

»Concerning the weakest link«¹

»A fundamental principle underlying DGS is that they are funded entirely by banks, and that no taxpayer funds are used«
(European Commission, 2015)²

»A well-designed financial safety-net contributes to the stability of the financial system. However, if poorly designed, it may increase risks, notably moral hazard«
(IADI, 2014)³

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Abstract

During the negotiations to establish a European Deposit Insurance Scheme (»EDIS«)⁴, the European Commission publicly doubted the resilience of national deposit guarantee schemes (»DGS«). Indeed, the DGS' vulnerability in the event of a large members default is clearly evident. Notably the reason behind this vulnerability derives from the harmonized funding mechanisms according to the Deposit Guarantee Schemes Directive (»DGSD«), namely the »risk-based contribution matrix«. An unintended consequence of this mechanism could be associated with a de facto funding limitation in a crisis situation, manifested by the »dilemma of the weakest link in the chain«.

This article outlines the underlying problem of the weakest link and presents both regulatory and supervisory options to solve this dilemma.

Catchwords

Deposit Guarantee Schemes, Moral hazard, Bail out, covered deposits, risk based contribution Matrix, Alternative Funding Arrangements, resolution, systemical relevance, systemic risk, liquidity risk, Resilienc, Pay out mechanism, EDIS

Regulations

Capital Requirements Regulation (»CRR«), Capital Requirements Directive (»CRD«), Deposit Guarantee Scheme Directive (»DGSD«), Proposal for a regulation amending Regulation (EU) 806/2014 in order to establish a European Deposit Insurance Scheme (»EDIS«), Österreichisches Bundesgesetz über die Einlagensicherung und Anlegerentschädigung bei Kreditinstituten (»ESAEG«), Deutsches Einlagensicherungsgesetz (»EinSiG«), Liechtensteinisches Einlagensicherungs- und Anlegerentschädigungsgesetz (»ESAEG«)

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1 This paper exclusively reflects the personal opinion of the author. The question of state liability in the event of the failure of a systemically relevant financial institution has been ignored deliberately. A short version of this manuscript was published in ZFR 2018/282 (Dec 2018).

2 *European Commission*, Deposit guarantee schemes-EU legislation protects banks deposits in case of bank failure, available at <https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/deposit-guarantee-schemes_en> (31.10.2018).

3 *IADI*, Core Principles for Effective Deposit Insurance Systems (2014) 11.

4 Proposal for a regulation of the European Parliament and the Council amending Regulation (EU) 806/2014 in order to establish a European Deposit Insurance Scheme (COM(2015) 586 final; »EDIS«). Cf *Linder/Wörle*, Kommissionsvorschlag für ein europäisches Einlagensicherungssystem, ZFR 2016, 68.

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I. Introduction

The default of a **systemically relevant financial institution** regularly outstrips the financial assets of deposit guarantee schemes (hereinafter referred to as »DGS«), which means that the DGS concerned could not raise the funds needed within the sector without jeopardizing the survivability of one or more – *low resilient* – member institutions (»*Dilemma of the weakest link in the chain*«). In the absence of emergency-funding by a third-party (e.g. public sector) the DGS, unable to meet its short-term obligations to satisfy all covered depositors, faces **default**.

Essential causes of the *dilemma of the weakest link* lie in the harmonized mechanism of ex-post contributions (**risk-based contribution matrix**), as well as in the lack of regulatory creativity in the establishment of further problem-solution methods, such as alternative funding arrangements under art 10 para 9 DGSD.

In principle, this is an **European-wide dilemma**, since the *Deposit Guarantee Scheme Directive* (»DGSD«⁵) harmonises essential safeguard mechanisms of national DGS within the EEA.^{6,7} The DGSDs scope of application basically covers the protection of all (non-financial) depositors up to a certain amount, irrespective of which member institution (systemically relevant or not) they hold their funds (cf art 4 para 3 DGSD). Consequently, art 1 last sub-para DGSD demands that DGS »*have in place adequate financial means or relevant financing arrangements to fulfil their obligations*«. The extent of such financial obligations may reach, particularly if an institution of systemically importance fails, considerable high amounts.⁸

According to the rules of the DGSD, the **protection of covered depositors** shall be carried out by the DGS as a **system**, which finally means that the member institutions are mutually required by institutionalised **solidarity** to pay-out covered depositors, and not by **taxpayer's**

funds (cf recital 37 DGSD)⁹. However, even the European Commission doubts that either the pure notion or the implementation of the DGSD may be capable of achieving this goal in relevant cases:

»*Despite the improvements brought by the 2014 Directive, the absence of a common deposit insurance scheme for the Banking Union means that depositors remain vulnerable to large local shocks, which could overwhelm national deposit guarantee schemes.*«¹⁰

By »*overwhelming the national deposit guarantee schemes*«, the European Commission seems to indicate the very tight limits of the current regulations and the associated increased probability of **state aid** (»*bail-out*«) in the case of the default of a large member institution, which takes high amounts of covered deposits on its balance sheet (»*deposit-rich member institutions*«).

To better understand the respective problem, both the *funding requirements* as well as the *funding mechanisms* of the DGSD are described below.

II. Funding requirements (Art 6 and 8 DGSD)

The DGSD requires member states to protect covered depositors up to a **coverage level of EUR 100,000,-** (art 4 para 1 in conjunction with art 6 para 1 DGSD). The DGS must ensure that the **covered deposits** can be made **available to the affected depositors within seven working days** (art 8 para 1 DGSD).¹¹

After a **deposit protection case** is triggered, the balance sheet of the DGS concerned is extended by the **pay-out obligations** towards the covered depositors (cf art 8 para 1 DGSD). These obligations shall be qualified as *sight deposits* after seven working days, taking in mind

5 Directive 2014/49/EU of the European Parliament of 16 April 2014 on deposit guarantee schemes.

6 For the standard at the global level, see BCBS, Core Principles for Effective Deposit Insurance Systems, <<https://www.bis.org/publ/bcbs156.htm>> as well as IADI, Core Principles for Effective Deposit Insurance Systems.

7 The deposit guarantee schemes of the Member States are centrally linked on the EBA website: <<https://www.eba.europa.eu/regulation-and-policy/recovery-and-resolution/deposit-guarantee-schemes-data>> (3.1.2019).

8 It should be noted that a case of a failure of a systemically relevant financial institution (a deposit protection case) may also occur **during the resolution** of an institution, e.g. in the case of a bank-run on the bridge bank (for further information on *liquidity in resolution* see *European Parliament*, Public hearing with Elke König, Chair of the SRB Supervisory Board. SRB Annual Report 2017 (11.7.2018)). If the DGS does not have sufficient funds available to satisfy all covered depositors, the DGS would also be forced into insolvency.

9 For the »Iceland scenario« see for example *Kelsey*, Crisis in Iceland: Deposit-Guarantee Scheme Failure and State Liability (14.4.2015), 39 f, *Baudenbacher*, The fundamental principles of EEA law. EEA-ities (2017), 165 f as well as the relevant case law of the EFTA Court (»*Icesafe*«).

10 *European Commission*, »Towards the completion of the Banking Union«. Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions (24.11.2015). Note: Since 2012, the establishment of a common European deposit insurance scheme (»*EDIS*«) as the third pillar of the banking union has been under discussion, but without any visible progress.

11 Cf *Kriwanek*, Einlagensicherung und Anlegerentschädigung, ZFR 2015. Note: An actual **pay-out** within seven days is not legally required. Furthermore, the DGSD does not provide any provisions on the pay-out-mechanism of the funds, which means that the choice of pay-out modalities is left to the national legislator. Remarkable therefore are art 41n lit a and art 41p para 1 SRM Regulation as amended by *EDIS*, which requires the payment of reinsurance or co-insurance to the DGS in »cash«.

that the DGS has to make the funds available at any time within seven days at the latest. To ensure balance sheet equilibrium, the DGS gains (on the asset side) all claims of the covered depositors against the failed institution (or its bankrupt's estate; art 9 para 2 DGSD; see chart 1).

DGS Balance Sheet
(extension)

Assets	Liabilities
total assets	equity (and other liabilities)
+	+
Preferred claims (against failed institution)	Pay-out obligations (to covered depositors)

(chart 1)

Anyway the concrete funding need may not be ascertainable until the deposit protection event – the default of a member institution – takes place. Still the DGS's challenges always include both a **solvency component** (amount of pay-out obligations vs volume of available funds) and a **liquidity component** (provision within seven days). If **no third party** voluntarily provides the funds needed, e.g. by granting a high volume loan (see art 10 para 1 second sub-para DGSD¹²), the DGS is fully dependent on its own limited financial means considering all available funding opportunities (e.g. contributions by the members).

III. Funding mechanisms (Art 10 DGSD)

As a basic principle, the available financial means of a DGS shall be funded by the **contributions of all member institutions** (art 10 para 1 second sub-para DGSD). Such contributions affect the banks profit or loss account (»expenses«)¹³. The distribution of those payment obligations between the members shall consider the so-called **»risk-based contribution matrix«**. According to the *matrix*, institutions of *greater risk* and *deposit-rich institutions* (art 13 para 1 and para 2 DGSD) shall be subject to a proportionally higher contribution obligation compared to low-risk and less depositing institutions.¹⁴

¹² »This shall not prevent additional financing from other sources.« (art 10 para 1 last sentence DGSD); *EFDI*, Alternative Funding Policy, Non-Binding Guidance Paper (18.6.2018), 5.

¹³ The DGSD does not intend to repay any potentially excess funds to the member institutions. This is also consistent with the minimum funding target of the Deposit Guarantee Fund. This is also true for *EDIS*, see art 41c para 1 lit c and art 41o para 3 SRM Regulation as amended by *EDIS*.

¹⁴ »The contributions to DGSs referred to in Article 10 shall be based on the amount of covered deposits and the degree of risk incurred by the respective member.« (art 13 para 1 DGSD). »The calculation

In essence, the risk-based contribution matrix requires that the **contribution** of each member should reflect both the **probability** of failure of the institution (risk profile; »fail or likely to fail«) and the **potential losses** for the DGS (amount of covered deposits), but calculated less all repayments from the failed institutions insolvency estate (»principle 1«)¹⁵. **Principle 1** addresses the inherent **moral hazard problem** in DGS¹⁶, but – as explained below – could lead to unintended consequences in a crisis. *EDIS* – as far as can be seen from the current state of negotiations – also may be based on the same matrix-mechanism.

It should be noted that the DGSD-rules on the funding mechanisms are – with the exception of a few detailed provisions¹⁷ – of **minimum harmonizing**¹⁸ nature and could be tightened up by the member states.^{19,20} The individual funding methods will be discussed in more detail in the next three sub-sections.

Basically, the DGSD provides three funding mechanisms:²¹

1. ex-ante funding (art 10 para 1 to para 3 DGSD)
2. ex-post funding (art 10 para 8 DGSD)
3. alternative funding arrangements (art 10 para 9 DGSD)

of contributions shall be proportional to the risk of the members and shall take due account of the risk profiles of the various business models. Those methods may also take into account the asset side of the balance sheet and risk indicators, such as capital adequacy, asset quality and liquidity.« (art 13 para 2 DGSD). Cf; *EBA*, Guidelines on methods for calculating contributions to DGSs (11.9.2015) recital 5 et seq.

¹⁵ The calculation methods for the indicators capital, liquidity, asset quality, business model and asset encumbrance can be found in *EBA*, Guidelines on methods for calculating contributions to deposit guarantee schemes, recital 19 and 48 et seq. However such repayment cash-flows from the insolvency estate may take a very long time.

¹⁶ Cf *Kelsey*, Crisis in Iceland: Deposit-Guarantee Scheme Failure and State Liability, 37. See also Guidelines on methods for calculating contributions to deposit guarantee schemes, recital 17.

¹⁷ See, for example, the need for approval of increased contributions above 0.5%.

¹⁸ A prominent exemption from this assumption can be seen in article 5 DGSD; *EuGH* 2.9.2015, C-127/14 (»Surmačs«); *Tuma*, Rechtsnews Nr 20160, ZFR 2015.

¹⁹ It should also be mentioned that the DGSD allows national discretion in specific issues, but generally does not cover other crucial aspects of a DGS such as the concrete pay-out-mechanism to covered depositors.

²⁰ The harmonization type of the DGSD has not been explicitly anchored in the regulations. However the DGSD has partially a full harmonizing, and partially a minimum harmonizing effect. The introductory recital 2 clarifies that the DGSD intends to eliminate »certain differences« between the applicable national legal provisions. Recital 6, which refers to the »principle of minimum harmonization« of the previous Directive 94/19/EC – obviously in distinction from the 2014/49/EU (»DGSD«) – as well as expressly art 6 para 1 DGSD (fixation of the sum covered) argue in favor of partial full harmonization; cf in particular *Gruber*, Volloder Mindestharmonisierung, ZFR 2011, 1-15.

²¹ The theoretical fourth possibility of funding operations to the detriment of other DGS (art 12 DGSD) is not discussed for lack of practical relevance.

In principle, these three funding mechanisms could be seen as interdependent funding measures (i.e. first using ex-ante funding, then ex-post, etc.). As the name suggests, *alternative funding arrangements* could also replace ex-ante/ex-post funding depending on the concrete national implementation.

A. Ex-ante Funding (Art 10 para 1 to 3 DGSD)

Members states shall ensure that the DGS' available financial means reach a target level of at least 0.8% of the amount of the covered deposits of its members (art 10 para 1 DGSD) until July 3, 2024. In fact, two thirds of the EEA Member States have decided not to go beyond the minimum of 0.8%²², including Germany and Austria. Note that the availability of DGS funding could be slightly diluted by art 10 para 3 DGSD, which allows that up to 30% of ex-ante contributions may be substituted by (fully collateralised) payment *commitments*.

DGS' are required by the DGSD to invest its available funds accordingly in a low-risk and sufficiently diversified manner (art 10 para 7 DGSD). In addition to the principles of the **risk-based contribution matrix**²³, the DGS should also consider the phase of the business cycle and its potential procyclical impact (art 10 para 2 fourth sub-para DGSD).

B. Ex-Post-Funding (Art 10 para 8 DGSD)

If the available financial means of the DGS are not sufficient to satisfy all covered depositors (i.e. if the failing member institution has taken more than 0.8% of the covered deposits in the entire system), the DGS shall call for sufficient **ex-post-contributions** from the members to **cover the residual amount** (art 10 para 8 DGSD).²⁴ According to the EBA, the distribution between the members of such (ex-post) calls for additional contributions shall be also based on the **risk-based contribution mechanism**,²⁵ whereby institution of greater risk and deposit-rich institutions shall also provide more ex-post contributions proportionately.

In the first step the DGSD limits the amount of **ex-post-contributions** up to 0.5% of the covered deposits

of the sector, which means that the DGS is to guarantee 1.3% of all covered deposits (0.8% ex-ante plus 0.5% ex-post). The contributions shall be provided by the members without delay²⁶, so that the DGS is finally enabled to provide the funds to the depositors **within seven days**.

However, if the funding needs exceed 1.3% the competent authority has to decide whether »**exceptional circumstances**« (art 10 para 8 first sub-para DGSD) justify the levying of **increased ex-post-contributions** higher than 0.5%.^{27,28} Notably, recital 33 DGSD expressly emphasises that

»whereas the cost to credit institutions of participating in a deposit guarantee scheme bears no relation to the cost that would result from a massive withdrawal of bank deposits not only from a credit institution in difficulties but also from healthy institutions following a loss of depositor confidence in the soundness of the banking system.« (recital 33 DGSD).

Thus, DGS have to achieve the accomplishment of a depositor pay-out by **all possible means**. **Maximum limits** for increased ex-post-contributions (in *exceptional circumstances*) are not anchored in the DGSD.²⁹ So consequently, a decision by the DGS generating a disadvantage for covered depositors in favour of any member institution, such as a ban or stop of calls on additional cover, would contradict the fundamental objectives of the DGSD.

26 According to art 411 para 2 SRM Regulation as amended by *EDIS*, a period of three days could be assumed in a system-coherent manner.

27 Note: According to *EDIS*, for ex-post-funding purposes there is no formal limitation to 0.5% (cf art 74d para 5 SRM Regulation as amended by *EDIS*).

28 On the first view, the mandatory condition of *exceptional circumstances* seems to violate inherent values of the DGS and to be a systemic contradiction to the objectives and backgrounds of the DGSD, since the prudential interpreter would therefore intuitively assume particularly *negative* or particularly *dangerous* circumstances.

29 In the German-speaking EEA, the legislators have chosen different approaches for the implementation of art 10 para 8 DGSD. § 27 para 4 of the German Deposit Guarantee Act (Ein-SIG) implements art 10 para 8 DGSD (in my view correctly) with the wording »exceptional circumstances **to protect the functioning of the statutory compensation scheme**«, but does not provide for maximum limits for increased ex-post contributions. In Liechtenstein, art 19 para 4 and para 5 of the consultation report of the Government – Deposit Guarantee and Investor Compensation Act (VNB-EAG) set maximum limits for calls for additional cover by ex-post funding (reaching the lowest quartile of the combined capital buffer requirement or in the case of any failure the 50% LCR-ratio, whichever occurs earlier), but this does not require *exceptional circumstances*. § 22 para 3 of the Austrian Deposit Protection and Investor Compensation Act (ESAEG) chooses a pragmatic approach and conceals both the facts of the case and the maximum limits for the increased ex-post contributions.

22 Only BL, EE, GR, CR, LU, MT, PL, PO, RO anchored higher target levels (up to about 3.43% in RO). FR and FL fixed the lower level of 0.5% with reference to art 10 para 6 DGSD.

23 See above as well as *EBA*, Guidelines on methods for calculating contributions to DGSS.

24 In the DGSD, the call for additional cover by ex-post contributions is understated as »solidarity it creates among all the institutions in a given financial market in the event of the failure of any of them« (recital 37 DGSD). Cf also *BCBS*, Core Principles for Effective Deposit Insurance Systems, <<https://www.bis.org/publ/bcbs156.htm>>, Principle 11.

25 *EBA*, Guidelines on methods for calculating contributions to DGSS, recital 9 lit a and recital 23.

From a teleological perspective, however, this principle only applies for as long as the calls for ex-post contributions do not trigger a default of another member institution (**second-round effect**), for example by the breach of **regulatory minimum ratios** on an individual or consolidated basis.³⁰ Due to the severe negative impact of the ex-post funding mechanism on the capital and liquidity³¹ base of each member institution,³² there always exist a **de facto limit** of the amount of callable additional funds. Essentially, the element of »*extraordinary circumstances*« thus crystallize in the ability of the DGS to demand more than 1.3 % of the covered deposits **without triggering another default as a second-round effect**.³³

Note that the DGSD provides the legal right for member institutions to **defer** the payment of ex-post contributions in the case of evidence of an inadequate solvency or liquidity situation (art 10 para 8 DGSD). However, from the perspective of the respective member this would only reduce the extent of the negative impact with regard to the certain cash-flow (liquidity), but not with regard to its solvency situation (»sudden loss«). Furthermore the deferred residual amount of ex-post contributions has to be paid by the other members with a higher liquidity buffer. Thus are to be seen as an additional burden for them in the short term, with the effect of more liquidity stress for the entire sector.

In addition to the short-term shock, the ex-post funding also results in negative long-term impacts on the member institutions, as they are obliged to **replenish the DGS' ex-ante funds** (cf art 10 para 2 second sub-para DGSD). The ex-post funding mechanism thus reduces the extent of the future opportunity to build-up the capital base by internal funds.

It must be borne in mind that, according to the **risk-based contribution matrix**, institutions of greater risk also have to raise proportionally more in the ex-post funding than lower-risk institutions. The risk profile of institutions of greater risk, i.e. institutions with weak capital or low liquidity will be further aggravated by the declining capital and liquidity base. In times of **crisis**, the matrix thus has a **pro-cyclical effect**.

30 Note that in the case of regulatory waivers (art 7, 8 and 10 CRR), tailor-made limits should be set for those institutions.

31 The effects of pure liquidity shortages at individual member institutions can be partially reduced by art 10 para 8 second sub-para DGSD (*deferral of payment*), but in turn exacerbates the risk profile of the other, more liquid members.

32 Finally, the additional cover by ex-post contributions results in a direct deduction of own funds and a reduction of the liquidity buffer, i.e. a *reduction in total assets*.

33 An *advocatus diaboli* would now suggest to the European legislator that – under normal circumstances – 98.7 % of covered deposits could not be protected by a DGS.

Indeed, the **weakest link in the chain** is the one member institution with the **lowest resilience** against a shock in the sector (see below chapter V) which **prevents the contribution of the required funding means** in the sector. This member concretely *stops* the ex-post funding mechanism. This finally means that the **weakest link** prevents the satisfaction of all covered depositors by the DGS and provokes a government **bail-out**.

In order to circumvent this dilemma, one possible solution could be found in *alternative funding arrangements* under art 10 para 9 DGSD.

C. Alternative funding arrangements (Art 10 para 9 DGSD)

Art 10 para 9 DGSD requires that »DGSs have in place *adequate alternative funding arrangements to enable them to obtain short-term funding to meet claims against those DGSs*« (art 10 para 9 DGSD). In conjunction with art 1 para 3 DGSD, the alternative funding arrangements could thus ensure the timely satisfaction of all protected depositors, even if the ex-post funding is not sufficient for this purpose. The wording of art 10 para 9 DGSD seems to require the implementation of an **effective instrument** which enables the DGS to fully pay-out all covered deposits.³⁴

Such an instrument may include compulsory **letters of comfort, credit and liquidity facilities**³⁵ (eg *compulsory borrowing* by the other member institutions³⁶) as well as other compulsory **insurance or guarantees** that would significantly increase the amount of funds needed.³⁷ From the perspective of the national DGS, future re- or full-insurance via *EDIS* could also be seen as an alternative funding arrangement,³⁸ provided that the *principle of tension* at the level of the national DGS (cf art 41i SRM Regulation as amended by *EDIS*) would not be undermined.

34 *EFDI*, Alternative Funding Policy 7 ff.

35 *EFDI*, Alternative Funding Policy, 6.

36 Mutual lending would spread and diversify the burden across the sector and therefore would have less impact on the capital base of the member institutions (build-up of risk positions) than calls for additional cover via ex-post funding (reduction of own funds). Actually this mechanism has already been established within institutional protection schemes (»IPS«), as the solvency and liquidity of the member institutions must be ensured at all times (art 113 para 7 CRR); see also Stern, *Regulating Liquidity Risks within »Institutional Protection Schemes«* (2014). See also the *ao variants assignment and delegation* below.

37 Of course, this would result in ongoing costs for the DGS and its member institutions, namely insurance premiums. However, such premium-payments would partly substitute the implicit state guarantee (bail-out).

38 Art 74g SRM Regulation as amended by *EDIS* shows alternative funding as a credit/funding operation (»*funding means*«) instead of art 10 para 9 DGSD (»*funding arrangement*«).

It is worth noting that apparently the member states have understood art 10 para 9 DGSD – insofar as it has been implemented nationally at all – in very **different ways**.³⁹ Thus, national transpositions are limited with the mere *possibility* to accept funds by third parties (cf art 10 para 1 DGSD) or in the establishment of a central bank- or state guarantee (cf § 25 para 3 of the Austrian Deposit Guarantee Schemes and Investor Compensation Act-ESAEG). Either such transpositions **would not create effective instruments** to tackle deposit-protection cases (*begging for resurrection*),⁴⁰ or they contradict the DGSD intention of protecting tax payers (*bail-out*).⁴¹

Overall, art 10 para 9 DGSD – as far as can be seen from a comparative analysis – **does not currently appear being effectively implemented** within the EEA^{42,43} which means that the loss-absorbance capacity of the DGS seems still limited by the *weakest link*.

D. Interim summary

In **essence**, the ability of a DGS to satisfy all covered depositors lies in the strength, namely the capitalization and liquidity of the *weakest link*. Thus, if a large *deposit-rich* institution (such as a systemically important universal bank) fails, the pay-out of all covered depositors could not be handled by the ex-post-funding-mechanism without risking a **second-round effect** respectively the **destabilization of the entire sector**.⁴⁴ It should be stressed that the generating of such large volumes of liquidity (potentially running into billions) is associated with **high operational risks too**. The problem is exacerbated by the **risk-based contribution matrix** which intends to place an ever greater burden on institutions of greater risk than on lower-risk ones. So in the event of a crisis, the matrix may have a **pro-cyclical effect**. In any way, in such a case the chance of a full depositor protection is highly reduced.

39 *EFDI*, Alternative Funding Policy, 10 f.

40 Examples for operational and legal restrictions can be found in *EFDI*, Alternative Funding Policy, 10 ff.

41 However it seems that some stakeholders, e.g. *EFDI* does not interpret the aims of the DGSD (protection of tax payers) that strict, see *EFDI*, Alternative Funding Policy, 7 ff.

42 Unfortunately, a presentation of a comprehensive EEA analysis must be omitted for reasons of thematic focus and available space.

43 Note: According to art 41i para 1 lit a SRM Regulation as amended by *EDIS*, an incorrect transposition of art 10 DGSD would even be a reason for exclusion from *EDIS*.

44 Depending on the assignment of own funds and liquidity in the system, it may therefore happen that the financial weakness of a single institution jeopardizes the full and timely compensation of the depositors. In the other extreme case, however, the sector-wide call for ex-post funding may contribute to a serious adverse impact on the capital and liquidity base of all institutions, and thus creating increased systemic risk.

IV. Regulatory options

A. Pay-Out-Mechanism

To avoid a further destabilization of the banking sector by the call for additional ex-post contributions, the **pay-out** of the covered funds could, instead of the pay-out by the DGS, better take place via **those member institutions which already hold the liquid funds needed for the full satisfaction of the depositors**, e.g. selected stable member institutions with a sufficient capitalization and high liquidity buffers. This would eliminate the need for ex-post funding contributions from all other members and would significantly **reduce the dilemma of the weakest link**.

Indeed a possible solution lies in the **pay-out mechanism**.⁴⁵ From a regulatory-systematic point of view, this variation could be implemented as a **tailor-made BRRD-analogy** for DGSD purposes (art 42 BRRD⁴⁶). Germany (*»assignment«*) and Liechtenstein (*»delegation«*) could serve as a starting point for respective **regulatory models**. Both variants are briefly presented below.

B. »Assignment« (Germany)

§ 23 para 2 of the German Deposit Guarantee Act (EinSiG) is based on the (above-mentioned) worst-case of a **DGS' default**. In such an event, the German Ministry of Finance may declare the *Kreditanstalt für Wiederaufbau (KfW)* to be the **new DGS by means of a Decree** (*»Assignment«*).⁴⁷ The pay-out would then be executed by the available operational resources of *KfW*. Regrettably, the EinSiG does not provide for any further requirements or details. A huge disadvantage of this measure is the late trigger event. § 23 para 2 EinSiG shall only apply if the DGS fails, which basically means that both the ex-ante and ex-post-funding mechanisms have not provided the funds needed and the sector may be destabilized in this point of time.

However, the biggest disadvantage of this instrument is its narrow scope. The *Assignment* does only apply to statutory, not to contractual DGS and only addresses the *KfW* as the potential *new DGS*. Due to the public owner-

45 Note: Pay-out mechanisms are not determined by the DGSD and are therefore subject to national discretion.

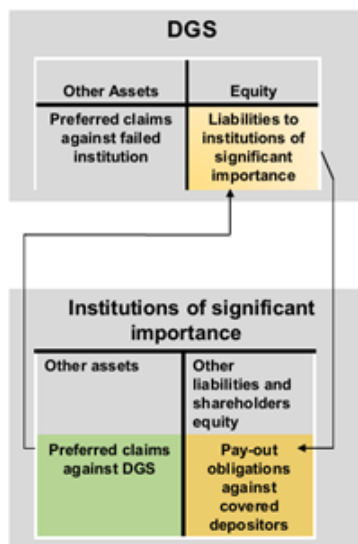
46 Art 42 Directive 2014/59/EU (BRRD) anchors the *asset separation tool*.

47 »The Federal Ministry of Finance is authorized by statutory law, which does not require the consent of the *Bundesrat*, to establish statutory compensation facilities at the *Kreditanstalt für Wiederaufbau* and to issue more detailed provisions on the administration of the statutory compensation facilities and the appropriate remuneration of the administration, if statutory compensation facilities under § 22 para 2 no 1 are not available, in particular if such a deposit guarantee scheme is dissolved or wound up.« (§ 23 Abs 2 of the German Deposit Guarantee Act (EinSiG)).

ship of KfW and corresponding public guarantees (§§ 1, 1a KfW-Act) the *Assignment* can be seen equivalent to a governmental *bail-out*. However, the *Assignment* could serve as a starting point to address the dilemma of the *weakest link*.

C. »Delegation« (Liechtenstein)

Article 12 of the consultation report of the Government-Deposit Guarantee and Investor Compensation Act in Liechtenstein (VNB-EAG)⁴⁸ empowers the DGS to **delegate** its pay-out obligations to selected member institutions, more concrete to *institutions of significant importance* (art 3b of the Liechtenstein Banking Ordinance), i.e. to **transfer** the corresponding **liabilities** (note: not the deposits!⁴⁹) to these institutions in proportion to the covered deposits to each other (see chart 2). In order to ensure balance sheet equilibrium, these institutions receive corresponding claims against the DGS to the extent of the delegated pay-out obligations, collateralized *ex-lege* by longer-term **preferred claims** against the bankrupt assets of the failed institution (*pass-through*⁵⁰).



(chart 2)

48 Within the editorial deadline, the legislative process in FL has not been finalized. The consultation report of the Government is available at <<https://www.llv.li/files/srk/vnb-eag.pdf>> (January 2018). Please note that art 12 VNB-EAG has been deleted in the final *BuA*, available under <<https://bua.regierung.li/BuA>> (January 2018).

49 It is important to note that the assumption of pay-out obligations is probably not to be qualified as the »establishing a business relationship« pursuant to art 11 lit a of the Directive on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing (Directive (EU) 2015/849). If the customer converts his claim into an ordinary deposit, the institution shall exercise the necessary due diligence.

50 Pursuant to art 12 para 10 VNB-EAG, the DGS is obliged to immediately transfer the funds received to the acquiring institutions (*pass-through*). See also art 410 para 2 SRM Regulation as amended by *EDIS*.

From the **depositors'** point of view, this is just a (renewed⁵¹) **change of the debtor**. The funds remain protected under the rules of the DGSD (cf art 12 para 8 VNB-EAG). In principle, the *ex-ante* and *ex-post* funding instruments remain **untouched** and stay available for a potential **second-round effect** (as well as for resolution purposes; art 24 para 1 lit d VNB-EAG in conjunction with art 129 BRRD).

While the *Assignment* (EinSiG) shall only be applicable in the DGS' default-scenario, the *Delegation* (VNB-EAG) however ensures the survival of the DGS. Due to the fact that neither the *acquiring* institutions nor the other (non-significant) institutions are forced to provide cash-flows to the DGS, the *Delegation* leads to far smoother consequences than the ordinary DGSD-*ex-post* funding mechanism.⁵² The *Delegation* also reduces operational risks, eg arising from payment transactions, to a high amount.

D. Pay-Out-Mechanism: Interim Summary

The negative impact of such *takeovers* of DGS-pay-out obligations by one or more institutions can be significantly **less** severe than effects arising from the DGSD-*ex-post*-funding mechanism. In contrast to the immediate loss of own funds and liquidity according to the DGSD-*ex-post*-funding mechanism, the *Assignment* and the *Delegation* create new *risk exposures* at the acquiring institutions (balance sheet extension).⁵³ Thus, the prudential risk profile of the acquiring institutions is supplemented with risk exposures in the **rank of covered depositors**^{54,55} and with run-off-positions towards covered depositors.⁵⁶ Depreciations, if they had to be

51 The first change of debtor already takes place when the payout is determined (art 6 VNB-EAG).

52 Note that the Delegation would **not have any direct operational impact on the non-accepting institutions**. For sure it cannot be guaranteed, however, that if a systemically important bank fails, confidence in the overall market will be significantly shattered.

53 In brief: For the most important regulatory ratios, the *numerator* will not be reduced, but the *denominator* will be increased.

54 Note: In contrast to art 23 para 3 EinSiG, art 12 para 5 VNB-EAG takes a detour via the DGS still in existence. Here the institutions weight their claims, which are collateralized by the (for insolvency purposes) high ranked covered deposits against the DGS.

55 With regard to compliance with the large exposure limits under art 395 para 1 CRR, art 400 para 1 lit k CRR must be cited, which explicitly provides for the exception for claims against DGS that serve to fund the scheme. Since the measures under § 23 para 3 EinSiG and art 12 para 5 VNB-EAG are de facto legally enforced *credit surrogates*, the subsumption under lit k par cit appears permissible.

56 This results in additional LCR run-off factors of 10 % (for natural retail clients; no established business relationship, see art 25 para 1 of the LCR delegated regulation) or 20 % (for deposits by non-financial sector depositors, see art 28 para 1 of the LCR delegated regulation).

made at all,⁵⁷ would affect the capital base of the acquiring institutions at a much later point of time. Thus, on the one hand, the acquiring institutions would keep stable, which may keep the **probability of a bank-run** much **lower**⁵⁸, and on the other hand, it would provide the competent authority **more time and room to manoeuvre** both for the **resolution** of the failed institution and for addressing second-round effects in the market.

It can be concluded that the **basic models** of the *Assignment* and the *Delegation* may effectively reduce the *problem of the weakest link in the chain*. However, the *Assignment* pays both the price of the DGS' default and the factual governmental *bail-out*.

V. Supervisory options

As argued above, the **reason** for the **endogenous vulnerability** of the *weakest link* lies in the **risk-based contribution matrix** which should **punish** the respective member for its *low resilience* (see chapter III.B), more concrete for its (higher) amount of covered deposits taken and its (more severe) risk profile. Obviously the competent and designated authorities thus may preventively try to increase the **resilience** of the *weakest link* or the entire sector.

Here, it would be conceivable to introduce a **resilience ratio**⁵⁹ which would require or reward the increased holding of own funds and liquidity in relation to the covered deposits received. From a pillar II perspective, the competent authorities could argue that this intervention in the business model (article 104 para 1 lit e and f CRD IV) would increase the idiosyncratic

vulnerability of the institution in the event of another institution's default. From a macroprudential perspective, the question arises as to which extent the *weakest link in the chain* might even lead to a **systemic risk** (art 3 para 1 no 10 CRD IV) and thus only well-capitalized institutions should have the right to take covered deposits to a large extent. By reasoning in this way, both a buffer for systemically relevant institutions (*impact of the low resilience of the weakest link to the system?*) and a systemic risk buffer (*solidarity of the member institutions as endogenous risk?*) could potentially be justified.⁶⁰

VI. Conclusio

This article outlines the **unintended consequences of the risk-based contribution matrix in the event of a crisis**. This *dilemma of the weakest link* is – along with the low target level of the ex-ante deposit guarantee fund – the most important reason for the **vulnerability of European DGS'**. Although *EDIS* would reduce this problem, it would not completely solve it.⁶¹ However, the entire abolition of the risk-based contribution matrix would in turn clearly generate **disincentives** within the DGS.

In the absence of regulatory solutions at European or national level, the supervisory authorities can at least try to preventively increase the **resilience** of the member institutions concerned.

Notably the legislators in Germany and Liechtenstein have identified **starting points for tailor-made regulatory options** to significantly reduce this problem. Indeed the optimal **pay-out mechanism** may significantly increase the chance of tackling the challenge of depositor-protection in the case of a systemically relevant institutions default without a governmental *bail-out*, and thus also increase a more effective resolution of the failed institution. In principle, such regulatory options seems to be introducible in all member state as well as compatible with the DGSD-requirements, as the Directive – as already mentioned above – neither explicitly nor implicitly anchors a provision on the **pay-out-mechanism**.⁶² It could be further argued that the regula-

57 Finally, the value of the claim depends on the value of the assets (largely manifested by the cover rate). It is worth remembering the high rank of covered depositors in the event of insolvency. On the basis of historical data, acquiring institutions have little reason to fear a big loss, as the cover rate would have to be lower than the share of covered deposits. However, the cover rates normally are significantly higher. See *OECD*, Estimating the size and incidence of bank resolution costs for selected banks in OECD countries (2016); *FDIC*, Understanding the Components of Bank Failure Resolution Costs (2015), 36; *Qu, Shisheng and Sun, Libo Alice and Twite, Garry J*, Failed Bank Asset Recovery: The Influence of Deposits and Loan Exposure (5.6.2017) 12 f; *McDill*, Resolution Costs and the Business Cycle (März 2004), 25 f; *James*, The Losses Realized in Bank Failures, *Journal of Finance* 1991, 1223; See case *Landsbanki* see also *Baudenbacher*, The fundamental principles of EEA law, 165 footnote 87.

58 See for example the research according to *Temzelides*, Are Bank Runs Contagious? <<https://philadelphiafed.org/-/media/research-and-data/publications/business-review/1997/november-december/brnd97tt.pdf>>.

59 Such a resilience ratio (e.g. tier 1 capital*risk scale factor/covered deposits) could even serve to identify the *weakest link in the chain*. Such indicators, including the corresponding calibration (e.g. on the basis of the risk-based contribution matrix of the DGS), also allow conclusions to be drawn on the actual maximum limit of the efficiency of the DGS.

60 From a political point of view, however, this does not seem particularly realistic. You may imagine the sensitive political component of presenting the DGS as a source of systemic risk (!).

61 According to art 74e para 1 SRM Regulation as amended by *EDIS*, the provisions of the DGSD should remain legally unaffected by the introduction of *EDIS*.

62 The argument of *gold-plating* would also be irritating for material reasons. Finally, the pay-out mechanisms discussed have less adverse implications for the institutions than the calls for ex-post funding contributions. The DGSD even emphasizes that it is *desirable* »to allow Member States sufficient flexibility to enable DGSs to carry out measures to reduce the likelihood of future claims against DGSs« (recital 3). The concept of flexibility is further elaborated in recital 14: »DGSs should be able to

tory options mentioned above are variants of *alternative funding* mechanisms under art 10 para 9 DGSD.⁶³

The **flexibility of the DGSD** combined with a breeze of **national creativity** thus also have the **potential** to substantially revive the complex and politically sensitive dialogue on the establishment of a common European Deposit Insurance System (»EDIS«) as the **third pillar of the banking union**⁶⁴.

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provide that protection [Protection of depositors against the consequences of the insolvency of a credit institution, note] *in various ways.*« The European legislator thus provides the member states with considerable scope for achieving the regulatory aims of the DGSD.

63 The *alternative funding* is provided by establishing a system of »lenders of last resort« (LOLR) with compulsory lending. For the alternative funding, new funds are not built up (ex-ante pot, ex-post margin calls), but existing funds (own funds and liquidity buffer of the acquiring institutions as LOLR) are being used.

64 See COM(2015) 586 final. A critical overview of EDIS is provided by *Keuschnigg C/Winterberg H*, Welche Europäische Einlagensicherung? Wirtschaftspolitische Blätter 2017, 565.

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