The disciplining effect of supervisory scrutiny in the EU-wide stress test

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This paper looks behind the curtain of stress testing and sheds light on the effects of supervisory scrutiny

- Earlier work shows stress testing can affect bank risk
  [Acharya/Berger/Roman, 2018; Steri/Pierret, 2018, Cortés et al., 2020]
  Does supervisory scrutiny play a role?

- A great deal of stress testing is confidential between supervisors and supervised banks, e.g. communications about best-practice and stress testing techniques
  Do risk management capabilities built up for compliance purposes spill over into bank outcomes?

- Supervisory efforts can have a disciplining effect on banks
  [Hirtle/Kovner/Plosser, 2019; Kandrac/Schlusche, 2019]
  Do they in stress testing?
What we do in this paper

▶ We investigate whether the supervisory scrutiny associated with the EU-wide stress tests has an effect on bank credit risk
What we do in this paper

- We investigate whether the supervisory scrutiny associated with the EU-wide stress tests has an effect on bank credit risk.

  - YES! The more scrutiny banks receive during a stress test exercise, the more they reduce credit risk.

![Marginal effects of supervisory scrutiny on credit risk.](image)
What we do in this paper

- We investigate whether the supervisory scrutiny associated with the EU-wide stress tests has an effect on bank credit risk.
- We study the 2016 EU-wide stress test in a diff-in-diff setting.

- 63 Tested SIs — 69 Non-tested LSIs
What we do in this paper

- We investigate whether the supervisory scrutiny associated with the EU-wide stress tests has an effect on bank credit risk

- We study the 2016 EU-wide stress test in a diff-in-diff setting

- Risk is measured as risk weight density (RWD) for credit risk exposures

\[
RWD_{i,t} = \frac{\text{Risk-Weighted Credit Risk Exposures}_{i,t}}{\text{Total Credit Risk Exposure}_{i,t}}
\]
What we do in this paper

[•] We investigate whether the supervisory scrutiny associated with the EU-wide stress tests has an effect on bank credit risk

[•] We study the 2016 EU-wide stress test in a diff-in-diff setting

[•] We explore the role of supervisory scrutiny

- The European design allows us to highlight the effect of supervisory scrutiny in contrast to other channels

- European stress test results do not necessarily lead to capital measures (profit distribution limits, capital requirements)

- We construct three metrics of supervisory scrutiny in the EU stress test
  
  ⇒ Today I focus only on one metric
Stress test design and supervisory scrutiny metrics

The EU-wide stress test follows a Constrained Bottom-Up approach:

- Banks use their own models to generate stress test projections
- The ECB and banks interact during the Quality Assurance (QA) between launch and publication of the stress test results
- The ECB mainly use two challenger approaches to ensure the credibility of banks’ projections

▶ High QA Quantity: Above-median number of communicated flags on credit risk

Simplified cycle of the ECB Quality Assurance process.

Comparison of bank submission and challenger models → Deviation raises a flag → Communication to the bank

automated, if material  
If ass. as meaningful
Main Finding: Effect of supervisory scrutiny on credit risk

\[
RWD_{i,t} = \beta_1 (\text{Post ST16}_t \times \text{Tested}_i) + \beta_3 X_{i,t-1} + \alpha_i + \gamma_t + \delta_{t,j} + \epsilon_{i,t} \\
+ \beta_2 (\text{Post ST16}_t \times \text{Tested}_i \times \text{High Scrutiny}_i)
\]

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<th>Baseline</th>
<th>Supervisory Scrutiny</th>
<th>Capital Structure</th>
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- Banks with higher stress test intensity in form of high supervisory scrutiny reduce credit risk
Conclusions

- We find that the 2016 European Stress Test exercise impacted SSM banks behaviour
- Higher supervisory scrutiny disciplines tested banks more
- Banks that had more interactions with the supervisor reduced their RWD more than banks that received less treatment.
- The scrutiny effect persists in a subsample of tested banks
- The scrutiny effect is independent of stress-test related capital effects
- Stress test design and stress test effects interact