Regulatory Model Secrecy and Bank Reporting Discretion

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1. Motivation

Transparency of bank stress testing is important:
I. Vast literature on transparency of test results.
II. Transparency of **test models** deserves more attention because of the following facts**:**
  1. It varies across countries: **why?→This paper.**
  2. It matters for the accuracy of test results: **how?→This paper.**

2. Research Question

How can regulators disclose the test models to:
I. prevent banks from manipulating the reports for stress tests?
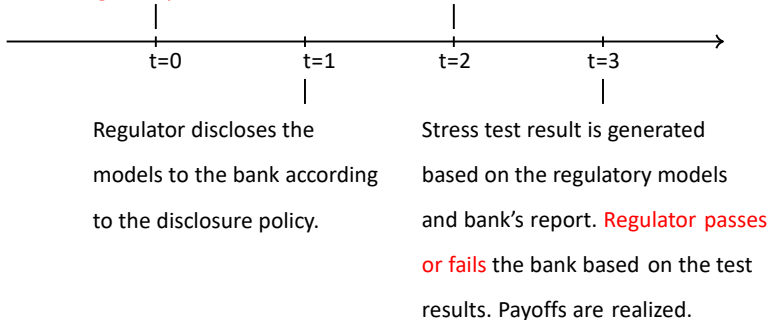II. improve the accuracy of test results and the efficiency of regulatory interventions?

3. Key Results

I. Regulators should disclose more information about test models when banks have higher tendency to manipulate the reports for stress tests.

II. Higher manipulation costs and lower private benefit in banks may hinder regulators from disclosing more information about test models.

4. Model

Regulator commits to a disclosure policy about the regulatory models.

Bank chooses manipulation to affect report generating process.

t=0   t=1   t=2   t=3

Regulator discloses the models to the bank according to the disclosure policy.

Stress test result is generated based on the regulatory models and bank's report. Regulator passes or fails the bank based on the test results. Payoffs are realized.

Information structure:
I. Regulator privately knows the regulatory models.
II. Bank submits (potentially manipulated) report about its assets.

Key interactions:
I. Regulator's pass/fail decision and bank's manipulation incentive are jointly determined.
II. Interactions in I. give rise to the need for disclosure of test models.
III. Regulator discloses more info about test models when the pass/fail decision induces more manipulation from the bank.
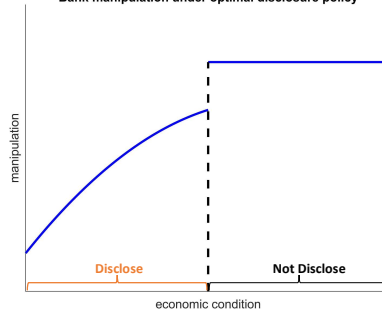
5. The Optimal Disclosure Policy of Regulatory Models

I. Regulator's pass/fail decision induces the bank to manipulate more when economic condition is bad.
II. Disclosure of test models reverses bank's manipulation incentive when economic condition is particularly bad.

Bank manipulation under full disclosure and the optimal disclosure policy
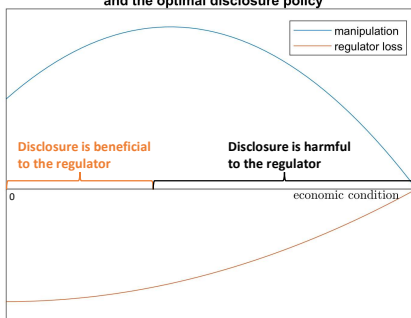
Disclosure is beneficial to the regulator | Disclosure is harmful to the regulator

Bank manipulation under optimal disclosure policy

When the manipulation is fixed, the regulator would disclose more. Then,
I. Higher manipulation cost;
II. Lower private benefit
for the bank increases the amount of disclosure of test models.

Bank manipulation under optimal disclosure policy
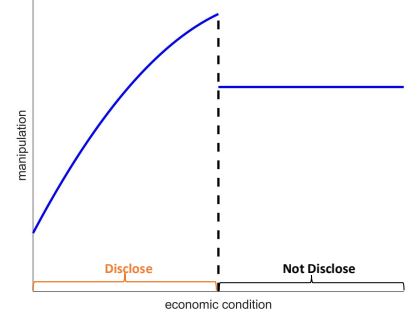
When the manipulation is fixed, the regulator would disclose less. Then,
I. Higher manipulation cost;
II. Lower private benefit
for the bank decreases the amount of disclosure of test models.