

Carbon Emissions and the Bank-Lending Channel

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Potential roles of the financial system in decarbonization

- Put pressure on firms (“voice”)
- Allocate capital
 - Finance green investment of brown firms
 - Divest from brown firms (“exit”)

Questions

- Do FIs engage in these activities?
- Are these activities effective?

Paper

- **Bank-commitment to decarbonization** ⇒ lending ⇒ real outcomes
 - **Speaks to two important questions**

Banks' self commitment

- Target measure: scope 1 emissions
 - Includes direct emissions; excludes energy usage and supply chain
 - Better to measure and easier for firms to reduce
- Commitments start mid 2015, staggered
 - Around Paris Agreement (Ehlers, Packer, de Greiff 2022; Degryse et al. 2023)
 - Diff-in-diff setting

Paper

- Static staggered diff-in-diff model

Challenge

- *Earlier treated* control group for *later treated* (Goodman-Bacon 2021 JE)
- ⇒ Biased estimator if treatment effect heterogeneous (Baker, Larcker, Wang 2021 JFE)
- Here: treatment effects might be heterogeneous
 - Each bank chooses target level and time horizon
 - (Expected) regulatory environment changes

Suggestion

- Implement estimator consistent under heterogeneous treatment effects (e.g., Callaway and Sant'Anna 2021 JE, Sun and Abraham 2021 JE)

Results: Committed banks

- Lend relatively less to brown (= high scope 1 emissions) firms
 - Because of preference, not risk management
- Charge (slightly) higher interest rates

Thoughts

- Banks walk the walk
 - Is this good or bad news?

Results

- Treated brown firms **relative to treated green firms**
 - Size ↓
 - No emission reduction
 - Firm communication signals increased awareness of climate issues
- Treated firms **relative to untreated firms**
 - Reduce emissions

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 - And green firms become greener

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- Greenwashing
 - Or awareness ↑, but means to invest in green tech ↓

What happens to cut brown projects?

- Disappear or implemented with greener tech
 - Composition shifts from brown to green
- Shift toward brown firms not in the sample (e.g., small firms)
 - Analyze aggregate carbon emissions (not necessarily in this paper)

Conclusion

- Key takeaway: banks can support decarbonization
- Refine DiD specification and parts of emission analysis
- Well-written, insightful paper; **have a look!**