased by institution or related party – Purchase not funded directly or indirectly by institution – Not secured or guaranteed by institution or affiliated undertaking – No legal obligation or de facto incentive to call, redeem, or repurchase prior to maturity without supervisory consent – No acceleration or increase of payments (principal, dividend, interest) outside bankruptcy/resolution – Minimum remaining maturity of one year
Excluded liabilities (Section 10) – Insured deposits – Sight and short-term deposits – Liabilities arising from derivatives – Debt instruments linked to derivatives – Non-contractual liabilities (e.g. tax liabilities) – Liabilities preferred to senior unsecured debt under insolvency law – Liabilities excluded from bail-in or subject to bail-in only with material litigation risk	Excluded liabilities (BRRD, art. 2(1)(71)) – Liabilities not subject to bail-in, BRRD, art. 44(2), e.g. covered deposits, secured liabilities – BRRD, art 44(3) (SRMR, art. 27(5)) ad hoc-exemptions only if predetermined in resolution plan, BRRD, art. 45(6)(c)	Excluded liabilities (CRR, arts. 72b(2), BRRD, art. 45b) – covered deposits – sight and short-term deposits – eligible deposits of natural persons and SME (also if made through third-county branches) – secured liabilities (incl. covered bonds and hedging instruments) – liabilities from holding client assets and money – liabilities of privileged fiduciary relations – short-term liabilities (< 7 days) to institutions or settlement systems – liabilities to employees, providers of critical goods and services, tax and social security authorities, DGSs – liabilities arising from derivatives or derivatives-linked instruments (exception for structured notes etc., BRRD, art. 45b(2): institution-specific MREL)

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Address

European Banking Institute
c/o
Prof. Dr. Tobias Tröger
House of Finance
Box: 22
Theodor-W.-Adorno-Platz 3 (Westend Campus)
60629 Frankfurt am Main
Germany

www.ebi-edu.eu

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