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The European Commission's crisis management and deposit insurance (CMDI) proposal increases system-wide liquidity risk and makes more banks systemic*

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In this policy note, we argue that the European Commission's crisis management and deposit insurance (CMDI) proposal is a costly policy error. One of the main reasons for the reform is that in some EU Member States existing resolution regimes have not been applied to address failing banks, and authorities have shied away from their application as they feared high political costs. We partly agree with this diagnosis of the Commission but argue that the reform proposal addresses the symptoms rather than the root causes of the failed framework. First, the proposed general depositor preference shifts the costs of bank failures from large uncovered depositors to deposit guarantee schemes (DGS) and – via the pass-through of the associated bank contributions – largely to covered depositors by ranking all deposits pari passu. Second, this shift of costs constitutes a subsidy and makes large, uncovered short-term deposits more attractive. Their mispricing increases moral hazard and system-wide liquidity risk and contradicts key objectives of the capital markets union project. Third, the proposal makes more banks systemic in gone concern, which increases costs for banks and supervisors. Finally, we conclude by making a strong case for improving the current regime in a less intrusive and complex manner.

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*The views expressed in this note are exclusively those of the authors and do not necessarily reflect those of the OeNB or the Eurosystem. This policy note expands the arguments brought forward by Stefan in the SUERF BAFFI Bocconi Panel Discussion: *The recent market turmoil: Lessons for market exits of systemically important banks*. May 17, 2023. We agree with Lind and Berg (2023; SUERF Policy Note No. 306), who see no need to stray from the original ideas behind the BRRD, and disagree with Restoy (2023), who supports the European Commission's proposal in his SUERF Policy Note No. 318. The authors are grateful to Daniel Hardy for providing comments on earlier drafts. All remaining errors are our own.

1. Introduction

We agree with the diagnosis of the European Commission (EU COM) that in some EU Member States, existing resolution regimes have not been applied to address failing banks. Too often in the past, bail-inable liabilities, especially uncovered deposits, were bailed out using taxpayer money.[1]

On 18 April 2023, the EU COM published its proposal for the review of the crisis management and deposit insurance (CMDI) framework in the EU.[2] According to the EU COM, the proposal seeks to improve, rather than overhaul, the framework in several key areas. Still, it envisages some quite radical changes. The rationale of the package is to address *"…misaligned incentives in choosing the right tool to manage failing banks, leading to the non-application of the harmonised resolution framework, in favour of other avenues."* (EU COM, 2023a, p. 3).

This note is structured as follows: Section 2 sketches the key elements of the EU COM proposal (cf. EU COM, 2023a, p. 4). Section 3 presents our main arguments why it constitutes a costly policy error that will have significant unintended consequences. Section 4 shows that the current regime works well in Austria. Finally, section 5 presents our conclusions and policy recommendations for making the current regime work across the EU.

2. The European Commission's CMDI proposal in a nutshell

The CMDI proposal suggests three broad elements for reform: (i) broadening the scope of resolution to cover more banks, (ii) introducing a general depositor preference to enhance the use of deposit guarantee schemes (DGSs) in crisis management, and (iii) allowing DGSs to contribute to resolution funding to unlock access to the Single Resolution Fund (SRF).

The proposal broadens the scope of resolution and makes it easier to access DGSs and resolution funds. The CMDI package expands the scope of banks subject to resolution to cover small and medium-sized banks, i.e., resolution is deemed by default to be in the public interest unless it is demonstrated that national bank insolvency proceedings are more effective in achieving all of the resolution objectives. It allows DGSs to provide resolution funding as a substitute for the bail-in of uncovered deposits in the case where the failed bank's deposit book is transferred to another institution ("sale of business" or "bridge bank"). The proposal also provides for easier access to resolution funding by counting the contribution by the DGS towards the 8% loss absorption threshold, which unlocks the access to the SRF. Due to a new approach to the public interest assessment (PIA), it becomes more likely that the failure of small and medium-sized banks is managed under the harmonized resolution regime instead of under national insolvency proceedings. More small and medium-sized banks will be subject to the minimum requirements for own funds and eligible liabilities (MREL). However, some of these less significant institutions do not have easy access to fund this requirement.

[1] See, for example, NORD/LB (2019), Banca Monte dei Paschi di Siena (2017), Banca Carige (2019), Banca Popolare di Vicenza (2017), Veneto Banca (2017), National Bank of Greece (2015), Piraeus Bank (2015), Banco Internacional do Funchal (2015) (EU COM 2023d).

[2] The package includes amendments to the Bank Recovery and Resolution Directive (BRRD) (EU COM, 2023a) the Deposit Guarantee Schemes Directive (DGSD) (EU COM, 2023b) and the Single Resolution Mechanism Regulation (SRMR) (EU COM, 2023c). The package published by the Commission also contains a Communication on the review of the crisis management and deposit insurance framework contributing to completing the banking union, including a call to resume discussions on establishing a European Deposit Insurance Scheme (EDIS).

The shift to a general depositor preference aims at extending the use of DGS funds for additional measures beyond the payout of covered deposits in insolvencies. The package introduces a single-tier general depositor preference, i.e., all deposits will be treated the same (pari passu) and senior to other unsecured claims in the creditor hierarchy to facilitate a broader use of DGS funds. This makes the financial means of DGSs available in resolution and/or for financing "preventive and alternative measures".[3] The so-called super-priority of covered deposits is to be removed.

The use of DGSs for preventive and alternative measures remains a "national option". The package does not provide for a full harmonization of DGS preventive and alternative measures. Where the option is implemented, DGSs will be able to intervene, subject to a harmonized least cost test (LCT), either through preventive measures by supporting a bank before it is declared failing or likely to fail (FOLTF) and/or in liquidation through alternative measures, to support a transfer of assets and liabilities to a viable bank.

The proposal introduces exceptions to the three-stage financing of DGSs. It allows more flexibility in the use of alternative funding arrangements, i.e., public funds. According to the EU COM, this is meant to avoid fire sales of DGS assets and limit possible negative procyclical effects for the banking industry caused by the collection of extraordinary contributions. The proposal allows using publicly funded alternative financing but requires DGSs to first consider other potential sources of funds such as available financing means from regular contributions or extraordinary and privately-funded alternative financing arrangements. Hence, according to the Commission, it should be possible to use alternative funding arrangements for all types of DGS interventions, thereby also allowing the direct use of public funds for, among other things, preventive measures.

The package of the EU COM also includes an impact assessment (EU COM, 2023d) and a Communication, which includes a call for resuming discussions on establishing a European Deposit Insurance Scheme (EDIS).[4]

In June 2023, the Council and the European Parliament started negotiations on the Commission's CMDI proposal. The negotiations are controversial, not least because national experiences with the current framework differ across EU Member States.

3. The CMDI proposal constitutes a costly policy error with significant unintended consequences

In several dimensions, the EU COM proposal is complex and entails substantial room for maneuver for authorities.[5] In the following, we highlight the incentives that increase the likelihood that these ambiguities and policy options are exploited in a manner that has substantial unintended consequences.

The EU COM facilitates bailouts of large uncovered depositors with the support of taxpayer money within the resolution regime. The legislator identifies two root causes in the Bank Recovery and Resolution Directive (BRRD) why the resolution framework is not working as intended: first, *"misaligned incentives in choosing the right tool to manage failing banks…"*, which lead to the non-application/circumvention of the BRRD framework.

[3] Preventive measures aim at preventing the failure of a credit institution and may be activated only if certain conditions apply, such as, in particular, the costs of the measures do not exceed the costs of fulfilling the statutory or contractual mandate of the DGS (Article 11(3)(c)DGSD); alternative measures intend to preserve the access of depositors to covered deposits, including the transfer of assets and liabilities and deposit book transfer, in the context of insolvency, and can be taken provided that the costs borne by the DGS do not exceed the net amount of compensating covered depositors at the credit institution concerned (Article 11(6) DGSD).

[4] For further information on the motivation for the proposal see also European Banking Authority (EBA) (2021).

[5] For example, uncovered deposits remain MREL-eligible but the objective is not to bail them in; banks should have enough MREL such that there is no need to bail them in, but the proposal is motivated by the observation that some banks cannot have sufficient MREL for structural reasons. Banks transfer the contributions to the DGSs, but given the low price elasticity of covered deposits, it is likely that these costs are passed on to covered depositors.

"[...T]he Union resolution framework saw little use due to the risks for depositors of deposit-funded institutions to bear losses to ensure that those institutions can access external funding in resolution, in particular in the absence of other bail-inable liabilities." (EU COM, 2023a. Recital 2). Second, state aid rules still allow bank bailouts, which facilitated the non-application/circumvention of the BRRD: *"...many failing banks of a smaller or medium size have been dealt with under national regimes often involving the use of taxpayer money (bail-outs)..."* (EU COM, 2023a, 3).[6] However, the proposal fails to address these two root causes, i.e., bailouts of uncovered depositors and reliance on taxpayer money. Instead, it prepares the ground for institutionalizing the former and increasing the likelihood of the latter by relying strongly on DGS and SRF funds (both provided with public backstops for intermediary funding) *within* the BRRD framework This way, the proposal remedies the symptom – notably, the non-application of the BRRD framework – but only by allowing bailouts of uncovered depositors and the use of taxpayer money.

3.1 The general depositor preference shifts losses from uncovered depositors to DGSs...

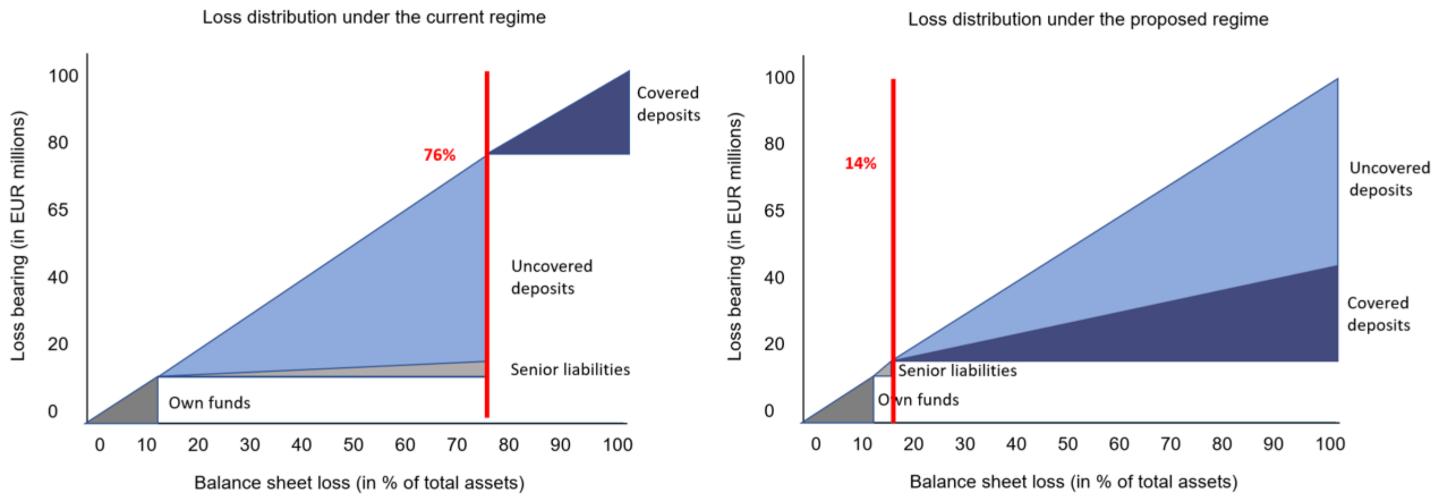
In the following, we demonstrate how the proposal is likely to work in practice: First we show how it changes the distribution of losses in insolvency (graph 1), and then we illustrate its effects under resolution (graph 2).

The example shows that the proposal shifts losses from uncovered depositors to DGSs in insolvency (graph 1). Since the proposal is very complex, we show its implications in a simplified example. Graph 1 depicts the case of a medium-sized Austrian bank under the current regime (left-hand panel) and the proposed regime (right-hand panel). The simplified balance sheet structure is as follows: 12% own funds, 2% (uncovered) senior liabilities and a total of 86% deposits (62 percentage points uncovered, 24 percentage points covered). A balance sheet total of EUR 100 million is assumed. The x-axis indicates the percentage of total balance sheet losses as a percentage of total assets, and the y-axis shows the distribution of losses across liability holders in EUR million as a function of the bank's losses. Under the current regime (left-hand panel), the uncovered depositors (light blue triangle) bear the losses before the DGS/covered depositors. The dark blue triangle represents the losses of the DGS/covered depositors under the current creditor hierarchy. The left corner of the dark blue triangle starts from a 76% balance sheet loss, as covered deposits have super-priority under the current rules and are most senior in bearing losses. Under the EU proposal (right-hand panel), uncovered depositors are pari passu with covered depositors. Hence, a large share of the losses in the former is shifted to the latter and senior liabilities. In most Member States (19 according to EU COM, 2023a) senior unsecured creditors rank pari passu with uncovered deposits from non-SME corporates. The proposal might imply rating downgrades and widening spreads for the former.[7] The left corner of the dark blue triangle illustrates this shift by showing that covered depositor losses and thus DGS losses occur significantly earlier (at a balance sheet loss of just over 14%). Consequently, it is much more likely that the DGS bears losses when a bank fails. Overall, the proposed credit hierarchy causes higher DGS losses at any level of recoveries below 100% of all deposits.

[6] The impact assessment lists 27 cases of application of the CMDI framework since 2015, of which 10 received public support. Out of the 27 cases, (i) 11 banks went into resolution, and in one case, public funds were injected to support resolution; (ii) in 6 cases (4 in Italy and 2 in Greece), authorities implemented precautionary public measures based on public funds; (iii) in 6 cases (4 in Italy and 2 in Latvia), the banks were subject to national insolvency proceedings, (of which 2 cases required public support and 2 were supported by the DGS, while the 2 cases in Latvia did not receive external support); (iv) in 4 cases (3 banks in Italy including 1 that required preventive measures twice and 1 in Germany) banks were subject to preventive measures which were funded by the DGS (Italy) or the state (Germany). Some banks underwent more than one treatment with, first, preventive measures or precautionary measures and, then, another round of preventive measures and/ or insolvency (EU COM 2023d, Annex 9, pp. 349).

[7] See Autonomous, 2023.

Graph 1: The effects of the general depositor preference in insolvency: losses are shifted from uncovered deposits to covered deposits/DGS and senior liabilities (simplified creditor ranking)



Source: Authors. Assume the bank balance sheet loss amounts to 40%. Under the current regime, 12% are borne by own funds, the remaining 28% are borne by uncovered depositors and senior liabilities. Both lose 43.75% of their claims. Under the proposed regime, 14% are borne by own funds and senior liabilities. The remaining 26% are borne equally by all depositors. Hence, the uncovered depositors profit by a reduction of losses from 43.75% to 30.23% at the expense of senior liabilities (up to 100% from 43.75%) and covered depositors/DGS (up from 0% to 30.23%). The creditor hierarchy was simplified to highlight the effects on covered deposits. Inter alia, below the class of uncovered deposits, sit private persons and SMEs > EUR 100.000. The simplification has no impact on the effects on the losses of covered deposits.

The same example (graph 2) demonstrates that the general depositor preference is the main driver of the use of DGS funds becoming more likely also in resolution, as the LCT hurdle is lowered. The left-hand panel is identical to the one in graph 1. The only difference is that it adds to the current creditor hierarchy the estimated payout costs under the general depositor preference for the DGS (dashed green rectangle). Although, in this example, covered depositors and, thus the DGS, do not suffer losses if the balance sheet loss is below 76%, the DGS incurs base costs of EUR 12 million for a potential payout of EUR 24 million.[8] Therefore, the LCT would allow the DGS to contribute EUR 12 million in non-payout solutions up to a balance sheet loss of 76%. In comparison, the DGS would not face any costs up to a balance sheet loss of 76% (graph 1). These additional costs (i) make insolvency more expensive relative to resolution also for smaller banks and (ii) "incentivize" the DGS to "voluntarily" contribute in resolution. Formally, this works via the LCT and the assumption that the costs of the sale of bank assets in resolution are much lower (close to EUR 0 million) than in insolvency (EUR 12 million).[9] The right panel shows the different forms of possible DGS involvements in resolution under the proposed framework.

[8] Assuming that payout costs are constant and amount to 50% of covered deposits. For illustration, under the general depositor preference full recovery might take 10 years, with opportunity costs of 4% p.a. and adding 2% administrative costs yields costs of EUR 12 million for the DGS for a payout of EUR 24 million. In some Member States, the costs of payouts might already be high without general depositor preference, due to inefficient insolvency procedures and DGS funding arrangements.

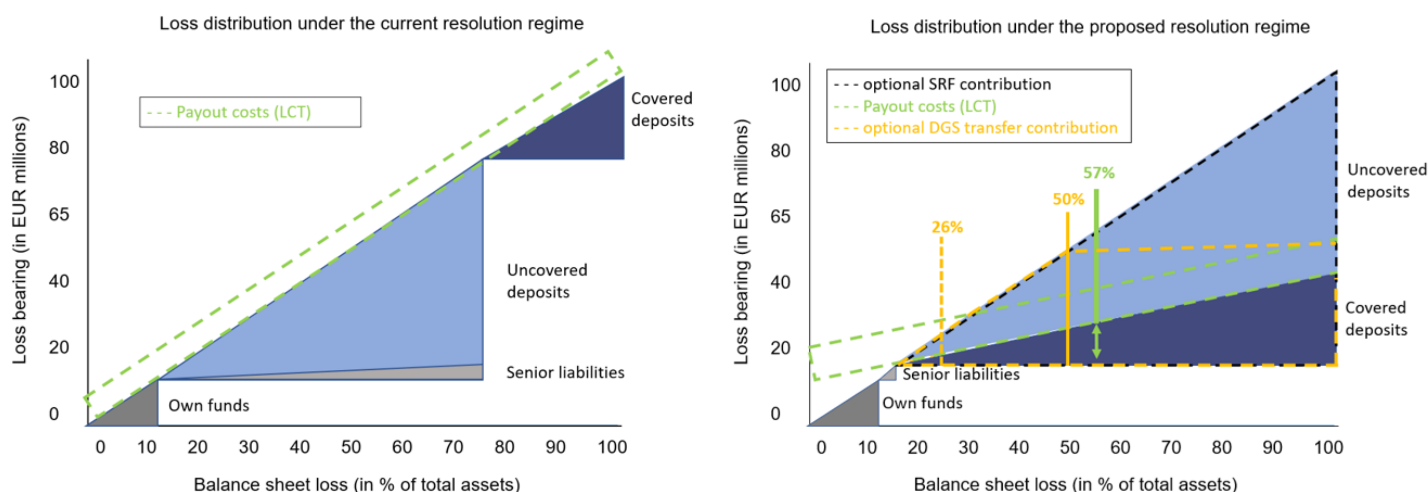
[9] The assumption does not hold for Austria, where the discount of bank loans in insolvency was roughly 20%, similar to the discounts in purchase and assumption transactions under the FDIC resolution procedures (see Bennet and Unal, 2015; and FDIC, 2017).

- Under the first option, a bail-in, there are sufficient bail-in-able total liabilities and own funds (TLOF; >8%) to directly engage the SRF (black dashed triangle). The DGS would only come into play to bridge a gap to this hurdle. Even potential losses of uncovered depositors can be borne by the SRF, if the NRA decides to exclude them from a bail-in, conditional on safeguards.

- Under the second option, an asset/liability transfer in resolution (yellow dashed quadrangle), the DGS is likely to be used to avoid the bail-in of uncovered deposits. The LCT limits this option to 50% of balance sheet losses in the example (solid yellow vertical line), as it corresponds to EUR 36 million in costs for the DGS (EUR 24 million covered deposits plus EUR 12 million payout costs). Compared to a payout under the general depositor preference, this option would be less costly for the DGS in the case of balance sheet losses of up to 26% (corresponding to an assumed payout cost of EUR 12 million).

- Under the third option, a standard resolution approach (not protecting uncovered depositors), the DGS would contribute according to the creditor hierarchy. Compared to a payout, this would be less costly for the DGS in the case of balance sheet losses of up to 57%, as minimum costs of up to EUR 12 million would always be incurred. We regard this option to be very unlikely under the proposed regime, because of the incentives it sets for the national resolution authority (NRA): Effectively bailing in only the DGS, with it financing a whole deposit book transfer (second option above), is associated with lower political costs than bailing in uncovered depositors as well. Furthermore, the "no creditor worse off" requirement increases the political costs of a bail-in of even highly professional depositors, such as hedge funds. If the NRA wants to bail in hedge funds, it must also bail in all other uncovered deposits. Hence, under the proposal, the resolution authority is more likely to exempt large uncovered short-term deposits from bail-in in resolution (EU COM, 2023a, Art. 44 Abs. 6/73 BRRD). This also happened in the US under the "systemic risk exemption".

Graph 2: The effects of the general depositor preference in resolution: more flexibility in resolution and the broader remit/use of DGS funds



Source: Authors' calculations. Assume the balance sheet loss amounts to 40%. Under the proposed resolution regime, (i) the SRF could bail out all depositors after a minimum 8% bail-in of total liabilities and own funds (TLOF). At a 40% balance sheet loss, there are no own funds and liabilities other than deposits left, thus, the DGS would need to bridge the 8% TLOF gap (EUR 4.8 million instead of EUR 12 million payout costs; but the SRF contributes EUR 21.2 million increasing the overall costs by 117%); (ii) the DGS could bail out uncovered depositors with a transfer resolution strategy causing 117% higher costs for the DGS compared to the current regime (EUR 26 million instead of EUR 12 million payout costs); or (iii) the DGS contributes to a resolution according to the creditor hierarchy, making it 40% less costly for the DGS (EUR 7.26 million instead of EUR 12 million payout costs).

The example shows that, under the proposed regime, uncovered depositors are much less likely to bear losses. This is in line with proposal's explicit aim of improving depositor protection and protecting depositors from bail-in (EU COM 2023a, pp. 4, 7, 10, 35).[10]

...and increases the (contingent) burden on DGSs

The proposal increases the volume of implicitly protected deposits in the EU by a massive 275% to about EUR 30,000 billion (incl. deposits from households, non-financial corporates, banks, non-bank financial intermediaries (NBFIs) and general government, as of May 2023[11]) from about EUR 8,000 billion **without providing for corresponding mandatory increases in the risk-bearing capacity of DGS ex-ante funds or the SRF or its ESM backstop:**

First, the general depositor preference per se increases the costs for DGSs in insolvency (even without the bailout of uncovered deposits discussed above), ceteris paribus by (i) reducing the assets the DGS may recover from the insolvency estate and (ii) prolonging the recovery process from a few months to a decade or more (intermediary distributions from the insolvency estate become more complicated and less likely). Hence, for the DGSs, the proposal would lead to a smaller recovery of assets discounted over a longer period.

Second, the larger remit of DGSs – higher quasi-coverage, higher costs in insolvency, contributions in resolution as well as for preventive and alternative measures (in the event of a national opt-in) – increases their (contingent) burden by increasing the frequency of DGS payments and its losses in these cases.

Third, the preventive measures carry the risk of being unsuccessful. Typically, a bank will require preventive measures by a DGS if private investors (incl. the shareholders of the bank) deem the risk that liquidity and/or capital injections may fail to be too high. In the case that the private investors are right to deny further support to the ailing institution, the DGS will need to arrange subsequent payments for the recovery and/or for a double payout to support the market exit of the failing institution.[12] The latter can require additional DGS payments (i) for the payout of covered depositors, (ii) for resolution or (iii) alternative measures.

Despite the higher burden on the DGS, only covered deposits remain the basis for calculating the DGS ex-ante funds, the respective contributions and extraordinary ex-post contributions. This leads to several unintended consequences.

3.2 Unintended consequences

In the following, we look into six unintended consequences of the proposal which are mainly caused – directly or indirectly – by the introduction of the general depositor preference and the ensuing increase in the costs incurred by DGSs.

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[10] For the deposits that are not covered, this approach facilitates their protection where it is necessary for safeguarding financial stability and depositor confidence." (EU COM, 2023a, Recital 40). These conditions are not specified in any detail.

[11] Data source: ECB Statistical Data Warehouse. However, the increase by 275% is only an indicative order of magnitude. It is difficult to estimate more precisely, as some uncovered deposits are already protected under the current regime (i.e., deposits of other banks with a maturity of less than 7 days, fiduciary deposits).

[12] In Annex 9, p. 349, the impact assessment of the European Commission includes several banks that, first, received preventive support or precautionary recapitalization, and then went into insolvency anyway (EU COM, 2023d, Annex 9, pp. 349).

3.2.1 Small covered depositors would have to pay for the improved seniority of large uncovered depositors

Banks are likely to pass the higher costs for DGSs on to covered depositors. The volume of, and the contributions to, DGS financing will continue to be only based on covered deposits. This increases the costs of covered deposits for banks, who will pass them on to covered depositors in the form of lower interest rates relative to uncovered depositors. In the end, this shift in the creditor hierarchy constitutes a subsidy from small covered depositors to large uncovered depositors: If a bank fails, large uncovered depositors receive a wealth transfer from the DGS, which will be recouped from banks based on their share in the total of small covered depositors. *"The [resolution and DGS] funds come from the banking system and a large part has been paid by [small covered] depositors, as costs like taxes are passed on to customers. Thus, there is a limited difference between bail out by taxpayers and bail out through the deposit insurance fund."* (Berg and Lind, 2023).

3.2.2 The higher burden on DGSs makes recourse to taxpayer money more likely *within* the proposed regime

The proposal makes it easier to fund DGSs with taxpayer money. Although DGSs and the SRF are primarily financed by bank contributions, public funds still play a critical role.[13] The DGS Directive provides for three stages of DGS funding: ex-ante funds, ex-post contributions and alternative funding arrangements (to be repaid by the DGS). However, the current proposal allows directly accessing the third stage of funding, which often involves taxpayer money. Member States have some leeway in implementing this final stage and, thus, its designs vary. Data collected by the EBA show that in nine countries (BE, DK, IE, LV, PL, RO, SE, SI, SK), a credit line (or similar) from the government is the third stage of DGS funding. In the remaining Member States, the funds are provided by a credit line from member banks, the central bank or other banks. Furthermore, funding via the SRF also builds on public funds. If the SRF is depleted, the ESM acts as a backstop and lends the necessary funds to the SRF to finance a resolution. The more frequent use of DGSs and their higher losses make recourse to taxpayer money more likely.

3.2.3 The proposal reduces the size of the marginal bank that overburdens a DGS

More banks become systemic in gone concern. The proposal increases the burden on DGSs in insolvency and in resolution. Hence, the marginal bank that may overburden a DGS becomes smaller (see section 4 for more details). Ex-post contributions and asset fire sales may jeopardize financial stability and put depositor confidence at risk. In turn, this would require recourse to taxpayer money to forestall systemic risk.

More banks must be treated as systemic in going concern. The US regional bank crisis demonstrated that ex-ante crisis prevention needs to be consistent with ex-post crisis management (Board of Governors of the Federal Reserve System, 2023). The Capital Requirements Directive (CRD) stipulates that if a bank's failure poses a risk to financial stability and the real economy, macroprudential supervision shall activate higher macroprudential capital buffers and tighter supervision.[14] Similarly, resolution authorities shall impose higher MREL requirements for systemic banks to ensure that they are resolvable without government support. More smaller banks would have to hold MREL and would be required to prepare resolution plans to avoid the need for DGS funds in the case of insolvency. While this would improve their resolvability, it is inconsistent with the EU COM's motivation for its proposal, i.e., the fact that some banks "cannot" issue MREL for "structural" reasons.

[13] "Indeed, it is the strength of the backstop that gives a DGS its credibility." (Huertas, 2022, p. 189).

[14] The EU COM acknowledges this and aims at reducing the cost of failure. It suggests triggering resolution earlier via the introduction of an "early warning period" when there is a material risk that an institution meets the conditions for being assessed as FOLTF, but solutions to prevent a FOLTF are still available. We fully support this part of the proposal, as it reduces the costs of failure and might shift upwards market expectations of bank capital and liquidity requirements.

3.2.4 The proposal can be seen as a first step towards EDIS through the backdoor

The proposal increases the accessibility of the SRF. Under the current regime, the political costs for the NRAs of gaining access to the SRF are the bail-in of at least 8% of bank shareholders and creditors, mostly in the respective Member State where the failing bank is resident. This price can turn out to be high.[15] However, this provision is a feature of the BRRD and the Single Resolution Mechanism Regulation (SRMR), not a bug. The hurdle is to ensure that the national authorities cannot shift the costs of their failures – e.g., lax supervision, forbearance, insufficient resolvability – to the euro area level. In comparison, the political costs of bailing in DGSs are much lower. In sum, the proposal makes it easier for NRAs – even incentivizes them – to shift some of the costs of bank failures to the European level. Easier access to the SRF increases the likelihood of burden sharing between weaker and stronger banking systems. Hence, the proposal can be seen as a first step towards EDIS through the backdoor.

3.2.5 The proposal increases system-wide liquidity and credit risk

A broadly shared conclusion from the US regional banking crisis in March 2023 is that the full coverage of all deposits by deposit insurance would be a mistake as it would increase moral hazard. Calomiris (2023) states that the deposit withdrawals from Silicon Valley Bank, Signature Bank and First Republic Bank demonstrated *"…the usefulness of the market discipline that comes from limiting deposit insurance protection."* Both banks had very low market capitalization due to bad liquidity risk and interest rate risk management, large hidden losses and doubts concerning their business models (Board of Governors of the Federal Reserve System, 2023, and FDIC, 2023). Veron (2023) argues along similar lines: *"Guaranteeing all deposits without limit, even in unsound banks like SVB and Signature Bank, removes an element of that elaborate system of market discipline."* Similarly, the Basel Committee on Banking Supervision (BCBS, 2010) identified the lack of market discipline as a problem seen in the Great Financial Crisis and strengthened the role of market discipline as the third pillar of Basel III in 2009.

The subsidy for uncovered depositors leads to a system-wide mispricing of liquidity and to an increase of system-wide liquidity risk. Uncovered depositors do not contribute to DGSs. Even with general depositor preference, uncovered deposits will require a risk premium above that of covered deposits, since the NRA decides on bailing-out uncovered depositors only after the FOLTF decision. For banks, this subsidy makes uncovered short-term deposits cheaper relative to a world in which the uncovered deposits would be charged a fair price for their better protection. Maddaloni and Scardozzi (2022) provide evidence that banks are likely to adjust their funding mix also to the general depositor preference: They *"…show that after the BRRD announcement, banks changed their liability mix toward cheaper sources of funding. They increased the portion of customer deposits relative to other interest-bearing liabilities…excessive reliance on bank deposits increases asset-liability mismatch and may enhance liquidity risk, especially when shocks occur."* Banks engage in maturity transformation and invest short-term liabilities in long-term illiquid assets. Recent experience (Silicon Valley Bank, First Republic Bank, Signature Bank and Credit Suisse) showed that large volumes of uncovered deposits can pose a systemic risk. The international debate, therefore, suggests increasing the marginal costs of these deposits, e.g., by reforming liquidity regulation. The EU COM should also focus on incentivizing investors (i) to shift (large) uncovered deposits from banks to the money/capital market, thereby strengthening the CMU, and/or (ii) to shift their funds into less runnable bank liabilities with longer tenors.

[15] See the political pressure in the US that led to the "systemic risk exemption" in the case of SVB, Signature Bank and First Republic Bank and the evidence presented for bailouts of subordinated debt in EU COM (2023 d, Annex 9).

The Commission's proposal decreases incentives to monitor banks and thus weakens market discipline. The envisaged general depositor preference even includes deposits of well-informed market participants like banks and NFBIs. This incentivizes well-informed professional depositors to shift their funds to those banks that offer the highest interest rates (moral hazard). *"[NBFIs] are sophisticated financial institutions that have established relationships with the banks to which they lend. And, because they lend to these banks on a consistent basis, they have strong incentives to monitor their counterparties."* (Potter, 2016).[16] Reduced market discipline exerted by large uncovered depositors implies that DGSs and supervisors would have to cover the gap. This raises the costs for DGSs. Many would have to establish and fund parallel quasi-supervisory functions to provide an effective risk management of their increased remit and contingent liabilities.[17]

The mispricing of better protection for all deposits leads to adverse selection and Gresham's law may come into play.[18] Less prudent banks may maximize the return on the free quasi-insurance of large uncovered short-term deposits by minimizing their DGS contributions and by avoiding the scrutiny of market discipline when they maximize the share of their balance sheet funded via large uncovered short-term deposits. To attract more uncovered deposits, they might offer somewhat higher rates than the market and take higher risk to earn them. This allows them to gain market share at the expense of more prudent banks (which constitutes a variant of Gresham's law). In a competitive environment, this might drag down lending standards and increase systemic credit risk (Calomiris and Jaremski, 2019). In the case of market exits, more prudent banks must replenish the DGS funds.

Yet, a general depositor preference will not increase depositor confidence when a bank is about to fail. Formerly, the NRA decides whether to exempt uncovered deposits from bail-in only *after* the FOLTF decision. Hence, even though it is highly likely that their deposits are exempt from bail-in, uncovered depositors still have an incentive to withdraw their deposits even under a general depositor preference. Furthermore, the potential exemption of all deposits from bail-in leads to confusion among investors as to whether EU banks effectively have enough MREL and who must bear what share of the burden in resolution. This increases the costs of other MREL in going concern and, hence, increases the credit costs for the real economy, especially for households and SMEs. As a minimum, all deposits that can be excluded from bail-in must also be excluded from MREL.

3.2.6 The higher seniority of all deposits makes uncovered deposits more attractive and contradicts the objectives of the CMU

The better protection of large uncovered deposits makes these highly runnable deposits even more attractive[19] **relative to financial market products** (such as commercial paper), ceteris paribus. The latter expose investors to funding liquidity risk, interest rate risk and market liquidity risk. In contrast, uncovered bank deposits benefit from a free implicit insurance against all these via a better protection against counterparty risk. This contradicts key objectives of the CMU, in particular the promotion of market-based financing and access to alternative providers of funding beyond banks for non-financial corporations.

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[16] See also Calomiris and Kahn (1991), Cebenoyan and Cebenoyan (2008), Alanis et al. (2015), and Balke and Wahrenburg (2019) on the effectiveness of monitoring by (large/informed) uncovered depositors. See Cecchetti et al. (2023) on the social costs of preventing efficient bank runs.

[17] It might also raise the costs for supervisors due to more intrusive supervision, and possibly for banks due to parallel regimes of DGS, competent authorities and resolution authorities.

[18] Stiglitz (1992) argues that [d]eposit insurance results in a process of Gresham's law: *"Depositors have no incentive to look to what the S&L does with their money. Financial institutions which engage in riskier investments can offer higher returns, and only these promised returns matter to the depositors."* Greenbaum and Thakor (1997, p. 486) present evidence based on the option feature approach to deposit insurance that it indeed leads to higher risk taking.

[19] It is likely that the general depositor protection will reduce interest rates on uncovered deposits somewhat .via a reduction of the risk premium relative to covered deposits, as the exemption form bail-in is uncertain. Danisewicz et al. (2018, p. 4493) document that *"…depositor preference laws that confer priority on depositors reduce deposit rates."*). But given the implicit subsidy of uncovered deposits such a decrease in the interest rate is unlikely to fully compensate for their better protection.

4. Making the current regime work: the case of Austria

Austria's integrated macroprudential strategy is an example of a consistent approach. In Austria, the activation and calibration of the other systemically important institutions (O-SII) buffer is consistent with the systemic risk analysis of the DGS, the resolvability assessment in resolution planning of going concern banks (Credibility & Feasibility Test) and with the PIA of gone concern banks. In addition, the activation and calibration of the systemic risk buffer (SyRB) ensures that the banks in the system can absorb the inevitable repercussions of a market exit – via insolvency or via resolution – even under system-wide stress.

A rigorous systemic risk analysis of DGSs plays a crucial role in macroprudential supervision and in resolution (planning). This analysis is based on a consistent and data-driven simulation of idiosyncratic and system-wide stress and the ensuing costs for the DGS.[20] Building on the analysis, the system-wide repercussions for all other banks that must contribute to bearing these costs are modelled. The model yields thresholds of the covered deposit share of the (marginal) failing bank in idiosyncratic and system-wide scenarios that constitute the maximum burden on the DGS (and the contributing banks). Up to that maximum, the DGS absorbs and mitigates systemic risk by spreading and absorbing the costs over a large number of banks and over time; beyond that maximum, the DGS amplifies systemic risk. The results are sensitive to the funding structure of the DGS. The analysis eventually led to the reform of the DGS funding structure. It significantly reduced the funding costs and the contagion effects of DGS payouts. The super-priority of the DGS plays a crucial role. It allows interim distributions from insolvency estates, which further reduce the costs of market exits. In the example provided above (section 3, graph 1), the payout costs would be lower by 87.5%, as the discounting of recoveries is a main cost driver.[21] The approach has proven to be effective in Austria.[22] Super-priority of the DGS might also reduce the transaction costs of resolution or insolvency, as it reduces conflict resolution costs among creditors which can result in overall lower funding costs for banks.[23]

The threshold of the covered deposit share of the (marginal) failing bank feeds into the following components of the integrated macroprudential approach:

- Banks with shares of covered deposits above this threshold are designated as other systemically important institutions (O-SIIs) to compensate for the risk that banks whose failure overburdens the DGS represent to the financial system and the potential impact of their failure on taxpayers.[24]
- Banks with shares of covered deposits above this threshold which are also vulnerable to interbank contagion are subject to the systemic risk buffer (SyRB) component "systemic vulnerability". This ensures that they have enough capital to absorb shocks to the DGS. A proportionality rule exempts small banks with total assets below 2% of the aggregate total assets of the Austrian banking system.

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[20] See Schmitz and Eidenberger (2021).

[21] Based on the Austrian experience (full recovery of the DGS payouts within one year), discounting recoveries by 4% and adding 2% handling costs.

[22] From 2020 to 2022, the Austrian DGS ESA successfully handled four payouts: https://www.einlagensicherung.at/de/cases.php.

[23] See Hardy (2014). He also points out that the pricing of the protection must be risk-sensitive; *"...the probability of distress might not be reduced if those that benefit from collateralization demand an interest rate that ignores the reduction in LGD that collateralization should achieve."* (p. 111). Unfortunately, this is not the case in the CMDI proposal: Uncovered depositors would enjoy better protection, but the costs thereof would still be passed through to covered depositors via banks' contributions to the DGSs. The latter are based solely on the banks' shares of covered deposits in the system and ignore their funding via uncovered deposits.

[24] See EU COM (2013) Recital 90.

- In resolution planning, the credibility and feasibility test for the resolution objective "financial stability" uses the threshold to identify banks that are likely to be resolved in the case of a FOLTF decision to avoid significant adverse effects on the financial system, in particular by preventing contagion, including to market infrastructures, and by maintaining market discipline and to protect public funds by minimizing reliance on extraordinary public financial support.[25]
- Upon failure of a bank, the threshold also informs the PIA.

Based on the systemic risk analysis of the DGS, (i) the general depositor preference and (ii) the wider remit of the DGS decrease the maximum threshold up to which the DGS acts in a systemic risk-mitigating manner. Hence, more banks become systemic. They are likely to become subject to the O-SII and/or systemic risk buffers and the ensuing tighter supervision. They are also likely to become resolution banks, which subjects them to additional requirements (resolution plan, MREL and additional reporting).

The Austrian banking system absorbed the costs of four market exits via DGSs during the Covid-19 crisis and the energy crisis after the start of the Russian war of aggression against Ukraine without causing negative repercussions for financial stability, depositor confidence or the real economy.[26] Hence, for small and medium-sized banks, market exits via the insolvency regime can work well (i) where efficient DGS funding strategies and super-priority of covered deposits lead to fast recoveries of DGS payouts and (ii) where authorities adopt sound macroprudential strategies to make the current CMDI framework work.

5. Conclusions and policy recommendations

The EU COM has rightly concluded that the resolution framework is not working as intended in some Member States. Some NRAs have shied away from insolvency or resolution without taxpayer money as they feared high political costs of imposing losses on investors, such as uncovered depositors. However, we find that the Commission's legislative proposal is a costly policy error with substantial unintended consequences.

We identify the general depositor preference as the main deficiency of the proposal for the following three main reasons:

First, it shifts the costs of bank failures from (large) uncovered depositors to DGSs. The latter are funded by banks, and the associated costs are largely passed on to small covered depositors. In addition, the larger remit of DGSs increases the likelihood that they will be overburdened and that taxpayers will have to temporarily finance preventive measures (where applicable) and the resolution of banks. For larger bank failures, the proposal implies that the costs of the higher seniority of large uncovered depositors may be shifted more easily to the SRF. The respective political costs for the NRA are significantly lower, as the 8% TLOF threshold can be reached without bailing-in uncovered deposits but via the DGS.

[25] See EU COM (2014) Article 31 2 (b) and (c).

[26] The four Austrian cases are not included in the European Commission's impact assessment (EU COM, 2023d), which argues that, in several cases, uncovered depositor losses in resolution have led to a loss of depositor confidence (EU COM, 2023d, Annex 8, pp. 315). However, most of the cases date back to the time before the BRRD was introduced and/or to cases associated with a sovereign debt crisis (e.g., Northern Rock in 2007, Iceland in 2008, Greece in 2012, Cyprus in 2013). Only one case involved a resolution under the BRRD, namely the resolution of Andelskassen JAK Slagelse, and the EU COM concludes that the bail-in of uncovered depositors worked "…without observed loss of depositor confidence." (EU COM, 2023d, Annex 8, p. 320).

Second, making large uncovered short-term deposits more attractive, decreases incentives to monitor banks which increases system-wide liquidity and credit risks. It also contradicts the objectives of the CMU. For investors, the general depositor preference makes large uncovered short-term deposits more attractive than other financial market products (e.g., commercial paper). The latter are subject to various risks (e.g., funding liquidity risk, interest rate risk and market liquidity risk). In contrast, what the proposal entails is a free implicit quasi-guarantee of uncovered deposits. This contradicts key objectives of the CMU, such as, in particular, promoting market-based financing.

Third, making more banks systemic increases the costs for banks and supervisors. The marginal bank that may overburden a DGS becomes smaller. As more banks become systemic in death, they must also be treated as systemic in life.

Given these unintended consequences, the EU Commission should not insist on rushing through the proposal in a hasty manner until spring 2024. The BRRD was introduced in 2014 and is still in its implementation phase (i.e., NRAs have not yet fully phased in the MREL requirements for many banks). Hence, there is very limited experience with bank failures under the fully implemented framework with fully phased-in MREL requirements in the EU. The proposed changes to the framework are far-reaching, and their consequences have been poorly researched. In fact, they would imply substantial implementation and compliance costs for banks, supervisors, resolution authorities and investors.

Based on the experience in Austria, we suggest the following, less intrusive and less complex measures for making the current framework work. The primary objective of the reform is to correct the "misaligned incentives in choosing the right tool to manage failing banks". In Austria, the current system has already been implemented in an incentive-compatible manner, and it is working well. The EU COM should consider promoting the adoption of the following best practices:

- The Single Supervisory Mechanism (SSM)/national competent authorities (NCAs) should **take failing-or-likely-to-fail (FOLTF) decisions earlier** – as advocated by the EU COM – and in a more predictable, rule-based manner; this reduces the losses for all creditors. The market discipline exerted by sophisticated uncovered depositors plays an important and positive role in this respect.
- The EU COM should promote the adoption of existing models of **effective and efficient DGSs as well as of insolvency regimes** in the EU to reduce the costs of payouts in Member States where they are still high.
- The macroprudential authorities should adopt **more forward-looking macroprudential strategies that integrate ex-ante and ex-post crisis management**. This ensures that the financial system remains resilient under stress, which, in turn, enables it to absorb the negative repercussions of any market exit on the sound banks, including the losses of uncovered depositors. For example, the integrated macroprudential strategy in Austria ensures an efficient funding of DGS payouts with a fast recovery through intermediary distributions from insolvency estates. An integrated macroprudential strategy ensures that the failure of banks with larger shares of covered deposits are less likely and less costly (O-SII buffer) and that other banks have enough risk-bearing capacity (SyRB) to maintain financial stability and depositor confidence even when MREL-eligible liabilities bear some losses.
- **A more effective enforcement of state aid rules** would harmonize the application of the BRRD. At the same time, state aid rules on access to funding outside resolution must become more stringent too.
- **The most effective way to reduce the potential system-wide effects of the bail-in of uncovered short-term depositors is to reduce the huge share of large uncovered short-term deposits in the EU banking system.** A major lesson learnt from the regional US banking crisis of spring 2023 is that large

shares of uncovered short-term deposits increase systemic risk. Hence, supervisors and regulators should create incentives for investors and banks, e.g., via higher run-off rates in the liquidity coverage ratio (LCR), to shift these into less runnable bank liabilities, such as bank bonds, and/or into commercial paper and bonds of non-financial corporates. This would also promote the objectives of the CMU.

- **At a minimum, the proposal needs to ensure that the better protection of uncovered depositors is funded appropriately and that it is priced in a risk-sensitive manner.** The current proposal fails to do that. Sufficient funds that are commensurate to the larger (contingent) burden of the DGS would maintain the credibility of the DGSs and reduce the likelihood that it is overburdened. Risk-sensitive pricing would avoid the subsidy of uncovered deposits and sustain their incentives to monitor banks and thus would preserve market discipline. ■

References

Alanis, E, H Beladi, M Quijano. 2015. Uninsured deposits as a monitoring device: Their impact on bond yields of banks. Journal of Banking and Finance 52, 77–88.

Autonomous. 2023. European Banks – Pushing depositor preference. 21 April 2023.

Balke, F, M Wahrenburg. 2019. Credibility of Bank Resolution Regimes and Market Discipline: Evidence from Corporate Deposits. Available at SSRN: https://ssrn.com/abstract=3494263 or http://dx.doi.org/10.2139/ssrn.3494263.

Basel Committee on Banking Supervision. 2010. Basel III: A global regulatory framework for more resilient banks and banking systems. Basel III: A global regulatory framework for more resilient banks and banking systems - post BCBS meeting - revised version June 2011 (bis.org).

Bennett, R L, H Unal. 2015. Understanding the Components of Bank Failure Resolution Costs. Financial Markets, Institutions and Instruments 24. 349–389.

Berg, J, S U Lind. 2023. Why there is no need to stray from the original ideas behind the Bank Recovery and Resolution Directive. SUERF Policy Note, Issue No 306, March 2023.

Board of Governors of the Federal Reserve System. 2023. Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank. Washington, D.C. (https://www.federalreserve.gov/publications/files/svb-review-20230428.pdf).

Calomiris, C W, C M Kahn. 1991. The Role of Demandable Debt in Structuring Optimal Banking Arrangements. American Economic Review 81. 497–513.

Calomiris, C W, M Jaremski. 2019. Stealing Deposits: Deposit Insurance, Risk Taking and the Removal of Market Discipline in Early 20th Century Banks. Journal of Finance 74. 711–754.

Calomiris, C W. 2023. That 80s feeling: How to get serious about bank reform this time and why we won't. 27 March. https://cepr.org/voxeu/columns/80s-feeling-how-get-serious-about-bank-reform-time-and-why-we-wont.

Cebenoyan, A S, F Cebenoyan. 2008. Subordinated debt, uninsured deposits, and market discipline: evidence from U.S. bank holding companies. Economics Working Paper Archive at Hunter College 421, Hunter College Department of Economics.

Danisewicz, P, D McGowan, E Onali and K Schaeck. 2018. Debt Priority Structure, Market Discipline, and Bank Conduct. The Review of Financial Studies 31, p. 4493–4555.

Cecchetti, S, K Schoenholtz, and L White. 2023. The dangerous role of America's weird lenders-of-next-to-last resort. Financial Times. Alphaville. August 17th.

European Banking Authority (EBA). 2021. Call for advice regarding funding in resolution and insolvency. EBA/REP/2021/31.

European Central Bank. 2023. Opinion of the European Central Bank of 5 July 2023 on amendments to the Union crisis management and deposit insurance framework (CON/2023/19).

European Commission (EU COM). 2013. Directive 2013/36/EU of the European Parliament and 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.

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

European Commission (EU COM). 2023a. Proposal for a European Parliament and the Council amending Directive 2014/59/EU as regards early intervention measures, conditions for resolution and financing of resolution action 2023/0112 (COD) https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023PC0227.

European Commission (EU COM). 2023b. Proposal for a European Parliament and the Council amending Directive 2014/49/EU on deposit guarantee schemes as regards the scope of deposits protection, use of DGS funds, cross-border cooperation, and transparency 2023/0112 (COD). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023PC0228.

European Commission (EU COM). 2023c. Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 806/2014 as regards early intervention measures, conditions for resolution and funding of resolution action European Commission (EU COM). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023PC0226.

2023d. Proposal Impact Assessment Report. SWD (2023) 225 final. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023SC0225.

Federal Deposit Insurance Corporation (FDIC). 2017. Crisis and response. An FDIC History, 2008–2013.

Federal Deposit Insurance Corporation (FDIC). 2023. FDIC's supervision of Signature Bank. Washington, D.C. (FDIC'S SUPERVISION OF SIGNATURE BANK).

Greenbaum, S I, A V Thakor (1997) Contemporary Financial Intermediation. The Dryden Press. Fort Worth.

Hardy, D. 2014. Bank resolution costs, depositor preference and asset encumbrance. Journal of Financial Regulation and Compliance 22. 96-114.

Huertas, T. 2022. Reset Required: The Euro-area Crisis Management and Deposit Insurance Framework. Journal of Financial Regulation 8, 187–202. https://doi.org/10.1093/jfr/fjac007.

Maddaloni, A M, G Scardozzi. 2022. The New Bail-In Legislation: An Analysis of European Banking Resolution. Working Papers (Dipartimento di Economia Aziendale). Università degli Studi Roma Tre. Rome.

Posch, M, S W Schmitz, P Strobl. 2018. Strengthening the euro area by addressing flawed incentives in the financial system. Monetary Policy & the Economy Q2/18. 34–50.

Potter, S. 2016. Discussion of 'Evaluating Monetary Policy Operational Frameworks' by Ulrich Bindseil. Remarks at the 2016 Economic Policy Symposium at Jackson Hole, WY, August 26. https://www.newyorkfed.org/newsevents/speeches/2016/pot160826.

Restoy, F. 2023. The Quest for Deposit Stability. SUERF Policy Note, Issue No 318.

Schmitz, S W, J Eidenberger. 2021. Einlagensicherung und Finanzmarktstabilität. in: N. Raschauer and T. Stern (eds.), Einlagensicherung. Linde-Verlag, Vienna 2021. pp. 75–105.

Sif Larsen, C, A Dyrberg Rommer. 2021. Crisis management of credit institutions: Senior unsecured creditors must prepare for bail-in. SUERF Policy Brief, No 69. https://www.suerf.org/docx/f_860e6390db45d650def1b4fa0c7dd667_22787_suerf.pdf

Stiglitz, J. 1992. The S&L Bailout. in J R Barth and R D Brumbaugh Jr. (eds.), The Reform of Federal Deposit Insurance: Disciplining the Government and Protecting Taxpayers, Harper Business, pp. 1-12.

Veron, N. 2023. Opinion: Fully reimbursing SVB depositors may prove to be a bad move. CNN Opinion. 16 March. Opinion: Fully reimbursing SVB depositors may prove to be a bad move | CNN.

List of acronyms

BCBS	Basel Committee on Banking Supervision
BRRD	Bank Recovery and Resolution Directive
CET1	Common Equity Tier 1
CMDI	Crisis Management and Deposit insurance
CMU	Capital Markets Union
CRD	Capital Requirements Directive
DGS	Deposit Guarantee Scheme
EDIS	European Deposit Insurance System
ESM	European Stability Mechanism
EU	European Union
EU COM	European Commission
FDIC	Federal Deposit Insurance Corporation
FOLTF	Failing Or Likely To Fail
LCR	Liquidity Coverage Ratio
LCT	Least Cost Test
MREL	Minimum Requirement for Own Funds and Eligible Liabilities
NBFI	Non-bank Financial Intermediaries
NCA	National Competent Authority
NRA	National Resolution Authority
O-SII	Other Systemically Important Institutions
PIA	Public Interest Assessment
SME	Small and Medium-sized Enterprises
SRF	Single Resolution Fund
SRMR	Single Resolution Mechanism Regulation
SSM	Single Supervisory Mechanism
SVB	Silicon Valley Bank
SyRB	Systemic Risk Buffer
TLOF	Total Liabilities and Own Funds

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