Opacity, Signaling, and Bail-ins

Kentaro Asai 1  Bruce Grundy 1  Ryuichiro Izumi 2

1Australian National University

2Wesleyan University
Motivation

- The 2007-08 runs on Money Market Mutual Funds (MMMFs)
  - A fixed value claim created a first-move advantage
  - Solutions: flexible repayments in forms of bail-ins

- Post-crisis reforms: mixed results during the COVID-19 crisis
  - Liquidity fees failed to prevent large cash outflows (U.S.)
  - Swing pricing succeeded in reducing cash outflows (U.K.)

- Why can flexible repayments fail to prevent runs?
  - **Our focus:** the effect of an adjustment in repayments on the prices of fund assets
    - rather than the form of the adjustment via liquidity fees or swing pricing
  - **We show:** the effectiveness of flexible repayments depends on the information structure.
This paper

▶ studies: equilibrium outcomes when flexible repayments may signal asset qualities

▶ considers: a possible conflict of two desires
  ▶ a bank’s desire to allocate resources ex-post optimally
  ▶ a bank’s simultaneous desire to induce higher asset prices

▶ compares: three information regimes concerning the agent’s information about asset quality
  ▶ Transparency: both asset buyers and the bank know quality
  ▶ Lemosity: only the bank knows quality
  ▶ Opacity: no one knows quality
Model


- $\tau = 0, 1, 2$

- Bank’s asset
  - random returns in $\tau = 2$
  - tradeable in $\tau = 1$ to wealthy risk-neutral investors
  - price depends on investors’ beliefs about asset returns

- **Complete** deposit contract
  - Risk-averse depositors choose to withdraw in $\tau = 1$ or $2$
    - Liquidity risk arises because a fraction of depositors must withdraw in $\tau = 1$
  - The bank learns withdrawal demand and then chooses repayments
  - Repayments may affect the investors’ beliefs (signaling)
Equilibrium

- Transparency and Opacity: the allocations are efficient
  - Transparency insures depositors from liquidity risk
  - Opacity insures depositors withdrawing in $\tau = 1$ against asset price risk

- Lemosity: the allocation is inefficient
  - Mechanism: Distorted incentives
    - Bad banks may mimic good banks to induce a higher price
    - Good banks raise repayments to distinguish themselves from bad banks
      - Repayments are inefficiently high at good banks
    - Expectations on high repayments cause inefficient runs

- The allocation under Lemosity is always inferior to either under Transparency or Opacity
Takeaway

- The effectiveness of bail-in tools will be **undermined** when the bank can learn asset returns privately
  - Bail-in tools can cause excessive short-term repayments under Lemosity
    - Distorting intertemporal allocation
    - Causing inefficient runs

- **Banks choose to be transparent or opaque** to avoid costly signaling
  - Asset qualities will not be private information