



# Credit Risk and Systemic Spillovers from an Unexpected Bank Rescue: Evidence from India

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## Abstract

This paper examines spillover effects from an unexpected rescue of a private sector bank in India. The unprecedented protection of shareholder claims increased bailout expectations among other private sector banks, triggering two opposing channels of systemic risk. On the one hand, affected banks engage in individual risk-shifting by increasing credit risk, lending more to risky borrowers, and restructuring loans. On the other hand, they increase loan specialization due to weaker incentives to correlate assets with peers. On net, their contribution to systemic risk rises by about 23%, highlighting how bailouts can reshape risk-taking and amplify fragility across the banking system.

## Introduction

- First paper to examine how an unexpected bailout affects the systemic risk contribution of other banks.
- Highlights an underexplored mechanism linking bank bailouts to financial stability through changes in the incentives of other banks.
- Governments often bail out failed banks to reduce systemic crisis risk.
- Side effect: alters bailout expectations of other banks, influencing systemic risk
- Two opposing theoretical channels for systemic risks:
  - Individual risk-shifting:** Higher bailout expectations → increased risk-taking
  - Specialization:** Weaker incentives for portfolio correlation → more differentiation
- Net effect on systemic risk empirically ambiguous
- Uses unexpected "Yes Bank" rescue in India as natural experiment

## Research Design

### Natural Experiment: Unprecedented rescue of "Yes Bank" (March 2020)

- First government rescue of a private bank in India protecting shareholder value
- Market reaction: Stock price doubled, credit rating jumped from default to investment grade

### Identification Strategy: Difference-in-Differences (DID)

- Treatment Group:** Private sector banks (excluding Yes Bank)
- Control Group:** Government-controlled banks (GCBs) with implicit guarantees

$$Bank Risk_{i,t} = \alpha + \beta_1 Treat_i \times Post_t + aX_{i,t} + \gamma_i + \lambda_t + \epsilon_{i,t}, \quad (1)$$

### Data Sources:

- Bank accounting & stock data
- Loan-level data: Control for demand with **Borrower X Time** fixed effects.

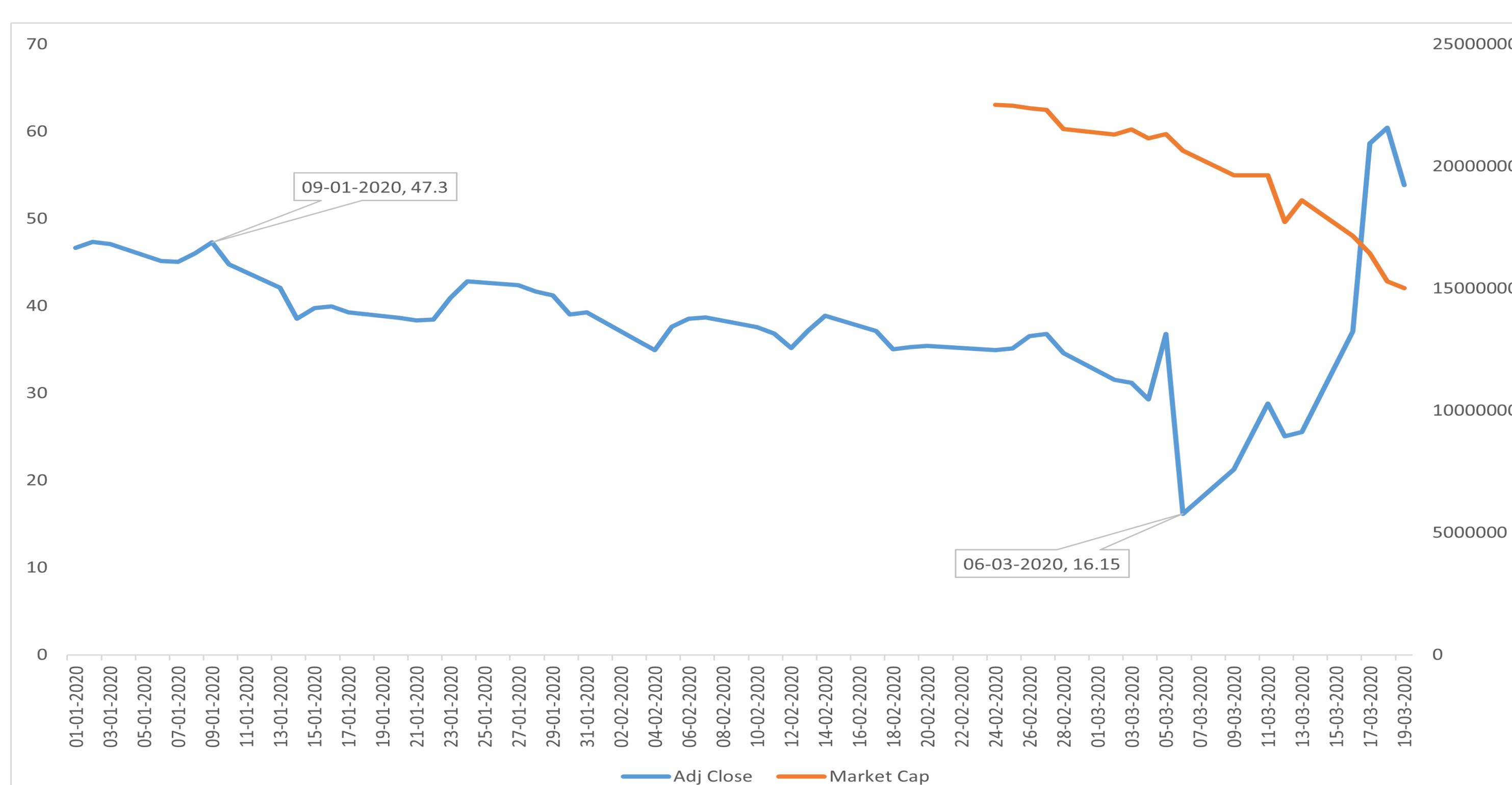


Figure 1. Stock price of "Yes bank" around bailout benchmarked with total market capitalization of all banks

| Rating Agency             | Date            | Security Type                      | Rating | Rating Definition |
|---------------------------|-----------------|------------------------------------|--------|-------------------|
| Before Rescue of Yes Bank |                 |                                    |        |                   |
| CARE                      | 6th March 2020  | Debentures / Bonds / notes / bills | D      | Default           |
| BRICKWORK                 | 6th March 2020  | Debentures / Bonds / notes / bills | D      | Default           |
| ICRA                      | 6th March 2020  | Debentures / Bonds / notes / bills | D      | Default           |
| After Rescue of Yes Bank  |                 |                                    |        |                   |
| CRISIL                    | 19th March 2020 | Certificate of deposit             | A 2    | High Safety       |
| ICRA                      | 24th March 2020 | Debentures / Bonds / notes / bills | BB+    | Inadequate Safety |

Table 1. Credit rating changes of "Yes bank" securities before and after the event

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## Results: Individual Risk-Shifting

### Credit Risk Increases Significantly

- Non-performing assets (NPA) increase by ~3 percentage points (+30%) for treated banks
- Results robust to with and without bank-time fixed effects and bank controls
- No evidence of pre-existing trends (Figure 2)

### Evidence on Bank Actions

- More Lending to Risky Borrowers
  - Treated banks significantly increase share of new loans to risky borrowers
- Increased Loan Restructuring
  - Restructuring rate increases by ~26%
  - Suggests higher risk-taking with existing borrowers
- Lending Expansion by Affected Banks
  - Share of new corporate loans increases from 45% to 52%

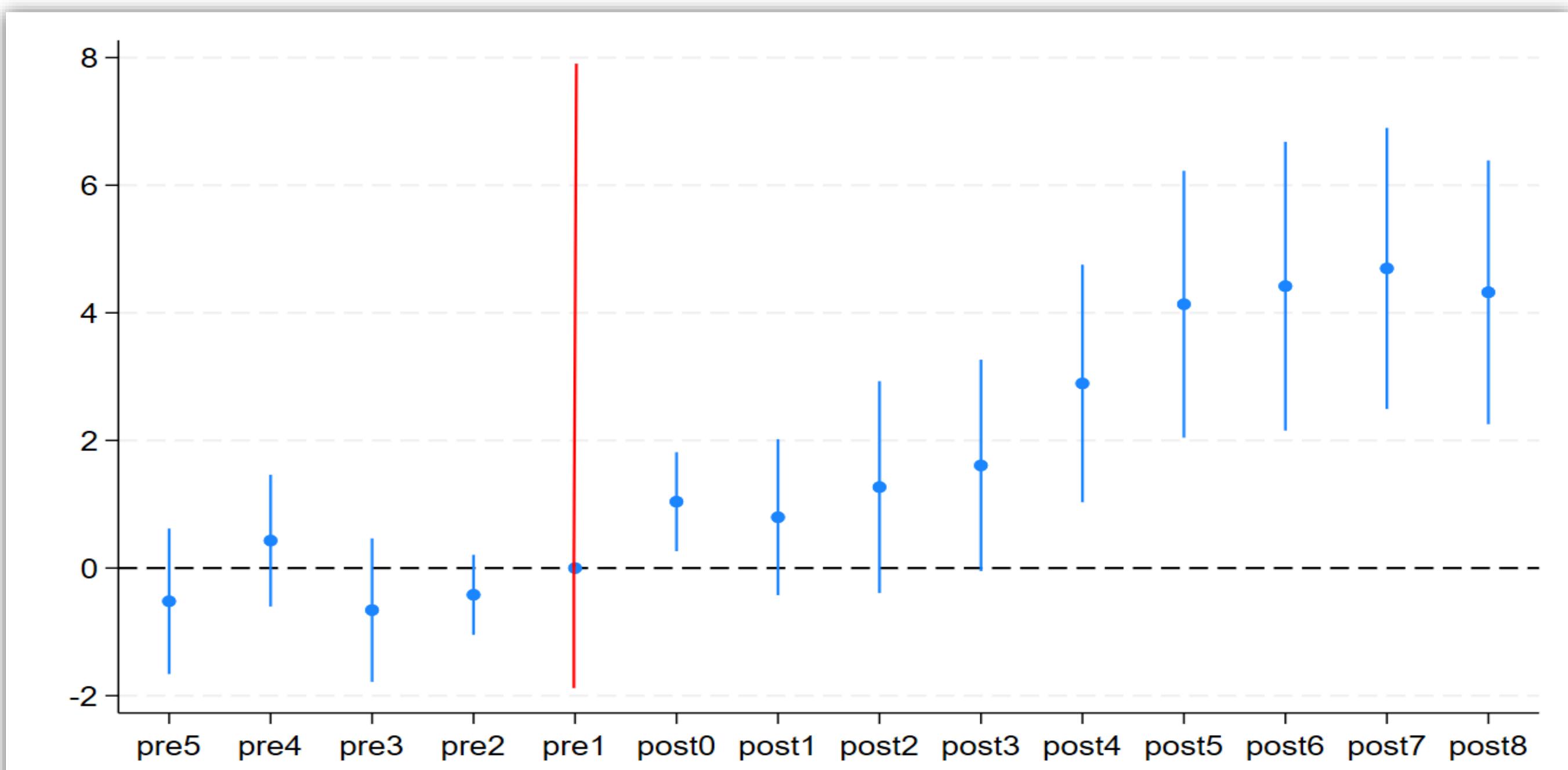


Figure 2. Pretrend and post trend for NPA- Quarterly frequency.

## Results: Specialization Channel

### Increased Loan Portfolio Differentiation by Affected Banks

Using novel cosine distance measures, I find that affected banks increase specialization across:

- Borrowers:** +3.3 percentage points (+68% of SD) (Figure 1)
- Industries:** +4.4 percentage points (+19% of SD)
- Regions:** +7.1 percentage points (+32% of SD)

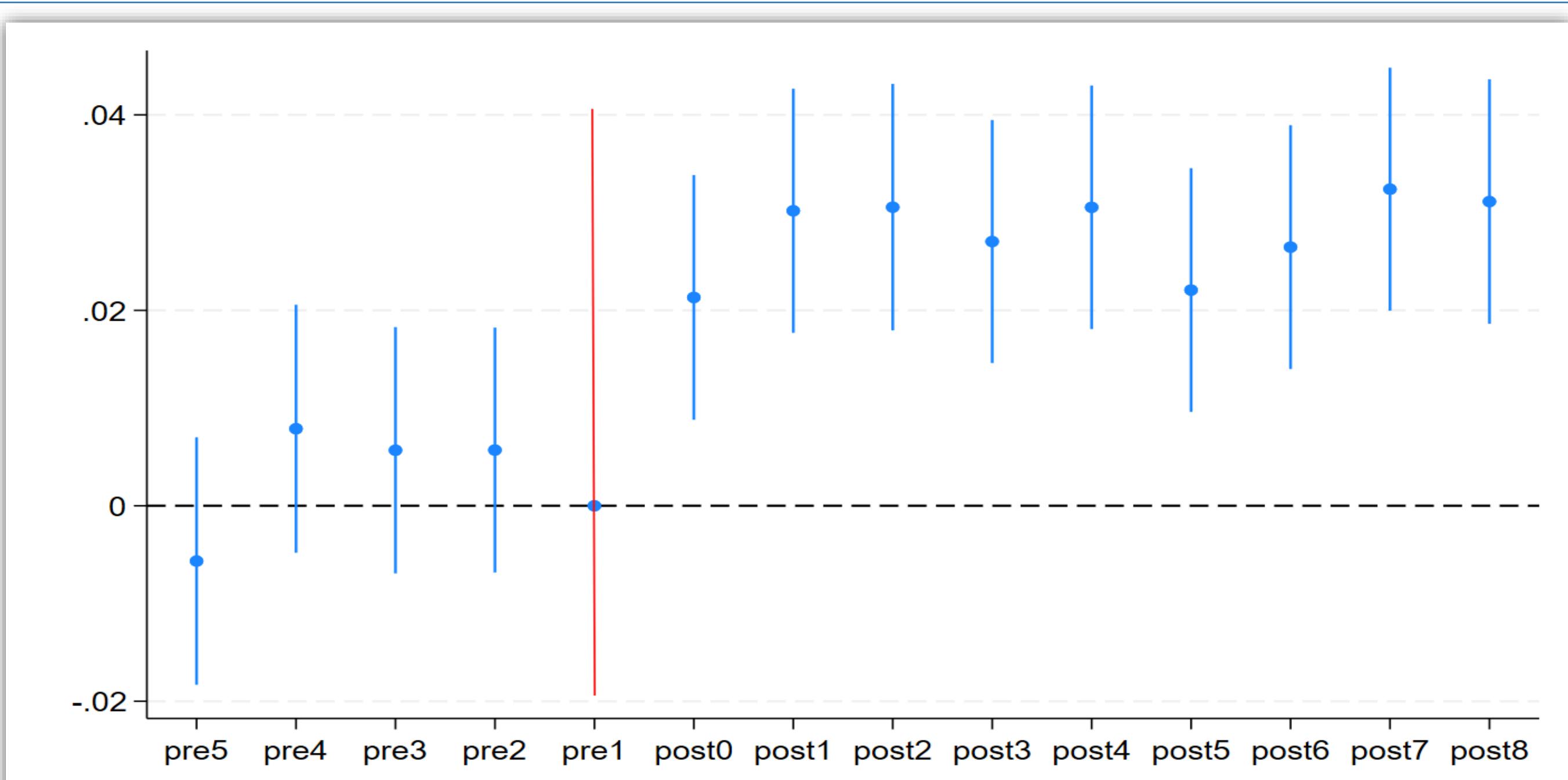


Figure 3. Pretrend and post trend for Specialization- Quarterly frequency.

## Results: Systemic Risk

**Individual risk-shifting effects dominate.** Despite increased specialization reducing portfolio correlations, systemic risk measures increase significantly for affected banks

- Marginal Expected Shortfall (MES):** +23%
- Delta Conditional Value-at-Risk (CoVaR):** +30%
- Beta:** +42%

## Contribution to Literature

- First paper to show that an unexpected bailout increases **loan specialization**, testing the theoretical implication of Acharya (2007): when individual bailout likelihood rises, the incentive to correlate portfolios for a joint bailout declines.

## References

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