EVALUATION OF EUROPEAN DEPOSIT INSURANCE SCHEME FUNDING

BASED ON RISK ANALYSIS

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The proposal for a Banking Union (BU) emerged in 2012 as a solution to the banking and sovereign debt crisis experienced by some European Union (EU) countries, mainly caused by the links between banks and states. The objective of the BU is the creation of a single banking market based on three pillars, the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM) and the European Deposit Insurance Scheme (EDIS). >

The EDIS proposal is based on national guarantee schemes, which are regulated by the 2014 Directive. This directive introduces important changes in the financing of the Deposit Insurance Schemes (DIS), including the size of the target fund, for which a target equity of 0.8% of covered deposits is established, and the contribution regime of the member institutions, whose contributions are established according to the covered deposits and the risk profile of the institution within the scheme.

The European Commission (EC) proposal establishes an EDIS composed of national DISs and a European Deposit Fund (EDF), which would be implemented in three stages. At the first stage (reinsurance) the EDIS would provide liquidity assistance and absorb a certain amount of loss when the resolution procedure exceeds the financial resources available to the national DIS. At the second stage (co-insurance) EDIS would progressively absorb an increasing share of the liquidity and loss needs regardless whether the resources of the national DIS were exhausted. At the third stage (mutualisation) EDIS would be the only DIS in the Eurozone, completely replacing the national DIS.

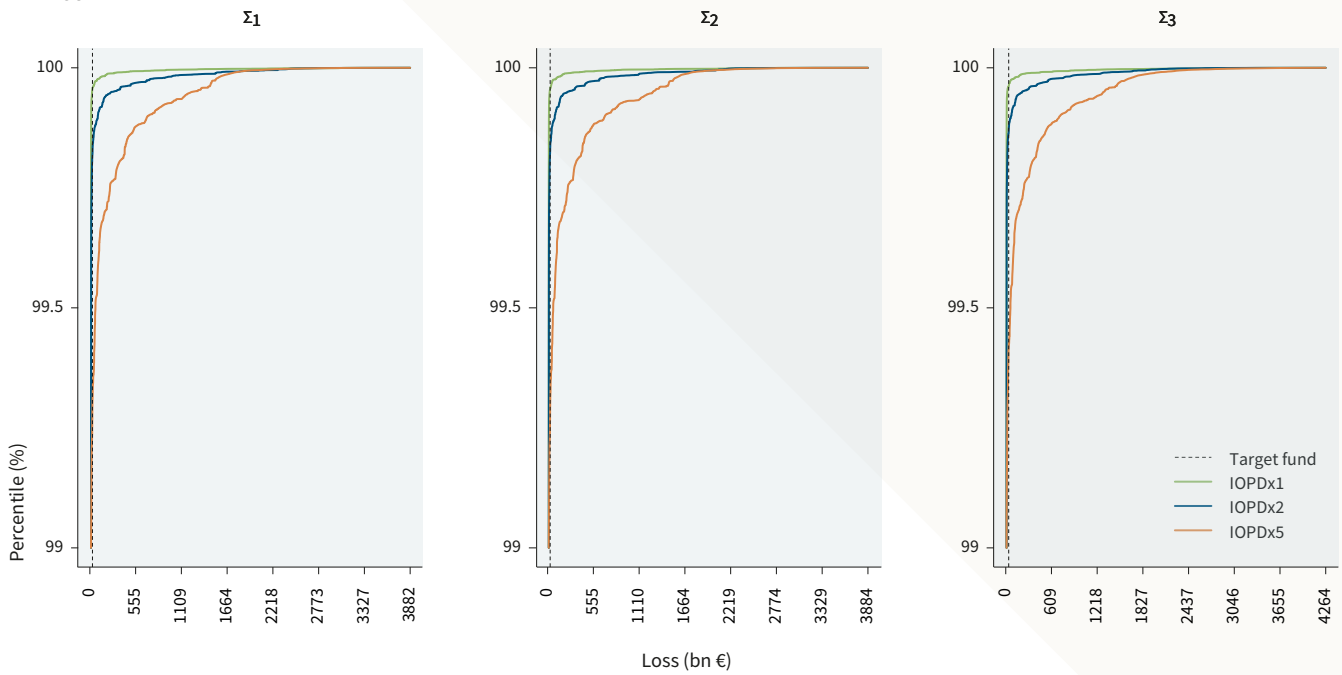
At the reinsurance stage, bank contributions would be calculated by reference to the level of risk in the national banking system, while at the co-insurance and mutualisation stages they would be calculated by reference to the risk in the Banking Union (BU).

Negotiations on EDIS are a still ongoing process because there is no consensus among EU countries. The main reasons for this lack of consensus are that some countries argue that its implementation would encourage cross-border subsidies between banking systems, could affect moral hazard by encouraging risk-taking behaviour by some banks, and could create disciplinary problems associated with deposit protection.

Additionally, the COVID-19 pandemic is expected to lead to an increase in bank risk because of declining asset quality and increased volatility in financial markets.

In our work we conducted a quantitative analysis of EDIS funding in the framework of risk management in order to assess the adequacy and potential impact of the proposed measures on EDIS equity and contribution regime. >

FIGURE 1



First, we estimate the EDIS loss distribution and analyse the impact on it of different sources of systemic risk. We model it by means of correlation matrices reflecting different degrees of interdependence between banks belonging to the same country and between banks belonging to other EU countries, $\sum_i, i=1, 2, 3;$ and different sources of bank risk, which are modelled by means of scenarios assuming different qualities of bank portfolios, IOPDxj, j=1, ,2, 5. Secondly, we analyse the EDIS contribution regime, determining the variation in the cost of insurance as a consequence of the risk profile of banks in relation to the BU, and the loss absorption capacity of the contribution made by countries by applying the methodologies proposed by the European Banking Authority (EBA).

We use the SYMBOL (Systemic Model of Bank Originated Losses) microsimulation model proposed by De Lisa *et al*. in 2011, which allows estimating the loss distribution of a banking system using the risk assessment framework established by the Basel Committee on Banking Supervision (BCBS), and which has been used by the EC on several occasions. The sample used consists of 806 Eurozone banks representing 81% of covered deposits in 2018.

Our results allow us to determine the fund needs according to the degree of risk aversion of the regulator and to assess the level of protection offered by the target funds set in the EDIS considering the different risk factors that affect the losses which EDIS is exposed to. They also make it possible to determine the impact of the new contribution regime on moral hazard and the possibility of cross-border subsidies between BU countries.

The main conclusions are that interconnection between banks in different countries has an important influence on the tail of the EDIS loss distribution, that deterioration in the quality of bank portfolios leads to a significant reduction in the loss absorbing capacity of the target funds and that the new contribution regime proposed by the EC has a positive effect by reducing both moral hazard and the possibility of cross-border subsidies.

The paper shows that actuaries, and CERAs in particular, have a global background in risk management that can be applied to other areas than the insurance sector, such as the banking sector.

DISCLAIMER As the intent of this note is to provide a very high-level summary of our talk to be presented at the European Congress of Actuaries 2022 in Madrid, additional information can be found at the following link: **Evaluation of European Deposit Insurance Scheme funding based on risk analysis.** <

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