

# Assessment of the Banking Sector's Exposure to Hydrometeorological Events in Costa Rica

## Discussion

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# Contributions

- 1 Little evidence on systemic effects of climate change on financial systems.
- 2 Focus on excess rainfall is consistent with literature documenting that the largest impacts of climate change are likely to be through extreme weather events.
- 3 Unique data.

# Questions

Focus on 3 of the 4 dimensions of climate risk:

- ① Physical hazards
- ② Exposure of assets
- ③ Geolocation

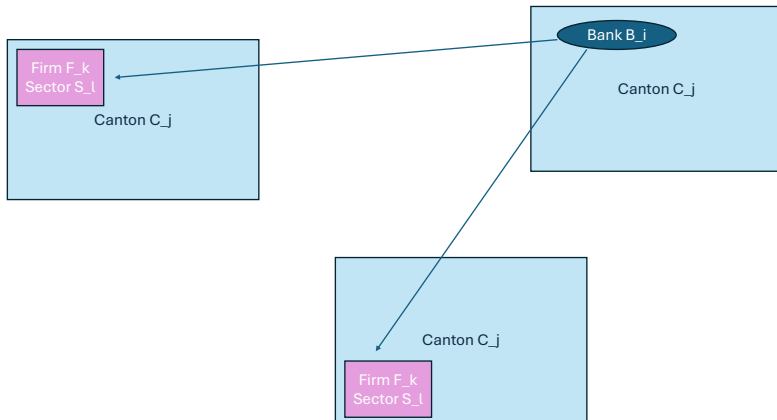
There is a section of the paper on physical hazards that quantifies excess rainfall events.

There is a section of the paper on asset exposure is monthly credit data.

What exactly is the geolocation dimension?

Credit extended/held in one canton is linked to the cantons where the borrowing firms' economic activities take place?

# Geolocated Data



# Suggestions

- ① Which sectors are vulnerable to excess rainfall in Costa Rica?  
Ex: Real Estate assumed not vulnerable.
  - ▶ Use historical data for analysis of which sectors of economic activity are most affected by your measure of excess rainfall.
  - ▶ Can you incorporate economic sectors' vulnerability in the risk indicator  $PHI_i$ ?
- ② Instead of focusing on top cantons in 3.1 - 3.3, use correlations to show a broader picture. The idea would be to generally align with the inputs to the risk indicator.
  - ▶ Are cantons likely to experience excess rainfall those with large shares of loans?
  - ▶ Are cantons with large shares of loans in vulnerable sectors those likely to experience excess rainfall?
- ③ Data covers 50% of credit in banking system. How is the data selected? How does it compare to the universe?

# Potential Extensions

Depending on Data Availability

- ① Use excess rainfall projections to determine physical risk?
- ② Include household credit?
- ③ Conduct analysis at the bank level instead of at the firm level?
- ④ Linkages across cantons through supply chains, markets, etc?
- ⑤ Can effects at one bank ripple through the system?