



RECOUPMENT CAPACITY OF THE EUROPEAN BANKING SECTOR TO THE SRF AND THE CB

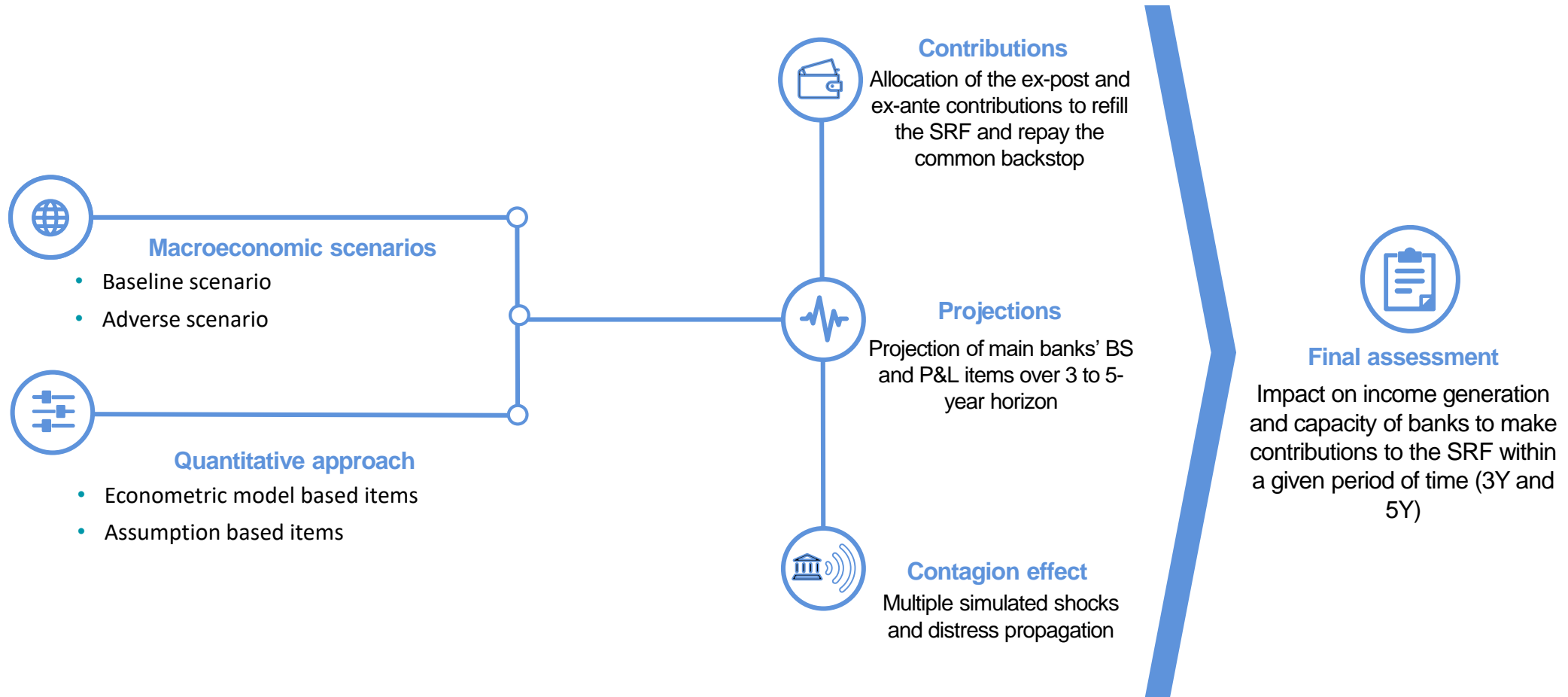
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Introduction

- Resolution Case(s) → Resolution Tools
 - Single Resolution Fund (SRF): 52 bn EUR
 - If SRF not sufficient → Common Backstop (CB): Size of CB = size of SRF
- Common Backstop provided by the ESM: Loan (3 or 5 years maturity)
- Recoupment Capacity: “Can the banking sector repay the CB and the replenishment of the SRF within the foreseen timelines?”
- Repayment capacity: Recoupment capacity plus other cash flow sources
- Joint Project ESM and SRB

Building blocks: Recoupment capacity



Profit and Loss projections



The **quantitative approach** is founded on **econometric model-** and **assumption-** based items

ECONOMETRIC MODEL BASED ITEMS

To estimate the econometric model based variables, **macroeconomic** and **financial** explanatory variables were selected according to their economic relevance and following existing literature.

- **Variables estimated:**
 - Net Interest Income
 - Fee & Commissions
 - Loan Impairment Charges
 - NPL ratio
- **Addressing non-linearities:** panel quantile regressions with bank fixed effects.
- **Addressing business model specificities:**
Regressions are run by bank type (GSIB vs non-GSIB according to EBA classification)

ASSUMPTION BASED ITEMS

- Operating Expenses
- RWA
- Dividend distribution
- Tax Rate

Contagion



Simulating shocks and tracking domino effects to the other financial institutions within the financial system.

CONTAGION MODEL

- Financial crises are modelled through a micro simulation portfolio model: Systemic Model of Bank Originated Losses (SYMBOL). SYMBOL incorporates contagion effects using a bank by bank correlation matrix
- We apply the SYMBOL model with a **correlation matrix** based on banks' equity returns (time-varying).
- Correlation Matrix decomposed into Common Factors: Faster simulation

SHOCKS

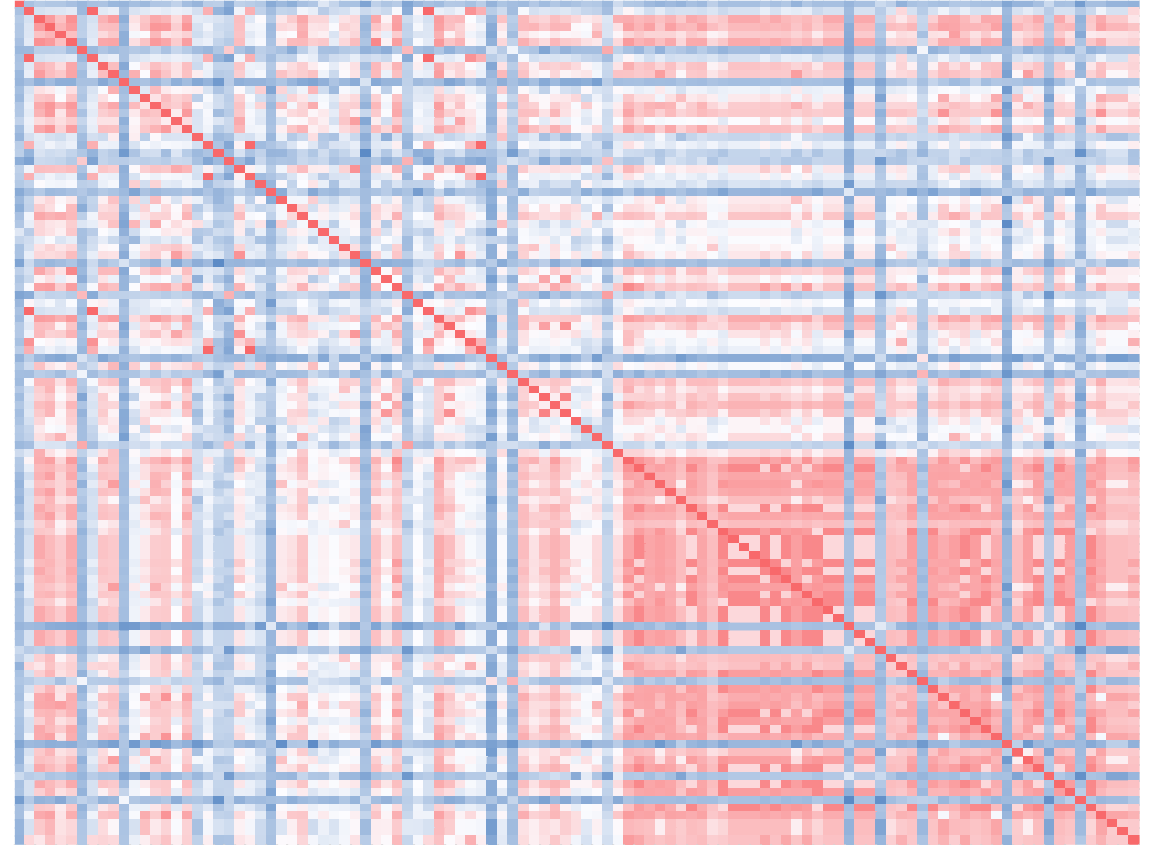
- Selection of runs depending on use of Common Backstop:
 - Safety Net implementation
- Losses attributed to final assessment
 - Defaulted banks: capital surplus: $\max(0, \text{TRC} - 10.5\% \text{RWA})$
 - Non-defaulted banks: SYMBOL simulated loss

*The outcome are simulations of a **distressed banking system** with banks that are failing/likely to fail.*

The outcome are losses that reduce the banks' capital levels

Scope & Correlation Matrix

- Public available data
- Scope: 107 Institutions
- Correlation matrix estimated on stock returns
 - Circa 50 banks are listed
 - Non-list banks: Average correlation between country index and listed banks



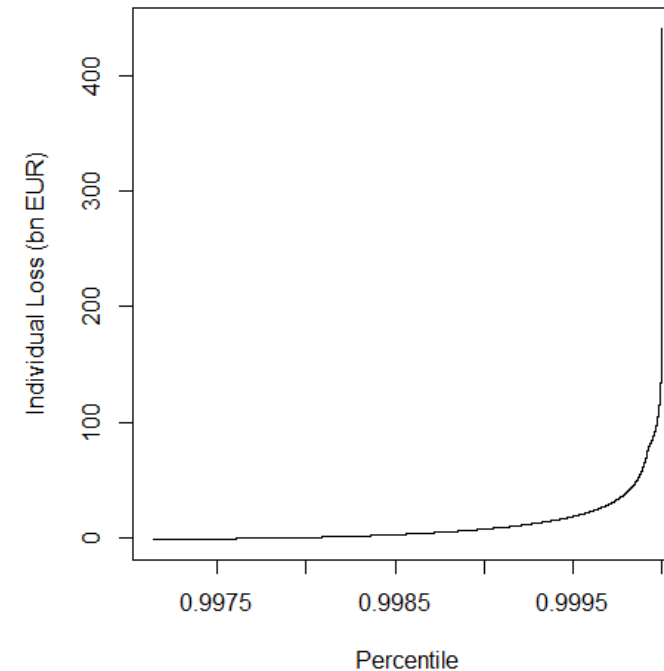
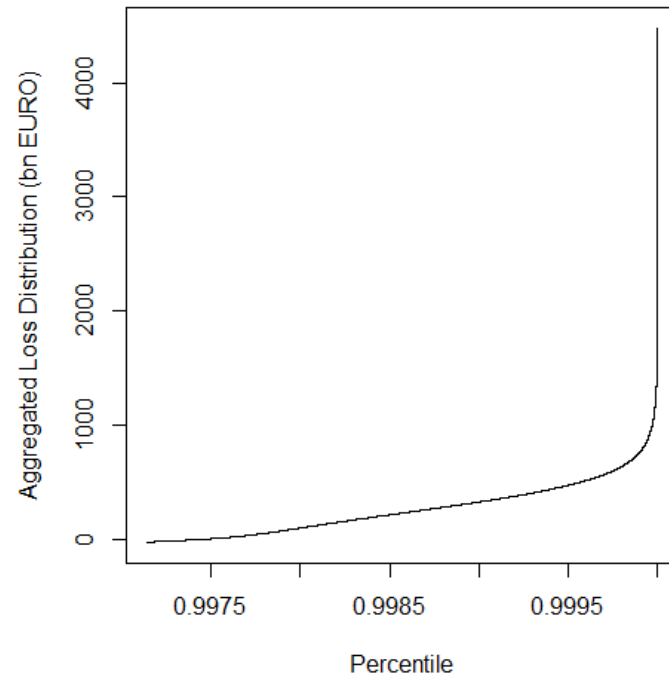
SYMBOL OUTPUT

- Circa 72 million runs simulated
- 300.000 runs with a simulated default: Loss > Total Regulatory Capital (TRC)

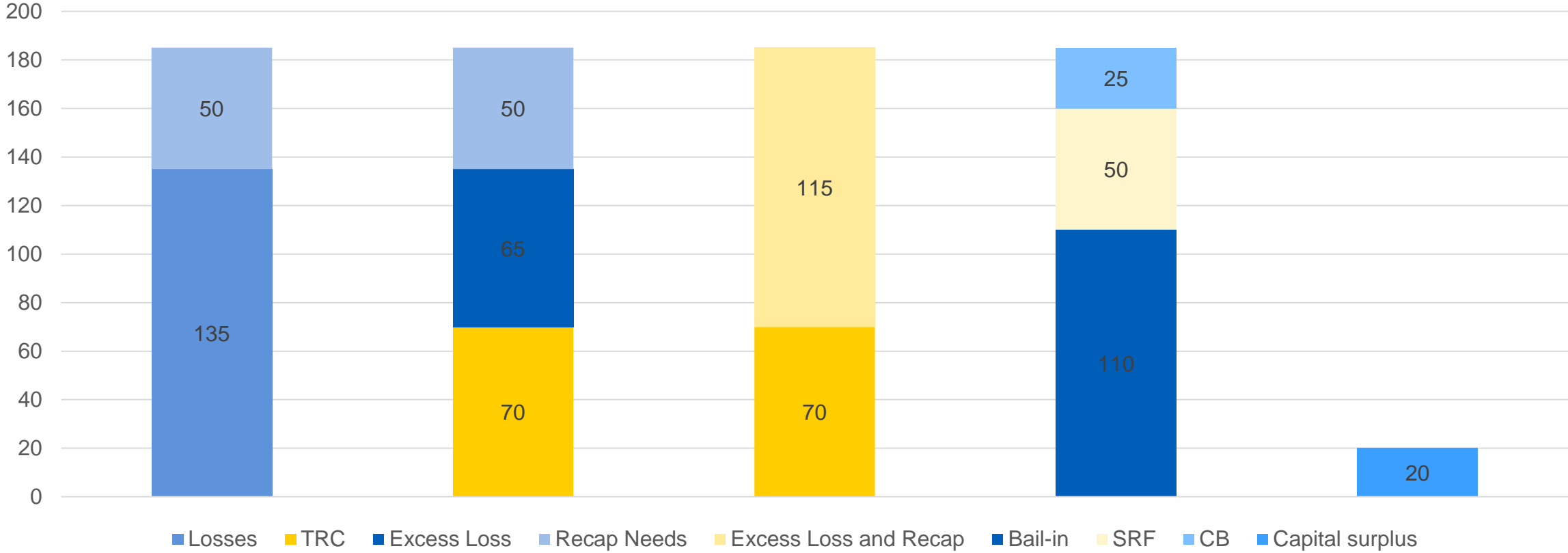
Aggregated loss

vs

Individual loss

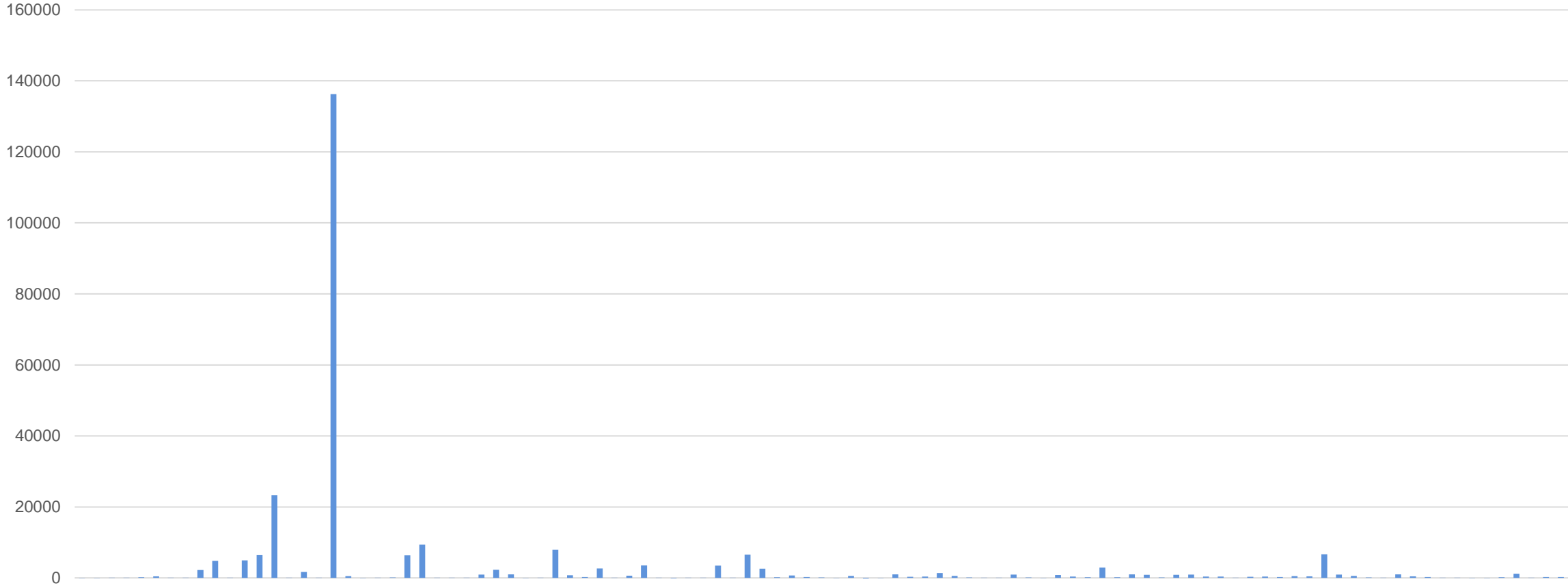


Safety Net Example: Use of CB for 25 bn

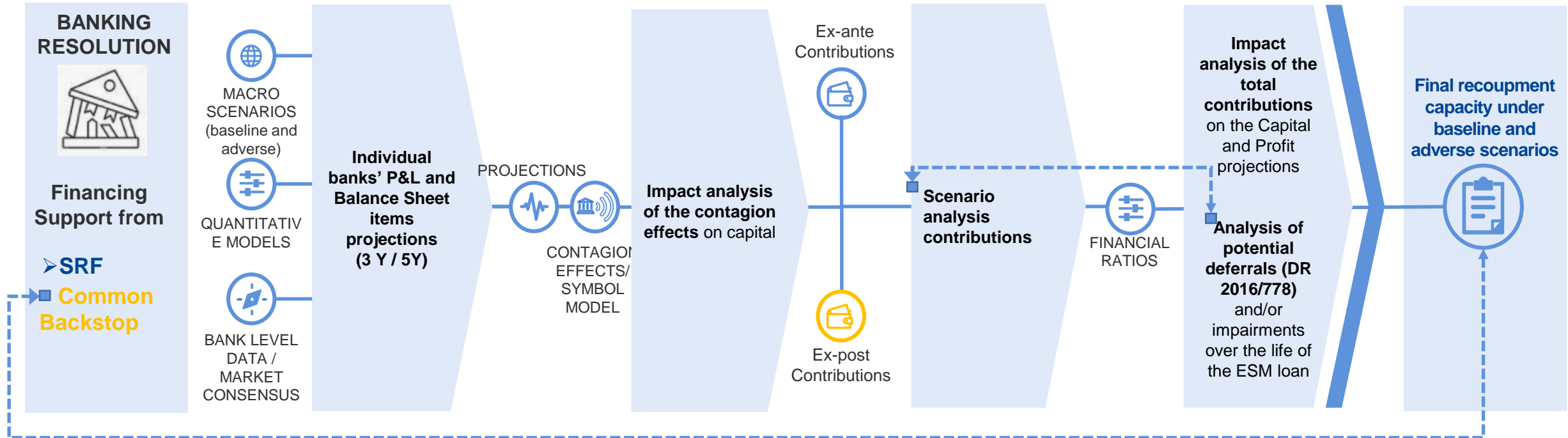


Losses generated by SYMBOL

Simulated losses (mn EUR)



Final Assessment: Integration of building blocks



Conclusion

- Different application of SYMBOL within the Recoupment capacity
- Changes to SYMBOL model
 - Adjustment of correlation matrix & Common Factor simulation
- Difficulties related to the integration with other models (blocks):
 - Macroeconomics scenarios
 - Econometric forecast of P&L
 - SYMBOL losses
 - Timing of losses



**THANK
YOU!**