Making Retail Banks Resolvable

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Abstract

The EU bank resolution framework relies heavily on banks' internal capacity for loss-absorption and recapitalization through the issuance of bail-inable financial instruments (MREL). Meanwhile, the existing collective funding arrangements (resolution and deposit insurance funds) seem inadequate to support other alternatives, such as resolution transfer strategies or administrative liquidation. Based on resolution experience and evidence thus far, such regulatory architecture cannot work effectively on all EU banks regardless of size and business model. Many retail banks – both significant and less significant with deposits higher than 40% of their total liabilities and own funds (TLOF) – struggle to comply with the existing framework due to their funding model and difficulty to tap capital markets. Ultimately, efforts to improve their resolvability could threaten their viability. In order to improve the resolvability of retail banks, regulators need to enhance resolution transfer strategies which would ultimately reduce MREL requirements. Credible transfer strategies though require credible financing arrangements when a buyer is not readily available. Therefore, resolution funds would need to be able to contribute more than the current 5% TLOF in order to credibly supplement bail-in. Otherwise, regulators should incentivize banks to establish voluntary collective industry funds – similar or identical to institutional protection schemes, which would finance transfer-based resolution strategies integrated in the resolution plans. Participation to such voluntary funds would occur in exchange for lower MREL requirements. The use of transfer strategies in conjunction with the establishment of voluntary industry funds would significantly reduce MREL requirements for retail banks.

Key-words: bank resolution, retail banks, bail-in, transfer strategies, liquidation, resolution financing, MREL, deposit guarantee schemes, voluntary funds

JEL Classification: G15, G18, G21, G28, K22

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1. Introduction

The establishment of harmonized bank resolution rules in the EU constitutes a fundamental piece of the post-crisis regulatory puzzle. Bank failures should, in principle, no longer be dealt with taxpayer money[1] but should be instead either liquidated or resolved on public interest grounds.[2] The effectiveness of EU bank resolution depends on the capacity of banks' internal funding structure – coined as 'minimum requirement for own funds and eligible liabilities' (MREL)[3] – and the capacity of collective industry funds – be it resolution or deposit insurance funds – to absorb losses, recapitalize the bank[4] and ultimately support any resolution measure taken.

When defining the required MREL capacity per bank, managing the interests of viability in going concern and resolvability constitutes the cornerstone to the success of the resolution framework. The fundamental trade-off lies in a simple conundrum: higher MREL enhances banks' resolvability, and negatively impacts banks' profitability, whereas lower MREL weakens banks' resolvability and enhances profitability. This trade-off applies to all credit institutions, regardless of their business model, ownership structure, and systemic importance. However, every bank tends to react differently to regulatory changes depending on its business model and ownership structure.

In this context, retail banks form a particular subcategory of banks that share certain common characteristics.[5] Retail institutions are banks that perform traditional banking intermediary services, namely deposit-taking and provision of loans. Deposit-taking comprises at least 40% of this funding model. Consequently, the income of such business model derives from net interest payments, commissions and fees, whilst its liabilities consist mostly of customer deposits. Trading and interbank lending does not fall, in principle, under this model's activities – or remains very limited. Their profitability, therefore, depends on the interest margin between lending (loans) and borrowing (deposits). Retail institutions tend to adhere to stakeholder-based ownership structures (cooperative and savings banks), however, retail

[1] Rec 1, 5, 31, 67 BRRD; Rec 73 SRMR.
[2] Rec 44, 45, 46 and art 32(5) BRRD; Rec 59 and art 18(5) SRMR.
[3] Rec 79, 80 and art 45 BRRD; Rec 83, 84 and art 12 SRMR. MREL-eligible assets are the ones that can be written down and/or converted to equity in order to ensure private sector participation (PSI). The MREL requirements apply only to EU banks. Similar requirements are set out by the Financial Stability Board, labeled as 'Total Loss-Absorbing Capacity' (TLAC), see Financial Stability Board, *Key attributes of effective resolution regimes for financial institutions* (October 2011).
[4] The term 'bank' is used interchangeably in this paper with the term 'credit institution'.
[5] Rym Ayadi and others, 'Banking Business Models Monitor 2015 Europe' (2016) ; On other types of classifications, see Marina Cernov and Teresa Urbano, *Identification of EU bank business models: a novel approach to classifying banks in the EU regulatory framework* (EBA Staff Paper Series, 2018).

institutions and stakeholder-oriented institutions do not always overlap (i.e. French cooperatives).[6] Therefore, we define retail credit institutions on the basis of their business and funding model. Based on this distinction, retail banks tend to be smaller than wholesale and investment banks, whilst many of them are neither listed nor relying on capital markets for funding purposes.[7] Typical examples of retail banks are the ones forming the European Savings Banks Group, the German Savings Banks Association, or the European Association of Cooperative Banks but there are also larger retail banks with assets standing at approximately EUR 50 billion. Depending on the characteristics of each national economy, there are Member State economies that comprise entirely retail banks, such as Portugal and Slovenia.

The importance of stakeholder value banks, as many of the retail banks are, has been highly debated.[8] Retail banks, be it cooperative or savings banks, constitute some of the most important elements of the financial system in terms of client base and lending provision to the real economy, and arguably, in some jurisdictions more prominently than in others. Compared to shareholder value banks, such banks have been criticized for not being subject to the disciplinary effects of capital markets and corporate control, for having weak corporate governance arrangements, and for having unclear objectives. Be it as it may, the recent global financial crisis showed that shareholder value banks were not as disciplined as expected, whilst stakeholder value banks proved more resilient during the crisis. In any event, since no perfect business model seems to exist, it is reasonable to assume that a mixed-system model is systemically more beneficial than opting for one over the other. This paper builds on this assumption.

Whilst retail banks are definitely not the only business models being challenged by the post-crisis regulatory behemoth, they do face specific challenges.[9] First, given the prevalent character of loans in their balance sheets, retail banks tend to suffer more from the current low-interest environment, which puts pressure on financial margins,[10] as well as from lower

[6] On the diversity of cooperative business models in the EU, see Rym Ayadi and others, 'Investigating diversity in the banking sector in Europe: Key developments, performance and role of cooperative banks' (2010) .
[7] Ayadi and others, 'Banking Business Models Monitor 2015 Europe'.
[8] Ayadi and others, 'Investigating diversity in the banking sector in Europe: Key developments, performance and role of cooperative banks'; Rym Ayadi and Reinhard H Schmidt, *Investigating diversity in the banking sector in Europe: The performance and role of savings banks* (CEPS 2009).
[9] For an impact assessment of the latest Basel III reforms, see EBA, *Basel III reforms: Impact study and key recommendations*, 2019). For a discussion on the impact of regulation upon retail banks, see Fernando Restoy, *Challenges facing the retail banking sector* (2016).
[10] Jacob A Bikker and Tobias M Vervliet, 'Bank profitability and risk ‐ taking under low interest rates' (2018) 23 International Journal of Finance & Economics 3.

GDP growth.[11] In the meantime, given that their main funding source is retail deposits, they find it difficult to fully transmit the low or negative market rates to funding costs. Second, retail banks tend to be less active cross-border and therefore tend to have larger non-diversified exposure to non-performing loans (NPLs). Third, the regulatory pressure to built-up sufficient loss-absorbing buffers might place retail banks in a competitive disadvantage vis-à-vis other banking models since many of them are neither listed nor active in capital markets.[12] In this paper, the focus lies on the latter, the regulatory requirement for many retail banks to build-up their MREL capacity in order to improve their resolvability.

Resolvability and MREL capacity at the bank-level are intricately linked under the EU bank resolution framework. Given the diversity in bank business models and the structure of national financial markets, in conjunction with the deliberate[13] finite capacity of collective resolution financing at the EU and national level, building up internal MREL for banks was deemed appropriate in the EU. Hence, banks are required to hold additional capital – beyond the prudential requirements – and/or certain liabilities in their balance sheets that would, in case of failure, be eligible for bail-in.

When calibrating the MREL for each bank, resolution authorities seek to ensure that depositors, both covered and uncovered, will not be called upon to carry losses due to fears of contagion and generalized bank runs.[14] Given the funding structure of retail banks, which rely more on equity and less on securities, uncovered depositors seem more likely to be hit should a bail-in be applied. It seems, therefore, that the good intentions of resolving banks without public money might end up to an unintended evil due to potential bank runs.[15] Naturally, national resolution authorities would then try to avoid the enforcement of bail-in by diverting to other alternatives, namely precautionary recapitalization,[16] industry intervention under

[11] Banks with a high or medium share of assets invested in loans suffer more than banks that hold large portfolios of securities, see Emilia Bonaccorsi di Patti and Francesco Palazzo, 'Bank Profitability and Macroeconomic Conditions: Are Business Models Different?' (2018) .
[12] Restoy, *Challenges facing the retail banking sector*.
[13] David Howarth and Lucia Quaglia, *The Political Economy of European Banking Union* (Oxford University Press 2016); Lucia Quaglia, 'The politics of an ‘incomplete’Banking Union and its ‘asymmetric’effects' (2019) Journal of European Integration 1.
[14] Oana Peia and Radu Vranceanu, 'Experimental evidence on bank runs under partial deposit insurance' (2017) ; Alexander Michaelides, 'Bank of Cyprus (BOC) and Laiki: Resolution via Public Support and Bail-in, Including of Uninsured Depositors ' in World Bank Group (ed), *Bank Resolution and “Bail-in” in the EU: Selected Case Studies Pre and Post BRRD* (Bank Resolution and “Bail-in” in the EU: Selected Case Studies Pre and Post BRRD, 2016).
[15] Jean Dermine, 'The single resolution mechanism in the European Union: Good intentions and unintended evil' (2016) Monetary Economics Today .
[16] Rec 41 and art 32(4) BRRD; Rec 57 and art 18(4) SRMR. Precautionary recapitalization allows the provision of public funds while an institution is still solvent in order to raise new capital due to the outcome of a scenario-based stress test. For its debatable use in the case of Monte Paschi di Siena in

special administration,[17] or national liquidation – either court-based or administrative.[18] Whilst resolution practice thus far entails banks burdened with legacy problems, most notably high NPLs, such concerns have been reflected in the treatment of the Veneto banks, and more recently of Banca Carige.[19]

In this context, this paper serves two purposes; first, it assesses how resolution laws may apply to retail banks and tries to identify potential impediments to their resolution, and second, it explores possible regulatory improvements to the current framework. In particular, part 2 sets the scene; how resolution works and what is the interaction between the MREL and collective industry funds. Part 3 assesses how the different resolution scenarios may apply once a retail bank is deemed 'failing or likely to fail' (FOLTF). Part 4 recommends alternatives aiming to improve the current resolution framework. Part 5 concludes.

2. An MREL-based resolution framework

Bank resolution in the EU operates in two parallel levels; a national and a European one. Whilst in all Eurozone Member States substantive rules are harmonized under the Bank Recovery and Resolution Directive (BRRD),[20] enforcement differs between Member States within and outside the Banking Union. In Banking Union, the Single Resolution Board (SRB), an EU agency, is responsible for all EU banks, and exercises its powers directly upon Eurozone's 'significant' banks and indirectly[21] upon 'less significant' banks.[22] National resolution authorities (NRAs) are competent for planning and executing resolution for less significant banks under the SRB's auspices, whilst the SRB is competent for resolution

2017 see Martin Götz, Jan Pieter Krahnen and Tobias Tröger, *Taking bail-in seriously: The looming risks for banking policy in the rescue of Monte Paschi di Siena*, 2017).

[17] Ioannis G Asimakopoulos and Pierre-Henri Conac, 'Exploring Alternative Resolution Strategies: the Tercas Case' (2019), SSRN.

[18] Ioannis G Asimakopoulos, 'The Veneto Banks Resolution: It Shall Be Called 'Liquidation'' (2018) 15 European Company Law 156.

[19] C. Dias, J. Deslander and M. Magnus, *Recent measures for Banca Carige from a BRRD and State Aid perspective* (European Parliament Briefing, 2019).

[20] Directive 2014/59/EU, as amended recently by Directive 2019/879 (BRRD 2). BRRD's older brother, the SRMR (Regulation 806/2014, as amended recently by Regulation 2019/877) copies the same substantive rules but places them in a uniform procedural framework that is followed by the SRB.

[21] According to Art 7(4) SRMR, all decisions by national resolution authorities need to be notified to the SRB and are implemented following the SRB's non-opposition decision.

[22] According to Article 4 SSMR, 'significant' banks are the ones that meet at least one of the following criteria: (i) the total size of their (consolidated) assets exceeds 30 bn euros, (ii) the bank qualifies as one of the three largest banks in the country or its assets exceed 5 bn and 20% of the home country's GDP, (iii) assets exceed 5 bn and the ration of assets/liabilities in more than one country exceeds 20%, (iv) the bank has received financial assistance by the ESM or the EFSF. The ones not meeting the criteria are deemed less significant. The ECB can, at any given moment, decide that a less-significant should be considered significant and thus, take over control.

planning, in collaboration with the NRAs, and for executing resolution for significant banks. The SRB is also responsible for executing resolution whenever European resolution funds need to be used. Moreover, all policy decisions related to bank resolution – including on the MREL calibration – are taken at the European level by the SRB.[23]

EU bank resolution policies can be designed and implemented on the basis of two different strategies.[24] The first resolution strategy, the so-called Single Point of Entry (SPE), requires that resolution of a group shall apply to one entity only, usually a parent holding company, which is the one required to build up its loss-absorbing capacity during good times, and takes the losses and is liquidated in bad times. The second resolution strategy, the Multiple Point of Entry (MPE), means that resolution of a group applies to multiple entities – subsidiaries, which all need to build-up MREL buffers. However, since retail banks tend to operate primarily in one jurisdiction and lack significant cross-border activity, the SPE strategy is almost exclusively applied upon them without however the possibility of applying resolution to a parent holding company, as with large international banks.

In order to make the SPE strategy work effectively, banks need to be able to absorb losses and recapitalize themselves sufficiently while preserving at least their critical functions.[25] In this context, there are three components that come together in resolution: (i) the MREL which is bailed-in in case of failure, (ii) resolution financing which aims at providing capital and liquidity[26] in resolution when bail-in does not prove adequate, and (iii) deposit insurance which aims at reimbursing insured depositors when insured deposits have been bailed-in or when the entity holding these deposits is drawn to liquidation. If one of the pieces is unavailable or underperforms then the pressure for financing falls upon the others and ultimately the success of the resolution framework can be at risk.

In the EU, concerns have been raised as to the adequacy of resolution financing.[27] To start with, resolution financing is not designed to cover losses; any financial contribution is

[23] On the MREL policy, see the first SRB's policy paper Single Resolution Board, *Minimum Requirement for Own Funds and Eligible Liabilities (MREL) - SRB Policy for 2017 and Next Steps* (20 December 2017). Other policy papers relate to the identification of a bank's critical functions and the application of the public interest assessment.
[24] Rec 80 BRRD.
[25] SRB, *Critical Functions Report*, 2019.
[26] Whilst European resolution funds can indeed be used for liquidity purposes, the limited capacity of these funds makes it rather unlikely that such thing will happen, see European Commission, *BRRD Impact Assessment*, 2012), 126.
[27] Ansgar Hubertus and Gros Belke, Daniel, 'Estimating the bridge financing needs of the Single Resolution Fund: How expensive is it to resolve a bank?' (2016) Centre for European Policy Studies ; Florian Brandt and Matthias Wohlfahrt, 'A common backstop to the Single Resolution Fund' (2018) Journal of Economic Policy Reform 1; Emilios Avgouleas and Charles Goodhart, 'Bank resolution 10

expected to be returned since the resolved bank should be, by default, viable again upon resolution. In the Eurozone, national resolution funds are steadily merging to a European Single Resolution Fund (SRF) owned by the SRB. The SRF is designed primarily as a recapitalization tool (and less as a liquidity provider) for Eurozone's banks only once the 8% bail-in of the bank's total liabilities and own funds (TLOF) has been applied and only up to 5% of the bank's TLOF.[28] However, its capacity –standing at approximately EUR 60 billion – makes it rather unlikely to ever be used as a liquidity tool, even when considering the European Stability Mechanism's (ESM) additional 60 billion backstop. Therefore, EU resolution financing for capital and especially for liquidity purposes is currently limited.

Resolution financing can be also provided by the Deposit Guarantee Schemes (DGSs).[29] Essentially, DGSs can contribute to resolution up to the amount they would need to contribute to reimburse covered depositors should liquidation had applied. In particular, when bail-in is applied, the DGSs are liable for an amount equal to what the contribution of covered depositors would have been should they had been bailed-in. This provision is aligned with the protection that covered depositors enjoy in case of liquidation; providing lesser protection under resolution than under liquidation would directly violate the 'no creditor worse-off' principle (NCWO).[30] However, when other resolution transfer tools are applied then the DGS is liable up to the amount of losses that covered depositors would have suffered under normal insolvency proceedings. This option offers indeed the flexibility for DGS funds to be used in case of resolution. To that, two limitations are imposed by the legislature; first, the use of DGS funds should not be greater in resolution than in liquidation, and second, its liability should not be greater than the amount equal to 50% of its target level. The use of the DGSs is subject to state aid clearance by the Commission, meaning that some form of burden-sharing is required for the use of DGS funds.[31] In case the use of DGS funds reduces its capacity to an amount lower than the 2/3 of its target level then the regular financial contribution of the affiliated banks should be set accordingly as to allow for the DGS' recapitalization within six years in order to avoid pro-cyclical effects.

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years from the global financial crisis: a systematic reappraisal' (2019) 7 School of European Political Economy, LUISS , Günter Franke, Jan Pieter Krahnen and Thomas von Lüpke, *Effective resolution of banks: Problems and solutions*, 2014).

[28] Commission, *BRRD Impact Assessment*, 126; Art 101(2) and 44(5) BRRD.

[29] Art 11 DGS Directive; art 109 BRRD; art 79 SRMR. On an analysis of the DGS, see Christos V Gortsos, *The new EU Directive (2014/49/EU) on deposit guarantee schemes: an element of the European Banking Union* (Nomiki Bibliothiki 2014); Christos Gortsos, 'The Role of Deposit Guarantee Schemes (DGSS) in Resolution Financing' (2019) .

[30] Art 74 BRRD; Art 15(1)(g) SRMR.

[31] European Commission, *Communication on the application, from 1 August 2013, of State aid rules to support measures in favour of banks in the context of the financial crisis ('Banking Communication')* .

For some significant and less significant banks financial support in times of financial distress is also provided by the so-called Institutional Protection Schemes (IPSs), which can be also recognized as DGSs.[32] These are usually sectorial institutional arrangements that aim at mutualizing certain funds to be used in case one or more members of the group experiences financial distress. These arrangements are primarily used as a recovery tool by rescuing a bank before it goes insolvent.

As regards deposit insurance, concerns have been raised as to the effectiveness of purely national DGSs.[33] Currently, DGS are expected to reimburse depositors up to the threshold of 100,000 euros. In this context, establishing a European DGS has been considered as the third missing pillar of Banking Union.

The current architecture with the missing elements in resolution financing and deposit insurance and the strict conditions attached to the SRB's mandate as an EU agency undoubtedly put additional pressure on resolution authorities to ensure the resolvability of banks through the MREL calibration. Besides, it has been a European policy and legislative decision to require from all banks to build up MREL in contrast, for instance, to the US, where only global systemically important banks (G-SIBs) are required to build up TLAC.[34] In particular, resolution authorities take into consideration the capacity of the available resolution and deposit insurance funds when calibrating the necessary MREL levels for each bank.[35]

Moreover, the calibration of the MREL stands in parallel to the regulatory thresholds related to bail-in requirements and access to resolution funds. Strictly speaking, the calibration of the MREL is detached from the bail-in threshold under the BRRD since the two serve different objectives; while the (8%) bail-in threshold becomes relevant only when resolution funds are to be used, the MREL aims to ensure the resolvability of an institution with the use of the resolution toolkit, including among others bail-in.[36] Moreover, liabilities eligible for bail-in are more broadly defined than MREL-eligible liabilities. However, the minimum bail-in requirement before accessing collective funds as well as the limits to the use of collective

[32] Céline Choulet, 'Institutional protection systems: are they banking groups?'.
[33] On the regulatory protection of depositors, see Niall J Lenihan, 'How Has the EU Protected Depositors in the Financial Crisis?' (2014) 16 Cambridge Yearbook of European Legal Studies 289.
[34] On the bank resolution and insolvency laws applied in the US, see J. Deslandes, C. Dias and M. Magnus, *Liquidation of Banks: Towards an 'FDIC' for the Banking Union?* (European Parliament In-depth Analysis, 2019); on a comparison of the mutualisation of risk between Banking Union and the US, see Maria Nieto, 'Bank resolution and mutualization in the euro area' (2016) 2 European Economy, Banks, Regulation, and the Real Sector .
[35] Art 45 BRRD.
[36] Article 45(6)(a) BRRD.

funds cannot but be related to the MREL calibration process since they form part of the resolvability assessment process.

The calibration of the MREL constitutes a complex technical process.[37] Assuming that an SPE strategy applies, the calibration of the MREL depends on the preferred resolution strategy opted for by the resolution authorities, namely liquidation or resolution.[38] Resolution is considered preferable to liquidation when it is deemed necessary that the critical functions performed by a bank need to be preserved, else contagion effects might follow an idiosyncratic event. In case of liquidation, the loss-absorbing capacity of banks should aim only at covering losses. Therefore, the MREL for such institutions will equal the sum of the pillar 1 and 2 prudential capital requirements. However, when resolution is deemed necessary, then the MREL levels should suffice to cover losses, recapitalize the resolved entity, and ensure that creditors' confidence will be regained after the resolution weekend.

In terms of the nature of liabilities comprising the MREL, resolution authorities can either request the MREL to consist of eligible debt or equity. In principle, the more subordinated the MREL is, i.e. equity, the better for resolution. Full subordination, though, is not required by the BRRD but higher subordination can be requested by resolution authorities.[39] However, even though equity seems to be socially preferable in the long run[40] and the first best choice for MREL, it is particularly costly for banks in the short-run, which instead opt for unsecured debt.[41] In particular, since equity is riskier than debt, investors request higher dividends than coupons, and thus the cost of capital increases. Moreover, in the short-run increasing the amount of equity would increase the cost of capital even further in order to sustain attractive dividends for a larger number of shares. Of course, in the long run the bank's lower leverage would lead to lower cost of capital.[42]

3. Testing the current bank resolution framework for retail banks

[37] For an extensive analysis, see Tobias H Tröger, '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' (2019) Journal of Banking Regulation 1.
[38] Board, *Minimum Requirement for Own Funds and Eligible Liabilities (MREL) - SRB Policy for 2017 and Next Steps*.
[39] Rec 10 BRRD 2.
[40] Anat R Admati and others, 'Fallacies, irrelevant facts, and myths in the discussion of capital regulation: Why bank equity is not socially expensive' (2013) .
[41] The level of long-term unsecured debt issuances has an increasing trend, see EBA, *Report on Funding Plans*, 2019).
[42] Admati and others, 'Fallacies, irrelevant facts, and myths in the discussion of capital regulation: Why bank equity is not socially expensive'.

With that in mind, this section theoretically tests the compatibility of the current MREL-based resolution framework with the business and funding model of retail deposit-funded banks. To do so, I apply a backward induction analysis. I consider the three alternative scenarios once a bank has been deemed 'failing or likely to fail' (FOLTF), namely (a) resolution based on open-bank bail-in, (b) liquidation under national laws, (c) and resolution based on transfer strategies, in order to test their rationale and feasibility. The outcome therefrom will allow the reader to identify the weaknesses of the current resolution framework vis-à-vis retail banks and will feed into the later discussion regarding possible recommendations.

a. *Resolution based on open-bank bail-in*

In open-bank bail-in resolution strategies a bank is resolved as a going-concern and all losses, as well as the funds for its recapitalization, are expected to derive from the bank's TLOF through bail-in.[43] This means that the resolution of an institution relies heavily on the bank's MREL capacity. In other words, in principle, the cost for both loss-absorption and recapitalization should be fully internalized. Collective resolution industry funds can supplement bail-in once a minimum bail-in threshold has been reached, which currently stands at 8% of TLOF, and can be used up to a limit of 5% TLOF.[44] Excess financing needs should be covered through alternative financing arrangements or through additional bail-in.

Open-bank bail-in strategies are considered as the current paradigm when it comes to resolution. According to anecdotal evidence, approximately 90% of all significant banks in Banking Union should follow the said resolution strategy once deemed FOLTF. Meanwhile, approximately 70 less significant banks would also fall under this strategy since they are considered of domestic systemic importance. In other words, open-bank bail-in strategies are to be applied to a very diverse group of institutions, from to domestic retail deposit-funded institutions. Therefore, the question is whether this group of rather diverse business and funding models can cope equally well with the need to issue MREL-eligible liabilities.

In this context, the first step of the analysis is to briefly examine the MREL funding needs of European banks. Since there is no information on MREL decisions by resolution authorities

[43] For an analysis of the mechanics of bail-in, see Christos Hadjiemmanuil, 'Bank Stakeholders' Mandatory Contribution to Resolution Financing: Principle and Ambiguities of Bail-In' (2015) ; Anna Gardella, *Bail-in and the two Dimensions of Burden-Sharing* (2015); and a seminal paper on bail-in, Nouriel Roubini, 'Bail-in, burden-sharing, private sector involvement (PSI) in crisis resolution and constructive engagement of the private sector. a primer: evolving definitions, doctrine, practice and case law' (2000) September Available online at: http://www stern nyu edu/globalmacro/psipaper pdf .

[44] Rec 77 and art 27(7)(b) BRRD.

reference can only be made to the European Banking Authority's (EBA) qualitative and quantitative work[45] as well as the Financial Stability Board's (FSB) work in collaboration with the Basel Committee.[46]

Irrespective of the technicalities of the MREL calibration,[47] under this strategy MREL needs to suffice both for loss absorption[48] and recapitalization. Quantitatively, this stands for retail deposit-funded banks – on an average – at 28% of risk-weighted assets (RWA) with the top 50% of these banks requiring 21.1% RWA, and the middle 50% being concentrated between 17-30%.[49] While these figures are indeed lower than the average of all banks – 37.9% – there are certain assumptions built into the analysis, which need to be considered when interpreting the results. One particular assumption for retail banks is that, as is indeed the case, many of them will not require resolution but instead liquidation should suffice. Under a liquidation scenario, MREL should reflect only the amount required for loss-absorption since the amount for recapitalization will be zero. Therefore, given that some banks would require zero MREL for recapitalization and some others 100% recapitalization, the EBA decided to introduce in its models the assumption that recapitalization for retail banks will stand at 50%. However, this means that the MREL for retail banks that require resolution will be expected to be significantly higher, around the figures that apply for all other banks where the recapitalization assumption stands at 100%.

Moreover, these MREL estimations may well stand at higher levels due to the risk of underestimating the amount required for loss-absorption. Underestimating the amount required for loss-absorption means that more bail-inable assets will be used for loss-absorption and less bail-inable assets will be then available for recapitalization purposes. This underestimation seems plausible when looking into the input of the FSB and EBA's work on historical losses which guided the regulatory framework for MREL calibration since it focuses primarily on large listed cross-border banks where information is available; small and mid-sized retail banks are therefore not well captured due to lack of information. From anecdotal evidence, losses for such banks are historically much higher. Therefore, when

[45] EBA, *Final report on MREL: Report on the implementation and design of the MREL framework*, 2016); EBA, *Quantitative update of the EBA MREL report (December 2016 data)*, 2017).
[46] FSB, *Historical Losses and Recapitalization Needs: Findings Report*, 2015).
[47] See Tröger, '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'.
[48] In principle, loss-absorption equals the pillar 1 and 2 capital requirements. However, upward or downward adjustment to this amount could be made ad hoc by resolution authorities after considering the information from the SREP, and the existence of any barriers or impediments to resolvability, see EBA, *Quantitative update of the EBA MREL report (December 2016 data)*, 25.
[49] Ibid, 10.

resolution authorities are called upon to calibrate the MREL, MREL decisions for retail banks might end up being higher than estimated. The EBA's update which pushes RWA-based MREL higher than its initial quantitative assessment might prove the point.

At the same time, there is some skepticism as to the capacity of deposits to function as a credible bail-inable cushion. Usually, in such business models, the volumes of uncovered deposits are significant[50] while there is always the fear of systemic contagion or bank runs in case losses are imposed upon uncovered depositors.[51] Meanwhile, deposit-funding is one of the main critical functions of any bank, and thus bailing-in depositors when there is a high degree of deposit funding can lead to opposite results.

As the EBA acknowledges, reaching the required MREL levels might indeed prove challenging for retail deposit-funded banks.[52] According to the EBA's final MREL report[53] the predominance of covered or preferred retail deposits in the funding structure and their limited or non-existent experience in issuing debt instruments was found to be the main factor affecting institutions' ability to meet the MREL requirements, especially in jurisdictions with less developed capital markets.[54] Even out of approximately 130 significant banks 70% is not listed, 60% has never issued convertible bonds (CoCos),[55] and 25% has never issued subordinated debt. Meanwhile, international investors are likely to ask for higher risk premia for buying bail-inable instruments of smaller banks compared to that of larger banks due to lack of information. At the same time, due to investor protection concerns, the placement of bail-inable instruments to retail investors has been significantly constrained.[56] At the end of the day, the capacity of the market to absorb those bail-inable instruments is questionable, meaning that for the time being MREL issuances challenge large international banks,[57] let alone smaller retail banks.

[50] Eligible deposits are those that have an outstanding maturity of more than a year, which excludes sight deposits and term deposits with outstanding maturity below 1 year.
[51] In fact, uncovered deposit runs are much stronger than covered ones from the moment that negative rumors start spreading, see evidence from the Italian Deposit Guarantee Scheme in Giuseppe Boccuzzi and Riccardo De Lisa, 'Does Bail-in Definitely Rule out Bailout?' (2017) Journal of Financial Management, Markets and Institutions 93.
[52] EBA, *Final report on MREL: Report on the implementation and design of the MREL framework*, 129.
[53] Ibid, 26.
[54] Ibid, 27.
[55] Joanne Wu, 'Investors' Trash, Taxpayers' Treasure: The Banco Popular Wipeout and Contingent Convertible Bonds' (2018) 22 North Carolina Banking Institute 405.
[56] BRRD2 introduced quotas related to maximum subordinated liability holdings in retail portfolios, see art 44a BRRD.
[57] Jean Pierre Mustier, Speech in the 2019 SRB Annual Conference.

Moreover, retail banks are business models with relatively balanced balance sheets since they take deposits and issue loans. Forcing them to issue expensive debt liabilities will inevitably push them to change their business model in quest for higher yields and thus for riskier investments. Moreover, by issuing more debt, equity will also become more expensive due to higher insolvency risk. With MREL being expensive, banks will need to make sure that they invest the excess liquidity in a way that makes a profit, or at least minimizes losses.[58] In particular, banks can invest in sovereign bonds as a risk-free asset, they can provide more loans to the market, or they can invest in riskier assets. Investing in sovereign bonds would not constitute a profitable investment in the current low-interest environment. Providing more loans would increase the banks RWA in times where banks are actually cutting credit supply to reduce the impact of higher RWA-based capital requirements.[59] Therefore, investing in riskier assets would seem to be the way to go. Another option for banks would be to finance MREL entirely through equity,[60] but as aforementioned equity for banks is costlier than debt in the short-term. Ultimately, the business model of these banks would be forced to change, thus threatening diversity in the financial sector.

Assuming that MREL levels are indeed not enough, then in most retail banks there is no other cushion between equity and deposits; deposits would then have to be bailed-in.[61] Then again, there are two alternatives: either – most likely – uncovered deposits suffice to cover losses and recapitalize the bank or – very unlikely indeed – covered deposits (replaced by the national DGS) would need to contribute as well.[62] In the likely scenario of a bail-in of uncovered deposits, the financial stability implications are significant as illustrated in the Cypriot bail-in but can be ever greater if applied at a wider level.[63] Besides, if indeed uncovered deposits are to be bailed-in as a standard procedure, should then the regulators take precautionary measures and clarify to retail clients that uncovered deposits are considered as risky investments since they can be converted to shares, as in Cyprus, and therefore should be

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[58] Otherwise, even corporate governance concerns might be raised, see Bart Bierens, 'The Governance of Banks and the Requirement of Resolvability: a Fundamental Change in Perspective?' in Danny Busch, Guido Ferrarini and Gerard van Solinge (eds), *Governance of Financial Institutions* (Governance of Financial Institutions, Oxford University Press 2019).
[59] Reint Gropp and others, 'Bank Response to Higher Capital Requirements: Evidence From a Quasi-Natural Experiment' SAFE Working Paper, No 156, Goethe University Frankfurt, SAFE - Sustainable Architecture for Finance in Europe, Frankfurt aM.
[60] That is now explicitly mentioned in BRRD 2, see rec 8 BRRD 2.
[61] This is pointed out as the main risk of bail-in, see Bart M Lambrecht and Alex SL Tse, 'Liquidation, bailout, and bail-in: Insolvency resolution mechanisms and bank lending' (2019) .
[62] There is little information on the distribution between uncovered and covered deposits.
[63] The Cypriot bail-in illustrated that retail holdings of bank deposits are reduced for all households regardless whether they held equity or debt in the banks affected, however, the reduction is much stronger when retail clients were also holding subordinated debt of these banks, a common phenomenon in the case of European retail banks, see Martin Brown, Ioanna Evangelou and Helmut Stix, 'Banking Crises, Bail-ins and Money Holdings' (2018) Central Bank of Cyprus Working Paper .

placed under the scope of MiFID? Ultimately that could reduce the amount of deposits held by retail banks.

Last but not least, banks fail in most cases due to a failed business model. At the end of the day, even if all goes as planned, the open-bank bail-in strategy is effective as long as it ensures that the restructuring plan submitted by the bank is credible and can be implemented. Otherwise, what is the point of resolution? However, restructuring adds additional costs to the newly-resolved institution, which span from termination of contracts, relocation or closing of branches, IT investments, etc, and thus push the requirements for MREL even higher.

b. Liquidation

When resolution does not meet the public interest test, liquidation under normal insolvency proceedings applies as the default scenario.[64] Liquidation can be either court-based or administrative.[65] In principle, under judicial liquidation national DGSs are employed to reimburse covered depositors up to the threshold of 100,000 euros, whilst under administrative liquidation resolution authorities have larger leeway in terms of what actions and financing methods they will apply. DGSs can support transfer strategies that cost less than depositor reimbursement as long as they comply with State aid rules.

Trying to enforce judicial liquidation generates three problems. First, DGS capacity to reimburse depositors in case of liquidation is very limited. According to the DGS directive, the target that DGSs need to meet stands at 0.8% of deposits, and indeed some countries have gone beyond that, but it also allows for a country to establish a lower target of 0.5% of deposits upon the Commission's approval, which currently only applies to France.[66] Putting this into perspective, at the end of 2016, the combined balance sheet of the Veneto banks amounted to EUR 28.1 billion and the available DGS funding amounted to approximately EUR 0.5 billion. Meanwhile, the need to replenish those funds immediately would put all banks affiliated to the DGS in pressure, most likely in times of general financial distress. Second, even assuming that DGS funding would suffice to reimburse covered depositors the impact to the real economy from a haircut to uncovered deposits would be immense, as well

[64] Art 18(1)(c) SRMR.
[65] Jens-Hinrich Binder and others, 'The choice between judicial and administrative sanctioned procedures to manage liquidation of banks: a transatlantic perspective' (2018) Available at SSRN 3244334 .
[66] EBA, Deposit Guarantee Schemes data, available at https://eba.europa.eu/regulation-and-policy/recovery-and-resolution/deposit-guarantee-schemes-data.

as the political costs of such a decision. In other words, the limit of 100,000 is one that national authorities would want to avoid by all means.[67] Moreover, if bailing-in uncovered deposits is to become standard practice, then perhaps we need to reconsider the scope of the definition of investment as to include as well the deposit of amounts larger than EUR 100,000.[68] Third, assuming that indeed DGS financing was adequate and political will for such approach did exist, removing a bank from the market may create a credit gap in the short-term since most SMEs tend to transact with one or two banks at most, meaning that moving to a new bank to seek financing would not happen automatically. Deposits can move automatically from one bank to another but credit provision cannot be replaced in the same manner.

The next point would then be whether the introduction of the MREL could make liquidation enforceable. The answer to that would be probably no. First, as aforementioned, MREL levels under a liquidation scenario might be set higher than the minimum capital requirements (Pillar 1 and 2), however resolution authorities are very reluctant in doing so.[69] Once the supervisor has approved a bank's minimum capital requirements it would sound paradoxical for the resolution authority to intervene and request higher requirements. If higher minimum capital requirements are indeed required that should be the role of the supervisor to decide. Secondly, the credit gap problem – as one of the bank's critical functions – is not resolved since a bank, will still be wound up under (corporate) insolvency rules.

Therefore, it is evident that liquidation in its traditional corporate form cannot be applied to banks.[70] This is also illustrated by looking back into cases of bank failure. According to anecdotal evidence, in France, no bank has been ever liquidated. In Spain, 7 out of 79 banks have been liquidated, however, their liquidation had a punitive character since the banks had been previously charged with criminal offences; in that sense, liquidation functioned as a means of placing the losses upon the bank's stakeholders in the form of a penalty.

The alternative is administrative liquidation. Administrative liquidation allows the use of transfer tools, such as separation of assets, sale of the good assets to a buyer and liquidation of the remaining bad assets. Losses are covered through limited bail-in, the use of liquidation

[67] Andrew Campbell and Paula Moffatt, 'Protecting Bank Depositors after Cyprus' (2014) 23 Nottingham LJ 94.
[68] Ph Athanassiou, 'On the Legal and Economic Treatment of Bank Deposits as Investments: Some Reflections' (2014) 29 Journal of International Banking Law and Regulation 715.
[69] EBA, *Final report on MREL: Report on the implementation and design of the MREL framework*.
[70] Biagio Bossone, 'What Makes Banks Special? A Study of Banking, Finance, and Economic Development' (1999) Thomas F Huertas, 'Are Banks Still Special?' (2017) Eva HG Hüpkes, 'Insolvency–why a special regime for banks?' (2002) .

aid under state aid rules, whilst if need be, covered depositors are reimbursed by the national DGS. However, once out of the scope of resolution laws national authorities could indeed circumvent resolution through the application of a resolution-like administrative liquidation.

The case of the Veneto banks perfectly illustrates the point.[71] On June 23, 2017, the SRB found no public interest in the resolution of the Veneto banks and thus, decided that the latter should be liquidated under national law instead. Two days later, on June 25, the Italian government adopted an Italian Decree, which provided for the forced transfer, by the insolvency administrator of the businesses of the banks to the higher bidder (Intesa Sanpaolo) – subordinated debt and outstanding litigation claims being excluded, combined with the provision of public support by the Italian government to the higher bidder in the form of a EUR 4.785 billion direct cash payment as well as ancillary guarantees of up to EUR 11.2 billion. The excluded liabilities and the NPLs were transferred to Società per la Gestione di Attività S.G.A., a risk management company. On the same day, the Commission confirmed that the Decree was compatible with the EU state aid rules on grounds of extraordinary necessity and urgency to adopt measures allowing the orderly exit of the two banks while avoiding a significant economic disturbance in the region. In other words, the administrative liquidation of the Veneto banks was essentially a 'mild resolution'.[72]

The alignment of such implementation of administrative liquidation with the spirit of the BRRD is questionable since it allows for the circumvention of bank resolution while allowing for the use of public funds with limited burden sharing. This controversial sequence of decisions[73] has been largely due to the financial stability risk of employing the DGS funds as well as the lack of a credible alternative to open-bank bail-in. In particular, applying resolution in the case of the Veneto banks might have led to the use of the DGS for the reimbursement of approximately two billion of deposits in value. Since the funds of the DGS would barely suffice to cover the two billion euro reimbursement, Italy's largest credit institutions would be called upon to replenish the funds of the DGS. Consequently, that could have generated systemic concerns since all banks would need to contribute at the same time. Lastly, there were concerns as well regarding the amount of potential litigation costs due to mis-selling practices in the self-placement of bail-inable instruments.[74]

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[71] Similar would have been the case with Banco Popular had a buyer not been found since there were severe concerns as to the treatment of its Portuguese subsidiary.
[72] Asimakopoulos, 'The Veneto Banks Resolution: It Shall Be Called 'Liquidation''.
[73] Ibid.
[74] Pierre-Henri Conac, 'L'auto-placement d'instruments financiers par les établissements bancaires et la protection des investisseurs par l' European Securities and Markets Authority (ESMA)`' in Blanche Sousi (ed), *LIBER AMICORUM BLANCHE SOUSI* (LIBER AMICORUM BLANCHE SOUSI, 2016);

Combining the tendency of the SRB to reject the existence of a public interest in most cases as well as the impossibility of enforcing liquidation in the traditional, corporate sense it becomes evident that the SRB's rejection of public interest might lead to the de facto circumvention of bank resolution which materializes through the application of national administrative liquidation. Whilst the much debated harmonization of insolvency laws would mitigate this problem,[75] it would still not solve for the financing gap in resolution.

c. *Resolution based on transfer strategies*

Resolution based on the use of transfer strategies is the medium-ground solution to open-bank bail-in and administrative liquidation. Resolution, in this case, does not rely on the use of the bail-in tool but rather on the use of other transfer tools that are available to the resolution authorities: sale of business, separation of assets, establishment of a bridge institution.[76] Whilst bail-in is a tool that, in principle, suits better large banks which realistically cannot be expected to be bought under resolution by a competitor, transfer strategies suit better small and mid-sized banks which perhaps find it expensive to issue MREL and which can be more easily absorbed by competitors leading to the much-discussed consolidation in the banking sector.

Transfer strategies similar to administrative liquidation involve the use of transfer tools instead of bail-in – asset separation, sale of business, bridge institution. Bail-in can be also used to cover losses but this is not where the centre of gravity of this strategy falls upon. That is why the MREL requirements are scaled-down by 20% TLOF as a proxy to reflect the recapitalization needs post-resolution or the assets that would be transferred and/or liquidated under normal insolvency proceedings.[77] Instead, the burden during the resolution process lies on improving the separability of certain assets, ensuring a fair and precise analysis of market depth, and making sure that the IT infrastructure is in place to support such strategies.

Pierre-Henri Conac, *Mis-selling of subordinated debt and other junior liabilities and weaknesses of MiFID (I) to avoid this*, 2018).

[75] Diego Valiante, 'Harmonising Insolvency Laws in the Euro Area: Rationale, stocktaking and challenges. CEPS Special Report No. 153, December 2016' (2016) .

[76] Besides, bail-in is just one form of imposing losses upon creditors, see P Tucker, *The role of deposit insurance in building a safer financial system* (Speech 2012).

[77] SRB, MREL policy 2018- second wave, 13.

Under a transfer strategy, there are two scenarios: either a purchaser is found immediately after the FOLTF assessment or the resolution authority needs to hold the entity under resolution in a bridge institution until a purchaser is found.

Having a purchaser from the beginning makes resolution indeed easy to enforce. Time-wise, it can be a much faster process than applying only bail-in. However, finding a purchaser at that early stage requires preparatory work before the actual trigger of resolution as well as an early trigger to ensure that the value of the bank is still positive. Bail-in is to be used in order to cover part of the losses and the costs inherent in the transfer – termination of contracts, restructuring of branches, and changes in IT infrastructure.

If a buyer is not found, a bridge institution is set up that will continue to manage the bank until that happens. However, this requires time, and the longer the period the bridge institute has to operate the higher the costs of the resolution process.

That takes us to the funding capacity of the bridge institution. In order for resolution funds to be employed, the bank under resolution is required to complete a full bail-in up to 8% TLOF. The problem is that by applying such a bail-in upon the bank – including possible depositors as well – the relationship of the bank with its creditors and clients can be effectively destroyed. But again, replacing depositors with collective funding might not work. SRF financing could go only up to 5% TLOF. DGS funds can indeed support resolution, but their funding capacity is limited. Therefore, the scenario of the bridge bank cannot work at the moment due to the limited collective funds to support such strategy and thus the impact of an extensive bail-in upon a bank's relationships.

4. Improving the resolvability of retail banks

Without underestimating the immense regulatory progress that has taken place in the field of banking regulation in the years following the global financial crisis, it seems that this MREL-based resolution framework is incompatible with the business and funding model of many European retail banks;[78] it does not only threaten these banks' viability but it also lacks credibility in its enforcement. Instead, based on the above analysis, enhancing resolution transfer strategies is fundamental in order to enhance the resolvability of retail banks while

[78] This falls within the broader concerns of lack of proportionality in European banking regulation, see Michael Boss and others, 'Proportionality in banking regulation' (2018) 2 Monetary Policy & The Economy, Oesterreichische Nationalbank Q .

preserving their viability with lower MREL requirements. The SRB has acknowledged the potential of transfer strategies and has committed to further develop them.[79] Also, historically, judging from the US regime, transfer strategies have been extremely successful.[80] However, the credibility of transfer strategies depends on the existence of sufficient collective industry funding in order to ensure that bail-in, which will continue to apply, will not deeply destruct banks' relationship with their clients and creditors and thus, lower their value in resolution.

However, should collective resolution financing be enhanced as a supplement to bail-in? This is a fundamental question that goes back to the objectives of bail-in as a bank resolution tool. In theory, the fundamental rationale of bail-in relates to the need to establish market discipline in the financial sector by forcing banks to internalize the costs of their risk-taking.[81] However, resolution practice in the case of retail banks thus far has taught regulators a lesson: full internalization of costs directly by each financial institution might not be desirable in the end for all banks since it might lead to sub-optimal outcomes.[82] Therefore, a solution can indeed be the use of private industry funds in parallel with bail-in in a more systematic manner. Indeed, between the use of public funds (externalizing costs) and the use of bail-in (fully internalizing costs), there is a middle ground solution, namely internalizing part of the costs on an individual level, and internalizing the rest of the costs on a collective industry level. Bail-in should then aim to exclude both uncovered and covered depositors in case the 8% threshold has not been reached through shares and junior subordinated debt.

As regards deposit insurance as a form of collective financing, most scholars and regulators concur that a European deposit insurance scheme (EDIS) is required.[83] At the moment the credibility of a DGS depends on the fiscal capacity of the sovereign; an element which is also reflected in the pricing of bail-inable debt.[84] The EDIS would steadily merge all national DGSs and would ensure that European funds would be available to backup national DGSs

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[79] SRB MREL policy, 2018.

[80] They are considered as administrative liquidation procedures. However, there is one important difference between the EU and the US. In the US, there is no resolution mechanism that operates in parallel. In the EU, bank resolution and administrative liquidation overlap to a large extent.

[81] Franke, Krahnen and von Lüpke, *Effective resolution of banks: Problems and solutions*; Tröger, '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'.

[82] Mr Giovanni Dell'Ariccia and others, *Trade-offs in Bank Resolution* (International Monetary Fund 2018).

[83] Among others, Thomas Huertas suggests the creation of European Deposit Insurance Corporation where all national DGSs would merge, see Thomas Huertas, 'Completing banking union' (2019) SAFE White Paper, No 63, Goethe University Frankfurt, SAFE - Sustainable Architecture for Finance in Europe, Frankfurt aM ; Dirk Schoenmaker, 'Building a stable European deposit insurance scheme' (2018) 4 Journal of Financial Regulation 314.

[84] Alexander Schäfer, Isabel Schnabel and Beatrice Weder, 'Bail-in expectations for european banks: Actions speak louder than words' (2016) .

once they are depleted. Having credible deposit insurance could change significantly the approach to the resolvability of retail banks, even though in its current form deposit insurance combined with super priority of covered deposits in the creditor hierarchy essentially cancels the effectiveness of deposit insurance.[85] Moreover, certain Member States have argued that such solution cannot be considered as long as risk levels in the banking sector have not been reduced and as long as NPL levels in certain countries have not been reduced. As discussed in the literature, the future of an EDIS seems rather blurry at least for the time being.[86]

Regarding resolution financing, an aspect to consider is not only the capacity of the funds per se but the conditions to access them as well. At the moment, there is a requirement for burden-sharing of no less than 8% TLOF or 20% RWAs before the resolution fund may be used.[87] Most importantly though, resolution funds cannot contribute to more than 5% TLOF, thus pushing the real bail-in needs higher than 8%. Therefore, these thresholds, especially the 5% limit to resolution financing, would need to be reconsidered.[88] However, reducing the 8% threshold or moving back to the state aid 'burden-sharing' means that more collective funding will be required. For access to national DGSs, there are no minimum thresholds to be met apart from the requirement for burden sharing under state aid rules, and apart from the limit of not exceeding the counterfactual of reimbursing covered depositors.

Beyond the establishment of EDIS and the modification of the thresholds linked to resolution financing, this paper argues that collective funding can be provided through the establishment of national voluntary industry funds. Such funds need to be distinct from the SRF, and possibly from the DGSs as well. They should also be of a voluntary nature.

According to the current legislative framework, the legal vehicle for implementing such a scheme could be an entity similar to or identical to the "institutional protection scheme" (IPS).[89] The current regulatory framework for establishing an IPS is set out in CRR and CRD IV. In particular, an IPS is legally defined as a "contractual or statutory liability arrangement which protects those institutions and in particular, ensures their liquidity and solvency to avoid bankruptcy where necessary".[90] An IPS constitutes essentially a civil-law arrangement

[85] Kevin Thomas Davis, 'Depositor preference, bail-in, and deposit insurance pricing and design' (2015) Bail-In, and Deposit Insurance Pricing and Design (December 18, 2015) ; Kevin Davis, 'Regulatory changes to bank liability structures: implications for deposit insurance design' (2019) Journal of Banking Regulation 1.
[86] David Howarth and Lucia Quaglia, 'The difficult construction of a European Deposit Insurance Scheme: a step too far in Banking Union?' (2017) Journal of Economic Policy Reform 1.
[87] Art 44(5) BRRD.
[88] EBA, Final report on MREL, 131.
[89] Used already in Germany, Austria and Spain to provide additional protection.
[90] Art 113(7) CRR.

between specific financial undertakings in order to provide for mutual protection to each other in situations of financial distress.[91] It requires the existence of a legal entity, which is responsible for the regulations related to the IPS,[92] but the IPS is not considered a legal entity as a whole. Its establishment needs to be licensed by the ECB after certain conditions have been met.

IPSs are established on a voluntary basis. This means that banks could decide to join if they consider that there is a benefit to it. So far, the benefits of joining such an arrangement were linked to prudential requirements; the supervisor may decide on a waiver on the calculation of risk-weighted exposure amounts within the IPS, waiver from specific deduction requirements, waiver on large exposures, as well as a waiver from the individual liquidity requirements. In the context of resolution, and assuming that they would be used in transfer strategies, participation in a licensed IPS should be linked to lower MREL requirements. Such trade-off (MREL v participation in an IPS) is consistent with the regulatory approach that was recently introduced in BRRD 2 regarding cooperative networks, which are now considered as resolution groups for the purpose of resolution planning.[93]

In particular, it is important to examine whether such a resolution-related institutional scheme could transpire and be suitable under existing laws. First, credit institutions are indeed eligible to become members of an IPS.[94] Only domestic institutions, though, are eligible. For resolution purposes ideally this scheme would need to have a cross-border dimension to act as a more resilient shock absorber.[95] Nevertheless, an IPS can be indirectly of a cross-border nature if a domestic institution is part of a cross-border financial group. Moreover, members of the IPS need to have a 'predominantly homogeneous business profile',[96] which is not further legally defined. Indeed, on the one hand, it might be reasonable to assume that homogeneous business profiles would make the supervision of the IPS simpler, however, on the other hand, some sort of diversification would be beneficial. Nevertheless, one can well argue that the wording ("predominantly") allows for such diversification to occur.[97]

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[91] Thomas Stern, 'Regulating liquidity risks within institutional protection schemes' (2014) 5 Beijing L Rev 210.
[92] Ibid.
[93] Rec 14a and Art 1(3) BRRD 2.
[94] Art 113(6) (a) and (d), and (7) (a) and (h) CRR.
[95] Daniel Gros and Ansgar Belke, *Banking Union as a Shock Absorber: Lessons for the eurozone from the US. CEPS Paperback, December 2015* (2015).
[96] Art 113(7) (h) CRR.
[97] Stern, 'Regulating liquidity risks within institutional protection schemes' argues that the bigger the sample of banks in the IPS the more variance would be accepted.

Second, these members need to establish a contractual or statutory liability arrangement, which ensures the members' liquidity and solvency in order to avoid bankruptcy.[98] However, the exact details regarding the liability arrangement are left undetermined by the regulator. Therefore, the trigger could indeed be set at a point agreed with the supervisory and resolution authorities. Moreover, whilst the contractual or statutory arrangement will generate a continuing obligation to the members, members could even retain the property of such funds, in a similar way as to the ex-ante financing arrangement of most DGSs. Since this arrangement is voluntary, members of the IPS could also decide when to leave. The departure date should be at least 24 months after the provision of advance notice,[99] which could be also linked with the requirement of building up the necessary MREL requirements in case of an exit. If those requirements have not been met within these 24 months then the member would be forced to delay its departure until those requirements have been met.

Third, funds in an IPS need to be readily available.[100] This requires that there is no material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the institution. While this requirement remains vague and imprecise, the inclusion of such arrangement under the SRB's resolution planning in conjunction with the ECB's regular oversight should ensure that such impediments do not exist. Ideally, the IPS' capacity could consist of a distinct pool of assets and funding sources provided ex-ante by the IPS members.

Fourth, appropriate risk management procedures need to be put in place.[101] The regulator needs to make sure that the existence of this "collective insurance" scheme does not generate moral hazard risks and does not promulgate excessive risk-taking. Therefore, financial risks should be assessed on a solo- and consolidated basis, whilst IPSs need to have the power to 'take influence' over individual members in order to reduce their risk profile. However, this 'influence' is weaker than in cooperative networks, which can issue instructions to its members.[102] Therefore, since the legal conditions are fulfilled establishing a national IPS for transfer purposes is possible under the current regulatory framework.

The next question is whether the SRB could take into consideration the membership of a credit institution in such an IPS in order to reduce its MREL levels. Clearly, the law does not explicitly state this possibility as it does for cooperative networks under BRRD 2. However,

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98 Art 113(7) CRR.
99 Art 113(7) (f) CRR.
100 Art 113 (6) (e) and (7) (a) and (b) CRR.
101 Art 113 (7) (c), (d), and (i) CRR.
102 Art 10 CRR.

there is no legal basis why this could not be the case. According to Level-2 provisions[103] and as developed by the SRB in its MREL policy,[104] the MREL comprises two components – a loss-absorption component and a recapitalization component that also includes a buffer to restore market confidence. The loss-absorption component remains the same in all cases, irrespective of the resolution strategy applied. The adjustment of the recapitalization component depends heavily on the preferred resolution strategy. At the moment, the SRB has already established a 20% MREL reduction when preferred strategy is the transfer of assets (partly or entirely) to a purchaser. It is therefore entirely up to the SRB to update its MREL policy for banks that are also members of a resolution-focused IPS. At a later stage, an explicit provision in the BRRD could be added, as was recently the case with cooperative networks in BRRD 2. Its lack, however, does not pose any constraints upon the SRB since such IPSs can already be established.

However, there are certain downsides to this solution related to the regulation of liquidity risks within IPSs. Since IPSs do not constitute legal entities themselves, liquidity risks relate to the IPS members due to their participation in the IPS. In particular, under any circumstances, holding liquid assets is expensive since they are relatively low-yield products. When an IPS member is equipped with the legal right to request liquidity assistance from other IPS members at any given time, it creates moral hazard risks related to its tendency to reduce its expensive liquidity buffer in favour of cheaper more illiquid assets. Ultimately, this may lead to the weakening of the entire IPS' liquidity capacity. Moreover, contagion effects within the IPS upon a member's failure might be generated, especially when considering the members' 'predominantly homogeneous business model'.[105] All these factors may lead to second-round effects and additional IPS member failures.

5. Conclusion

The establishment of the European bank resolution framework aims to improve the resilience of the banking system by requiring banks to internalize their losses, limiting the use of bailouts, and ultimately establishing market discipline in the financial market. However, the architecture of the SRM has been designed to rely primarily on banks' internal MREL capacity and secondarily on collective industry funds, namely resolution funds and deposit guarantee schemes. Resolution experience and evidence thus far show that such design is

[103] Commission Delegated Regulation 2016/1450.
[104] SRB, MREL Policy 2018.
[105] BCBS, Liquidity Risk: Management and Supervisory Challenges 2008, p. 17.

incompatible with the business and funding model of retail banks, which focus on deposit-taking and provision of loans and are not active in capital markets. As a result, the viability of the retail deposit-funded bank model is put at risk in the name of resolvability. And whilst it might be true that there are no perfect alternatives[106] to the existing bank resolution model, much can be done to improve the resolvability of retail banks. In this context, this paper was constructed in three steps: (1) it started by understanding the rationale and key features of the EU bank resolution framework, (2) it then tested its implementation on retail banks in order to identify the problem, and (3) finally offered solutions.

First, this paper argued that the EU bank resolution framework is rather inflexible and relies heavily on the bail-in tool and the MREL, which has been set as a requirement for all EU banks. In particular, bank resolution functions as a system where internal and collective financing is combined to support different resolution strategies as designed by the resolution authorities on an ad hoc basis. When collective financing is limited, resolution authorities have no other choice than to increase MREL requirements as a means to achieve their objective.

Second, this paper theoretically tested this MREL-based resolution framework as to whether it can apply effectively to retail banks. It did so by taking all three available scenarios: open-bank bail-in, national liquidation, and transfer-based resolution. Under different reasoning, all three scenarios seem to lead to a deadlock situation due to the lack of sufficient collective financing available for resolution purposes. However, transfer strategies are most likely to succeed given the realistic possibilities for the use of the sale of business tool, combined with the use of bail-in to cover losses. However, it is of paramount importance that bail-in does not exceed the 8% TLOF threshold and does not affect uncovered depositors. Therefore, credible resolution financing is required that should go beyond the 5% TLOF limit.

Third, assuming that removing the 5% threshold is not possible, this paper argued in favour of establishing voluntary collective industry funds, similar or identical to institutional protection schemes, that banks would be free to join in exchange for lower MREL requirements. With that as a given, it would then be feasible, and without any further legislative amendment, to proceed with the development of transfer-based strategies which could then also be incorporated in the resolution plans of these banks. Overall, the combination of transfer resolution strategies, reasonable use of bail-in, and credible collective financing would ensure

[106] Sergio Puig and Gregory Shaffer, 'Imperfect Alternatives: Institutional Choice and the Reform of Investment Law' (2018) 112 American Journal of International Law 361.

significantly lower MREL requirements for retail banks, and would enhance their resolvability without threatening their viability.

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