

Risky Financial Collateral, Firm Heterogeneity, and the Impact of Eligibility

American Finance Association, PhD Poster Session 2021

Corporate Bonds in Central Bank Collateral Frameworks

- Several central banks accept corporate bonds as collateral for short-term borrowing, especially in financial crises.
 - Relaxing collateral standards is intended to ease money market frictions, but has substantial side effects on bond markets.
- ⇒ Research question: which trade-off does the central bank face and how is collateral policy affected in a crisis?

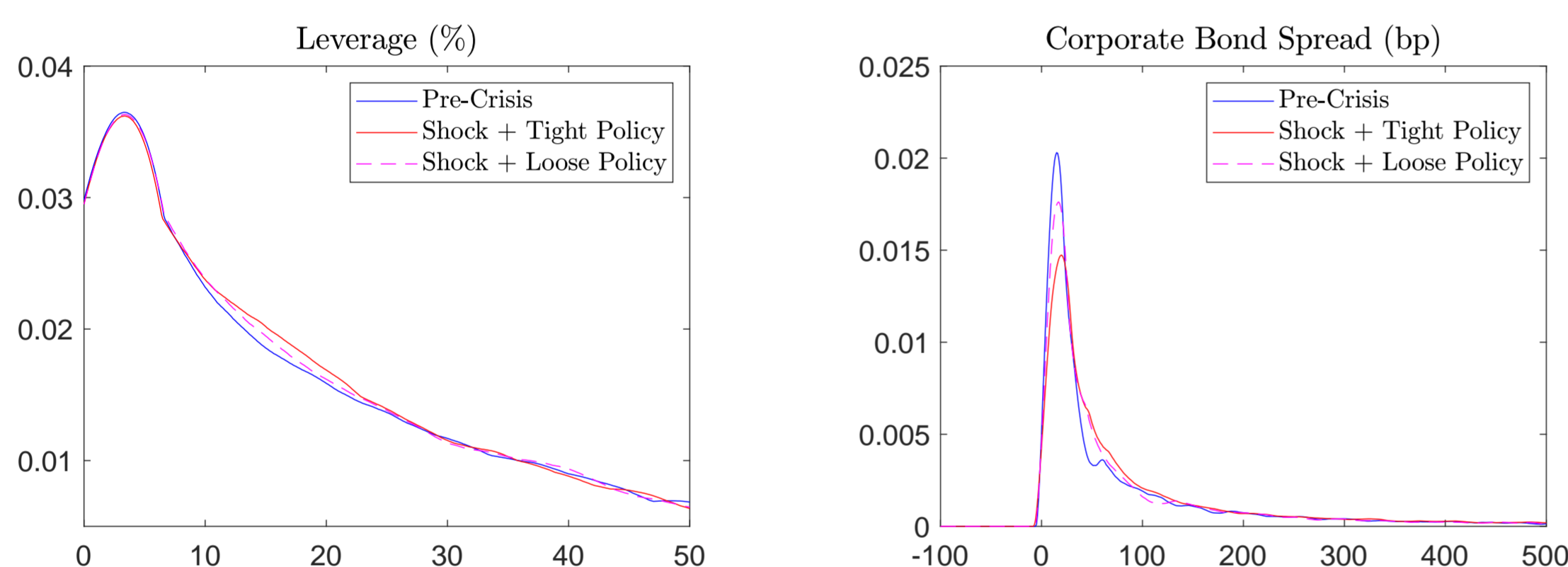
The Pass-Through of Collateral Policy

- Banks can use their corporate bond holdings to settle liquidity deficits on money markets.
- Anticipating this benefit, banks are willing to pay **eligibility premia** on corporate bonds. We label this the **pricing effect**.
- Empirically, the issuers of eligible bonds increase risk-taking and dividend payouts, which we call the **borrower effect**.
- Relaxing eligibility standards has a positive impact through the **money market channel** and a negative impact by subsidizing risk-taking through the **bond market channel**.

Model

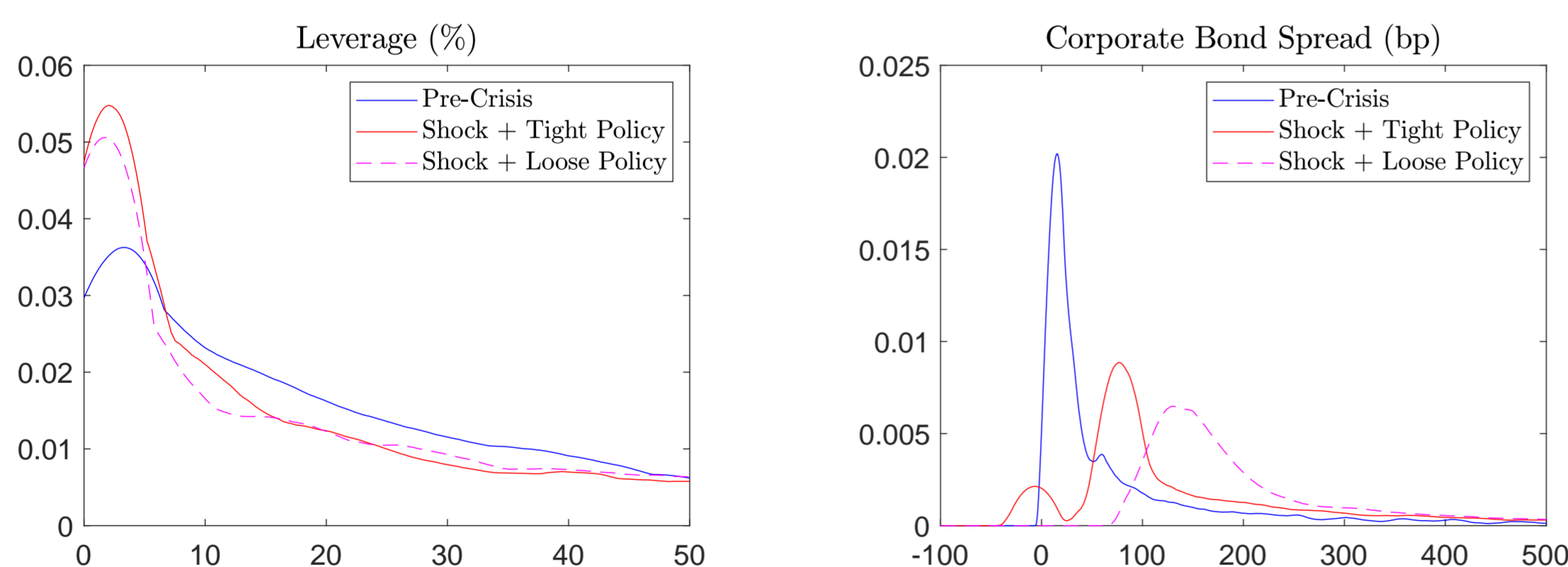
- Dynamic capital structure model: eligibility premia distort the trade-off between tax advantages and **default costs**.
- Collateralized money market with two segments: private (interbank repos) and public (CB standing facilities). Assumption: **cost of cash lenders** decline with collateral quality, **costs of cash borrowers** decline with amount of available collateral.
- The model is calibrated to Euro area before the financial crisis of 2008 and used as laboratory for policy experiments.

Firm Response to Interbank Shock



- Leverage and spread distributions slightly shift to the right.
- Shift more pronounced in the case of loose collateral standards.
- Aggregate collateral drops to 73 % (94 %) in case of tight (loose) policy, borrowing costs increase by 1 % (0.2 %).
- Collateral policy does not visibly affect default costs.

Firm Response to Fundamental Risk Shock



- Leverage and spread distributions strongly shift to the right, especially when collateral standards are loose.
- With tight (loose) policy, default cost increase by 66 % (67 %) while borrowing costs increase by 6.5 % (4.8 %).
- Central bank crowds out almost the entire private money market segment and takes on significant counterparty risk.

Implications

- Increasing available collateral by relaxing eligibility criteria is very effective for interbank shocks, without inducing excessive risk-taking. In case of fundamental risk shocks, adverse effects via the bond market channel are large.
- The **total effect** can be determined using the welfare relevant cost terms. Depending on structure of central bank, welfare depends on how much **counterparty risk the central bank is willing to take**.

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