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U.S. Banks’ Exposures to Climate Transition Risks

Hyeyoon Jung
Economist,
Federal Reserve New York

Joao Santos
Director,
Federal Reserve New York

Joao Santos
Economist,
Federal Reserve New York

Executive summary

Climate change can pose risks to banks through the transition to a low-carbon economy. In their paper, Jung, Santos and Seltzer investigate the impact of climate transition policies on U.S. banks’ credit risk. Using sectoral estimates from general equilibrium models, we assess these risks and study how bank-level exposure to transition risk changes over time. Unlike commonly used backward-looking measures such as carbon emissions, our proposed measure is forward-looking.
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This Policy Brief is based on the webinar of the 8th of April 2024 with Olivier Darmouni and hosted by Michael Barnett (Carey School of Business, University of Arizona) entitled "U.S. Banks’ Exposures to Climate Transition Risks".

Policy Brief

Key Findings

How significant are U.S. banks’ credit risk exposures to climate transition risks?
Using sectoral estimates from models such as Jorgenson et al. (2018), Goulder & Hafstead (2018) and NGFS (2022) scenarios, we find that U.S. banks’ exposures to climate transition risks vary significantly across models and policies. However, they do not exceed 14% of banks’ loan portfolio values under the most adverse scenarios.

General equilibrium models add value compared to historical data Most researchers tend to proxy for climate transition risks using carbon emissions, which are backward looking in nature. We find that data from carbon emissions explain at most 60% of the variation in our measure of bank exposures to transition risks

What are the implications of various transition policies?
Transition policies, including carbon taxes and redistribution mechanisms, impact banks’ exposures differently. Higher initial carbon taxes and faster annual growth rates in taxes

result in higher exposures. For example, compared to a $25 tax, a $50 tax increases the average bank exposure by 1%. Policies involving corporate tax cuts tend to have less adverse impacts on banks compared to lump sum redistributions.

How are banks managing their transition risks?
We find some evidence of banks managing their transition risk exposures. After the Paris Agreement, previously more exposed banks reduced their proportion of lending to the riskiest industries. Additionally, banks that have signed the Net-Zero Banking Alliance have significantly reduced their exposures compared to non-signatories by cutting lending to the riskiest industries.

Final Words

We propose a novel forward-looking measure of bank exposure to transition risk by building upon general equilibrium estimates of the sectoral impact of carbon tax policies. It will be valuable to monitor how these estimates evolve over time as transition risks increase.

References

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228 Park Ave S., PMB 35845, New York, NY 10003