



Modelling for the Banking Union

Modelling the effectiveness and efficiency of crisis management safety nets

Marie Donnay, DG Fisma D3, November, 24, 2021

DISCLAIMER: This presentation has not been adopted or endorsed by the European Commission. It may not in any circumstances be regarded as stating an official position of the Commission.

Applications to safety nets in crisis management for financial intermediaries

Banking sector – Banking Union

- Bank Recovery Resolution Directive – Single Resolution Mechanism Regulation (Single Resolution Fund)
- Deposit Guarantee Scheme Directive
- European Deposit Insurance Scheme (not agreed by co-legislators)



SYMBOL

Insurance sector

- Insurance Recovery Resolution Directive
- Insurance Guarantee Scheme (not adopted)



VaR

(Vasicek credit risk model)

Banking Union: Why we need to take action?

CMDI review and EDIS

- Resolution has so far been used in very limited cases (only once in the BU)
- The current framework did not provide sufficient protection for both depositors and taxpayers at the same time. Solutions have often been found outside resolution, with support from taxpayers' money, which only reinforces the bank-sovereign loop
- Experience shows that the impact of a single payout on a DGS can be significant
- It is appropriate to look at the example of the FDIC as a reference for consistent and flexible solutions (e.g. transfer strategies) for a very wide population of banks

Overarching objectives of a possible reform

- Promote a wider use of the resolution framework, while keeping national insolvency procedures in the toolbox. Ensure consistency between measures in resolution and outside, to align the incentives when choosing the appropriate measure
- Preserve financial stability and protect depositors while instilling market discipline, limiting moral hazard and recourse to taxpayers' money
- Ensure the right balance between level playing field and proportionality in the application of the crisis management framework: proportionate approach to funding in resolution
- Provide adequate and robust safety nets (financed by the industry) to all banks. All the above requires an effective and consistent use of DGS resources as well as a broad scope of DGS intervention across the whole CMDI framework. Possible role for hybrid EDIS liquidity support in case of shortfalls

Main analyses in the impact assessment (IA)

- Analysis of access to the resolution funds/SRF for solvency support by performing a bail-in of 8% total liabilities and own funds, checking to what extent deposits would be impacted
- Loss simulation via SYMBOL model and allocation of losses to categories of liabilities as per hierarchy of claims, with the aim to analyse where losses would hit
- Assessing the possibility for DGS funds to intervene in resolution, under different options of depositor preference in the hierarchies of claims
- All above analyses performed by considering different scenarios and assumptions
- Measuring the effectiveness and efficiency of the national and common safety nets for depositor protection and the pooling effect of EDIS

What does modelling bring to the analysis

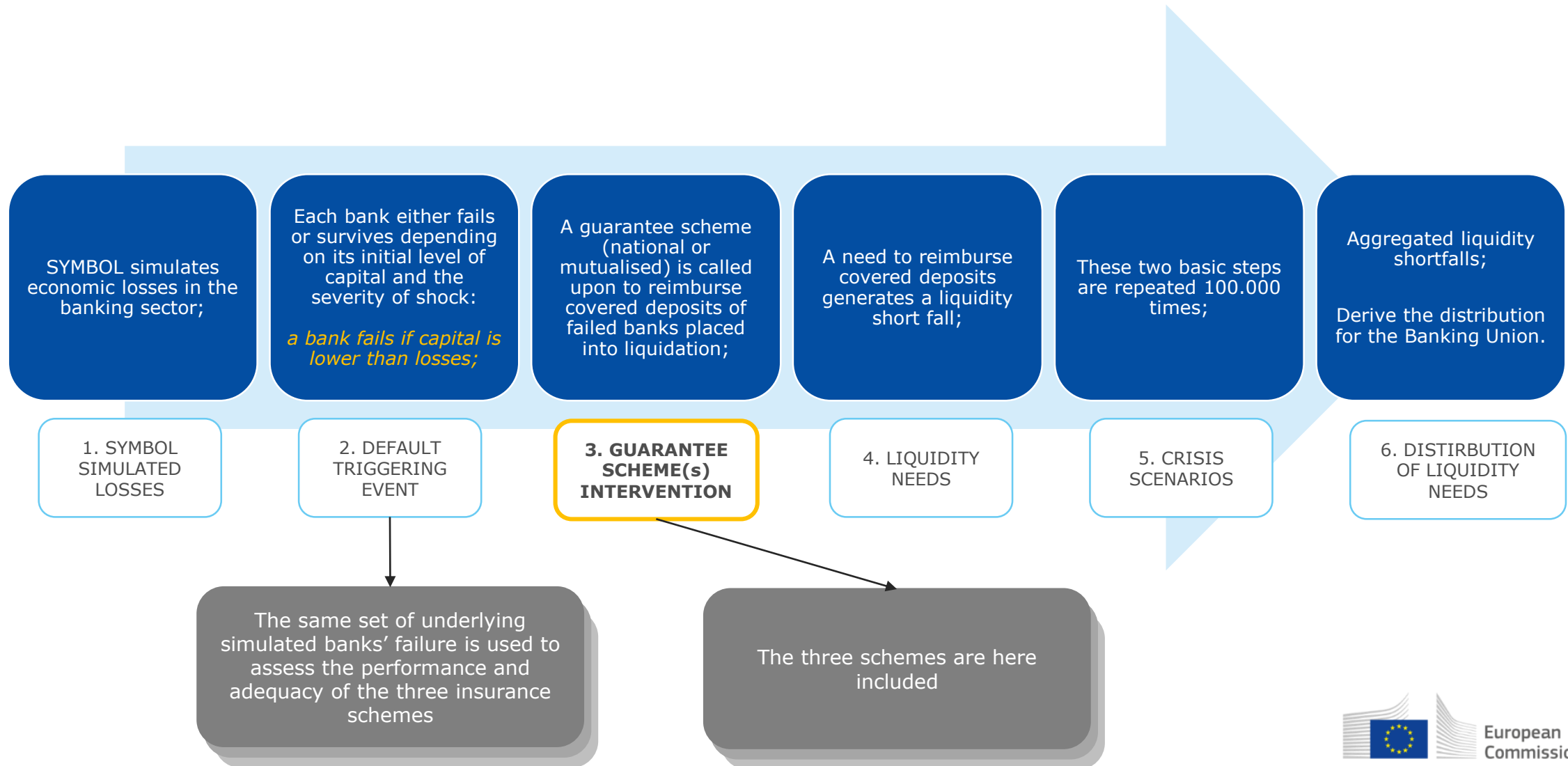
The **SYMBOL model** estimates the distribution of bank failures and allocation of losses. The model has been developed by DG JRC and has been widely used to assess the impact of regulatory reforms and the robustness of the EU banking sector in crisis scenarios.

- **Accuracy and ability to process computation-intensive simulations** ► SYMBOL estimates losses via Monte Carlo simulations for each banks, creating a distribution of possible losses under 1,000,000+ scenarios
- Ability to **process complex problems**, e.g.:
 - interconnections within groups ► SYMBOL is able to allocate losses within a banking group and map the effects of each entity on other entities of the same group, e.g. internal loss absorption
 - interconnections between groups ► SYMBOL is able to introduce correlation factors in the loss scenarios, that change the way some entities are impacted

What does modelling bring to the analysis

- Ability to **process several complex problems at the same time**, e.g.:
 - Change of underlying variables and sensitivity analysis on the output ► test scenarios of capital depletion or creditor hierarchy
 - Additional layers to make the study multi-faceted ► test loss allocation in a waterfall mode: e.g. access to 8% -> possibility for DGS to contribute -> actual DGS contribution -> actual use of resolution fund -> cap on resolution fund intervention (note: this waterfall assessment is done taking into account the interconnections described previously)
- All these aspects are **key for policy making**:
 - Need to test various options to find the most suitable way to regulate
 - Need to avoid blind spots that could arise if multiple complex problems cannot be analysed at the same time
 - *EU-machinery specific*: Need to have contingency plans for negotiations

Modelling framework – EDIS effectiveness and efficiency



Analysis of EDIS design options

1. Status quo of national DGS

Only national DGSs remain in place

Each DGS is responsible for covered deposits of the banks in its own Member State

The total initial amount of funds of the national DGS is set at 0.8% of covered deposits in each country



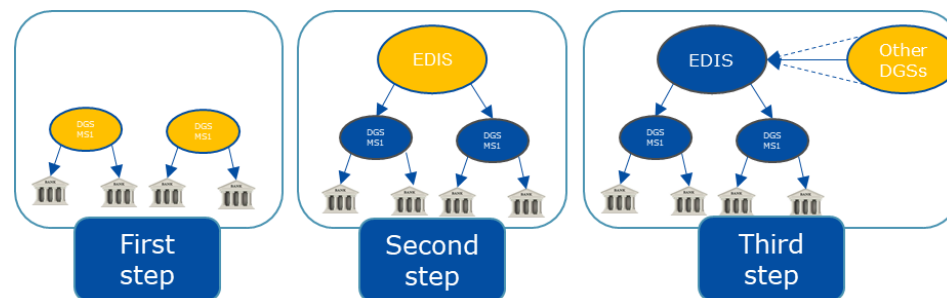
2. Hybrid EDIS

Coexistence of a central fund and national DGS funds

Central fund provides liquidity support only

The combined target level of the central fund and national DGSs is 0.8% of covered deposits. A share of these funds is transferred to the central scheme while the rest remains within the national DGSs

Waterfall mechanism to activate hybrid EDIS

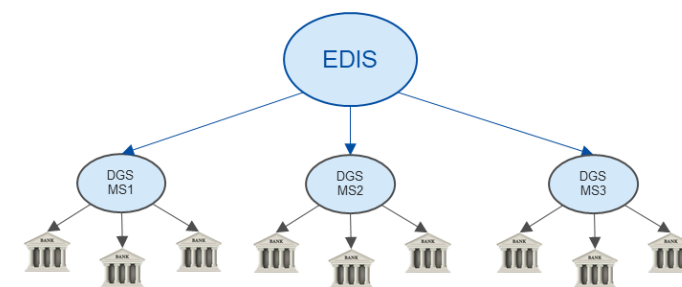


3. Full liquidity pooling EDIS

A common scheme protects covered deposits in the Banking Union, prefunded by banks located in the participating Member States

Provides liquidity support

Target level of 0.8% of covered deposits in the Banking Union



Rationale for IRRD: Possible threats to the insurance sector and cross-border activity

- EIOPA's 2018 report on failures and near-misses illustrates that:
 - Investment risk and underwriting risk are among the main causes of failure
 - The 2008 financial crisis affected some undertakings severely
 - While Solvency II reinforced the overall resilience of the insurance sector, it is not (and was not designed to be) a zero-failure regime
- EIOPA, IMF and Moody's Investors Service stressed the sensitivity of insurers to market developments and, in particular, the effects of protracted low interest rates on their capital positions and long-term profitability
- Substantial share of cross-border business in total business (direct and indirect) in European Economic Area (EEA) countries: almost 11% in 2019 (amounting to EUR 173 billion) and slightly but consistently rising every year since 2016
- For six EEA countries (Estonia, Ireland, Latvia, Liechtenstein, Luxembourg and Malta) over 50% of their business is carried out outside the home country

IGS rationale, design and modelling approach*

- IGS should protect policyholders from the risk that an insurer is not able to honour its claims, by paying compensation or by securing the continuation of the insurance contract
- The VaR (Vasicek credit risk) model allows to estimate policyholders' losses combining the effect of various elements:
 - exposure at default (EAD)
 - probability of default (PD)
 - correlation of defaults between insurers (how probable is it that defaults happen at the same time)
 - concentration of the insurance market (how many insurers dominate the market)
 - severity (Loss Given Default) of the losses in case of default

* *Impact assessment and JRC Study:*

- <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021SC0260>
- <https://op.europa.eu/en/publication-detail/-/publication/36ade6ec-1b51-11ec-b4fe-01aa75ed71a1/language-en/format-PDF/source-231332618>

Thank you