Blockchain and Banking Efficiency: Global Evidence from Ripple Network Adoption

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Ripple

- Cross-border transfers are slow and expensive for banks
- Crypto allows to make payments instantly and save on costs
- Ripple is a blockchain-based technology that allows banks to use XRP to make cross-border payments
- Many banks including Bank of America, PNC, and Santander adopted Ripple

This paper

- **Broad question:** How does blockchain affect bank efficiency?
- Use Ripple as a natural experiment setting – how does adoption of Ripple impact bank efficiency?
- Main results:
  1. No impact of Ripple on liquidity and cost efficiency in the short-run
  2. **Negative impact** in the long run

Great question!

- The question is extremely important:
  - Currently banks' cross-border operations are not efficient – people use crypto exchanges
  - Not enough evidence in the literature that crypto can be welfare-improving
- Potential implications for CBDC – do we need CBDC if private coins can address the efficiency issue?

Comments

1. Potential selection bias
2. Choice of the experiment
3. Sample choice and other small comments

Selection bias

- Using crypto or new technologies in general is risky and potentially expensive in short-run, especially for small banks
- Banks would do it only if they face a demand from their clients (e.g. Chang et al (2020))
- Hence, comparing treated banks and control banks can incur a selection bias
- Might be the reason for mixed results on costs – need good counterfactual to compare with
- Liquidity results can be driven by endogenous differences between two groups – e.g., treated banks have better access to crypto
- Quick test: show parallel trend graph. Long-term comment: compare more similar groups of banks

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Choice of the experiment

- XRP is a risky coin – its value fell sharply after April 2022
- Even though banks potentially mitigate exchange rate risks, they have new risk – crypto exchange
- All leverage (Basel) constraints should include the risk since they are risk-weighted
- Mixed results on valuation can arise from the crypto risk – banks incur new costs in short-run hoping to reduce long-run costs
- Quick test: show more detailed structure of Ripple holding by banks – did it change after April 2022? Might be a good experiment

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Sample choice and other comments

- Quarterly data exist for the US and many EU countries – maybe focus on those to conduct more detailed analysis
- Are there many global banks in the sample? Those can change their behaviour in countries with better environment for crypto but not in others – again, can be a nice experiment
- Can banks try to make profits from cross-country arbitrage? Check Makarov and Schoar (2020)
- Show descriptive statistics before and after the event

Conclusion

- Very nice and important question
- Ripple is unique experiment and is an important policy question by itself
- The paper needs to address selection bias and potential crypto risks that lead to somewhat surprising results