

Optimal deposit insurance in a macroeconomic model with runs

Executive Summary

A credible provision of deposit insurance is widely considered the leading remedy to reduce run-incentives of banks' depositors. However, there is little quantitative guidance to determine its optimal level. This study develops a quantitative macroeconomic model to investigate the impact of varying deposit insurance coverage on bank stability, credit provision, and broader economic performance. The model incorporates banks' (unobservable) risk choices, and elements from real-world regulatory environment—including, insurance on deposits up to a limit and minimum capital requirements. An increase in deposit insurance coverage (i) lowers panic-induced bank insolvencies by reducing "flighty" deposits, (ii) increases likelihood of fundamentally-driven insolvencies due to a weakening of banks' risk management incentives, and (iii) offers speedier economic recovery in the aftermath of banking crises (resulting from general equilibrium effects). Calibrating model parameters to U.S. data yields a U-shaped relationship between the level of deposit insurance coverage and the risk of bank failures. The welfare-maximizing level of deposit insurance coverage in 2008—roughly 60% of aggregate deposits insured by U.S. FDIC—aligns closely with the level observed in the data. This level weighs less severe deadweight costs and macroeconomic losses during the infrequent episodes of bank panics against higher deadweight costs due to fundamental bank insolvencies in normal times. Finally, the model delivers novel insights into determinants of optimal deposit insurance, including the roles of capital requirements, fiscal capacity, and depositor alertness.