Discussion of: "Climate Risk and Bank Liquidity Creation in MENA Region: A Dual Threshold–Quantile Approach" by Sedki Zaiane

Vladimir Sokolov[1]

[1]ICEF, HSE Moscow

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What is the paper about?

- The paper studies how *climate risk* affects *bank liquidity creation (LC)* in MENA countries
- Climate risk is proxied by the Germanwatch Climate Risk Index (CRI) at the *country-year level*
- Empirical design:
  - Dynamic bank-level panel regressions with fixed effects
  - Threshold (nonlinear) model
  - Quantile regressions

Main findings

1. Climate risk is positively associated with liquidity creation
2. The effect becomes stronger above a threshold level of risk
3. The effect is concentrated in the middle of the LC distribution

Comment on the economics of liquidity creation

- Liquidity creation (Berger & Bouwman) combines:
  - Illiquid assets (loans)
  - Liquid liabilities (deposits)
- Therefore, an increase in LC can reflect very different economic forces:

Components of LC response

1. Expansion of lending (real intermediation)
2. Deposit inflows / precautionary savings

- In the current paper, these channels are not disentangled
- As a result, it is unclear whether the results reflect:
  - *credit expansion on the assets side* or
  - *shifts in composition of banks' funding sources and their maturity*

Comment on the hypotheses development

- The paper develops the hypothesis that climate risk increases liquidity creation via:
  - precautionary savings
  - flight to quality
  - increased liquidity demand

Strength

The hypotheses are economically intuitive and consistent with crisis-style behavior in banking systems

- However, the mechanisms are grouped together and not clearly separated

Conceptual issue

The same empirical prediction (LC ↑) can arise from fundamentally different channels

  - For example:
    - Deposit inflows ⇒ LC ↑ (liability-driven)
    - Credit expansion ⇒ LC ↑ (asset-driven)
    - OBS commitments ⇒ LC ↑ (contingent liquidity)
- I suggest formulating separate hypotheses for each balance-sheet channel and test them directly

Comment on identification

- The key regressor (CRI) varies at the *country-year level*
- The regression is estimated at the *bank-year level*
- Implication:
  - All banks in a given country-year share the same shock

Identification issue

Effective variation is at the country-year level, not the bank level

- This creates:
  - Correlated residuals across banks
  - Overstated precision if not properly clustered
- With 19 countries:
  - Significance may disappear with country-level clustering of standard errors

Comment on data and reported statistics (cosmetic)

- Several summary statistics appear inconsistent:
  - Standard deviations exceed feasible bounds (ROA)
  - Mean larger than maximum (inflation).
- Possible issues:
  - Scaling errors; data construction problems
  - Perhaps columns SD and Mean are mislabeled and it's just a table formatting issue

Comment on the nonlinear design (strengths)

- The threshold + quantile framework is, in my view, the strongest part of the paper
- It moves beyond average effects:
  - Climate risk may matter only at *salient disaster levels*
  - Linear models would miss such effects

Economic interpretation

1. Small shocks: absorbed within the financial system
2. Large shocks: trigger behavioral and balance sheet responses

- Quantile regressions add an additional dimension:
  - Banks with different LC levels respond differently
  - Suggests heterogeneity in business models / funding structure
- As a *framing device*, this is clearly more informative than a linear FE regression

Comment on the nonlinear design (limitations)

- The nonlinear results are interesting, but their interpretation is limited by identification

Threshold model

Identifies a statistical split in the data, not a structural regime change

- Key issue:
  - Threshold is estimated on a *country-year variable*
  - Precision of cutoff (e.g. -46.38) has limited economic meaning

Quantile regressions

Capture distributional heterogeneity, but do not identify mechanisms

- Open question:
  - Why do middle-LC banks respond more strongly?
- More generally:
  - Nonlinear patterns may reflect:
    - omitted country-level shocks
    - composition effects across banks

Comment on the mechanism

- The paper proposes:
  - precautionary savings
  - flight to quality
  - increased liquidity demand
- However, these mechanisms operate through *different balance sheet margins*:
  - Deposits (households / firms)
  - Lending decisions (credit supply)
  - Off-balance-sheet exposures
- A key missing step:
  - Which margin is driving the increase in LC?
- Suggested test:
  - Decompose LC into:
    - on-balance-sheet vs off-balance-sheet
    - Sokolov and Gorodilov (2026) consider separately LC^{assets} and $LC^{liabilities}$
- Without this, mechanism remains *observationally equivalent across competing explanations*

Do the hypotheses map to the empirical design?

- If we simplify the paper to a linear model it effectively tests:

$$LC_{ict} = \beta \cdot CRI_{ct} + \text{controls} + \varepsilon_{ict}$$

Key issue

All hypotheses are tested using the same dependent variable (LC)

- Mapping hypotheses → empirical margins:
  - **Precautionary savings**:
    - Prediction: deposits ↑
    - Empirical test: not directly observed in baseline regression
  - **Flight to quality**:
    - Prediction: reallocation across banks
    - Empirical test: requires cross-bank heterogeneity (not isolated)
  - **Liquidity demand / OBS channel**:
    - Prediction: off-balance-sheet exposures ↑
    - Empirical test: not separately identified in LC measure

How I would sharpen the contribution

- The paper asks a relevant and timely question
- The nonlinear perspective is potentially interesting
- However:
  - Inference likely overstated (clustering of standard errors) and mechanisms are not fully demonstrated

Reframed contribution

1. MENA-specific evidence on climate risk and liquidity creation
2. Nonlinear (threshold + distributional) effects
3. Evidence that high physical risk may increase measured LC

- Key step:
  - Link this pattern to specific balance-sheet channels