**Deposit Insurance Model**

October 26, 2023

RW Kopcke

US Department of the Treasury, OTA

The model comprises two Excel workbooks that show the evolution of a DI fund's net assets, using Monte Carlo simulations, data for each bank, policy parameters, distributions for macro variables, each bank's probability of failing, and distributions of recovery rates. The workbooks project the distribution of the DI fund's net balances for 10 years, reported by selected quantiles.

Each workbook provides two alternatives for generating the DI fund’s net balances. In Alternative I simulations, the user specifies which banks fail and the years in which they fail. In Alternative II simulations, the Monte Carlo simulation specifies which banks fail and the years in which they fail.

In the workbook *Deposit\_Insurance\_model\_auto\_bank\_failures.xlsm*, the model draws a set of random bank failures in Alternative II simulations each time the model runs.

In the workbook *Deposit\_Insurance\_model\_manual\_bank\_failures.xlsm*, the model draws a set of random bank failures in Alternative II simulations only when user chooses to do so.

The first two sheets in both workbooks describe the model in the workbook, describe the inputs (most are optional) and outputs, explain the running of the model, and describe the Monte Carlo.

Although the model is quite general, giving the user the option to enter a range of policy inputs, many of these inputs are not necessary for every DIA. We can discuss this. We also can design the bank inputs sheet to suit the structure of Chile’s DI program.