International Banking and Financial Stability

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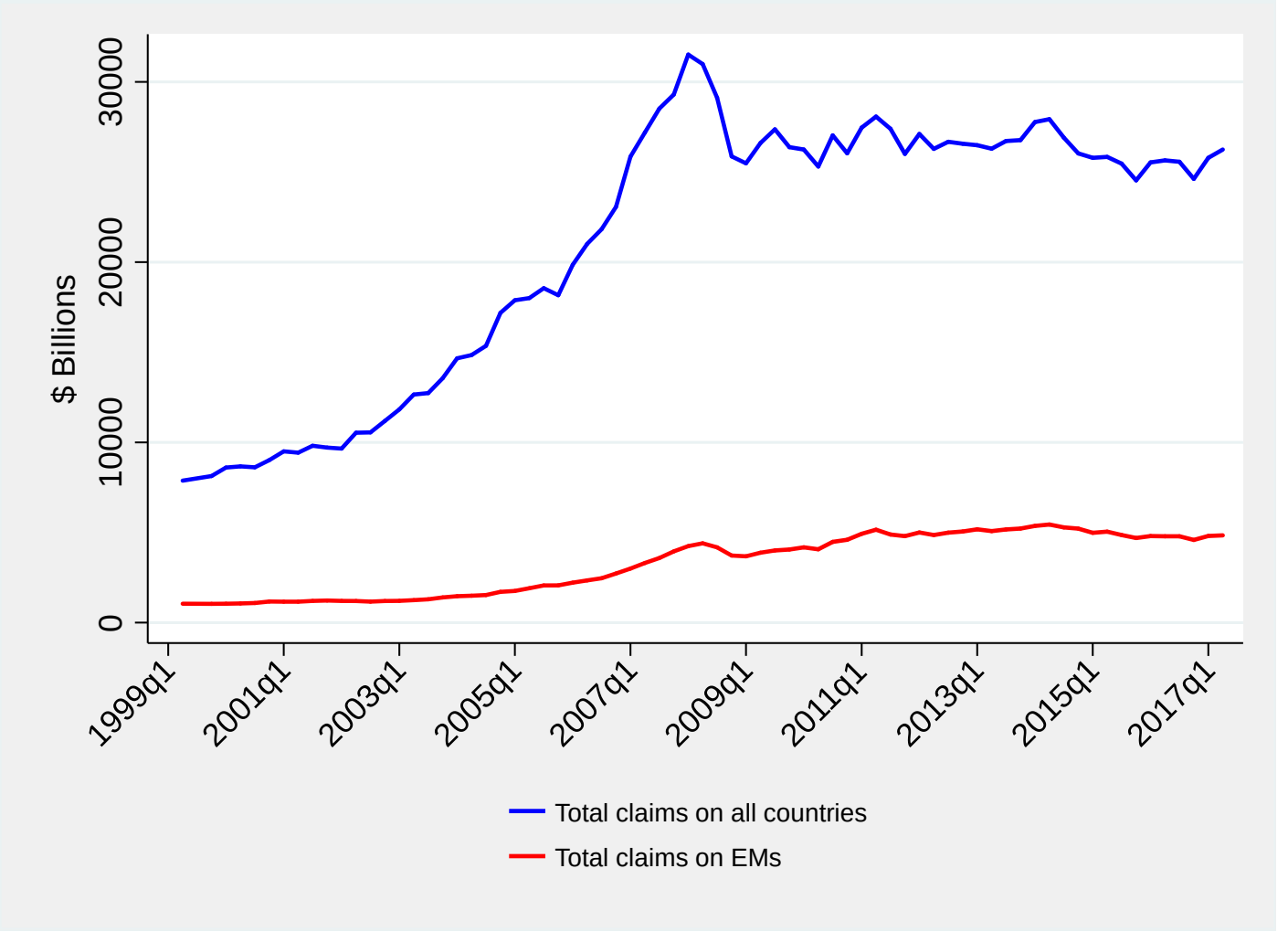
The views expressed in this presentation are those of the author and do not necessarily represent those of the Board of Governors or the staff of the Federal Reserve System.

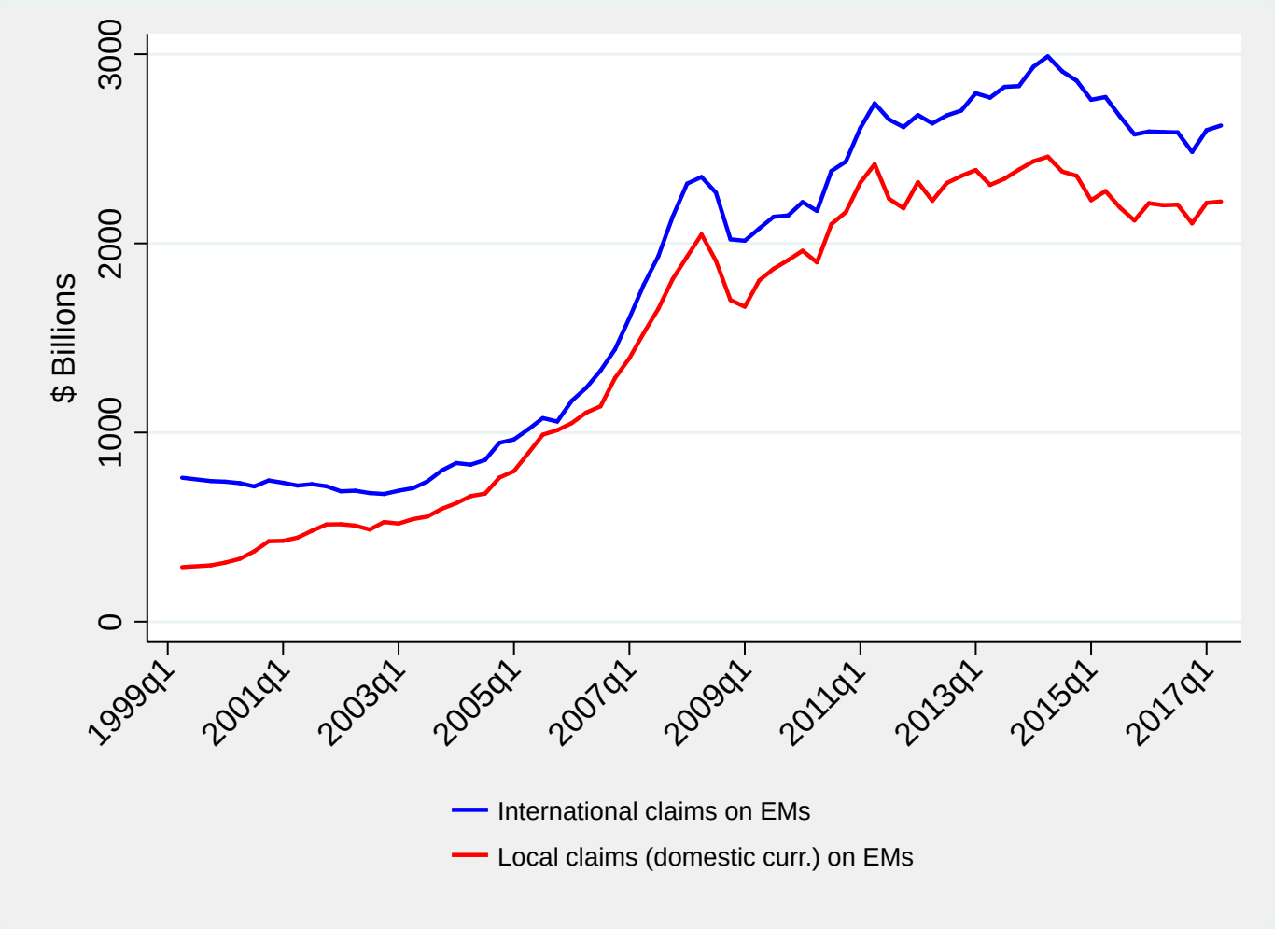
Roadmap

- Trends in international banking.
- Framework to analyze cross-country linkages through multinational (global) banks.
- What can we learn from the academic literature?
- Monitoring international banks from a financial stability perspective.
- Supervisory tools.

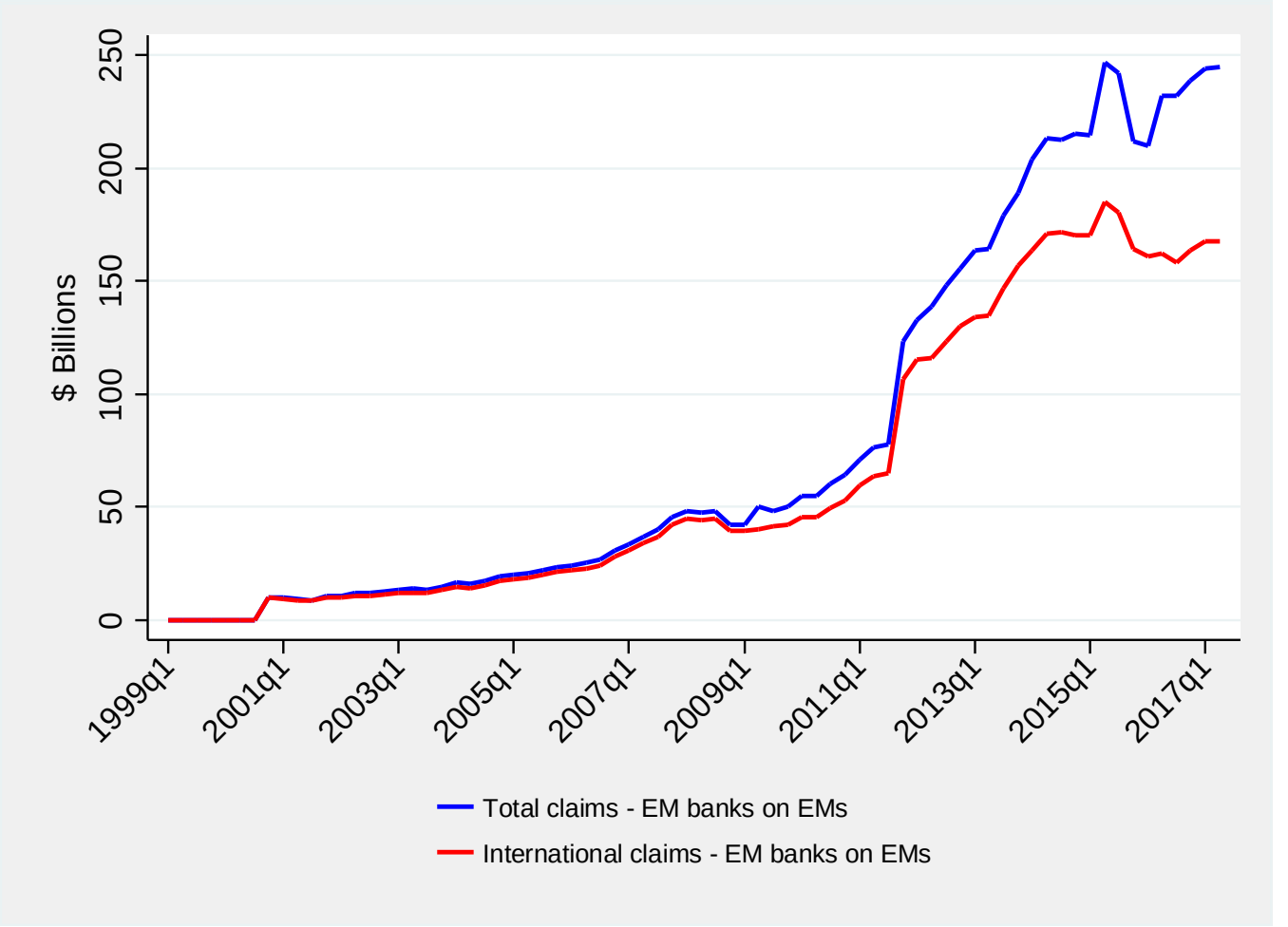
Global banking increased rapidly prior to the Global Financial Crisis, but has leveled off…



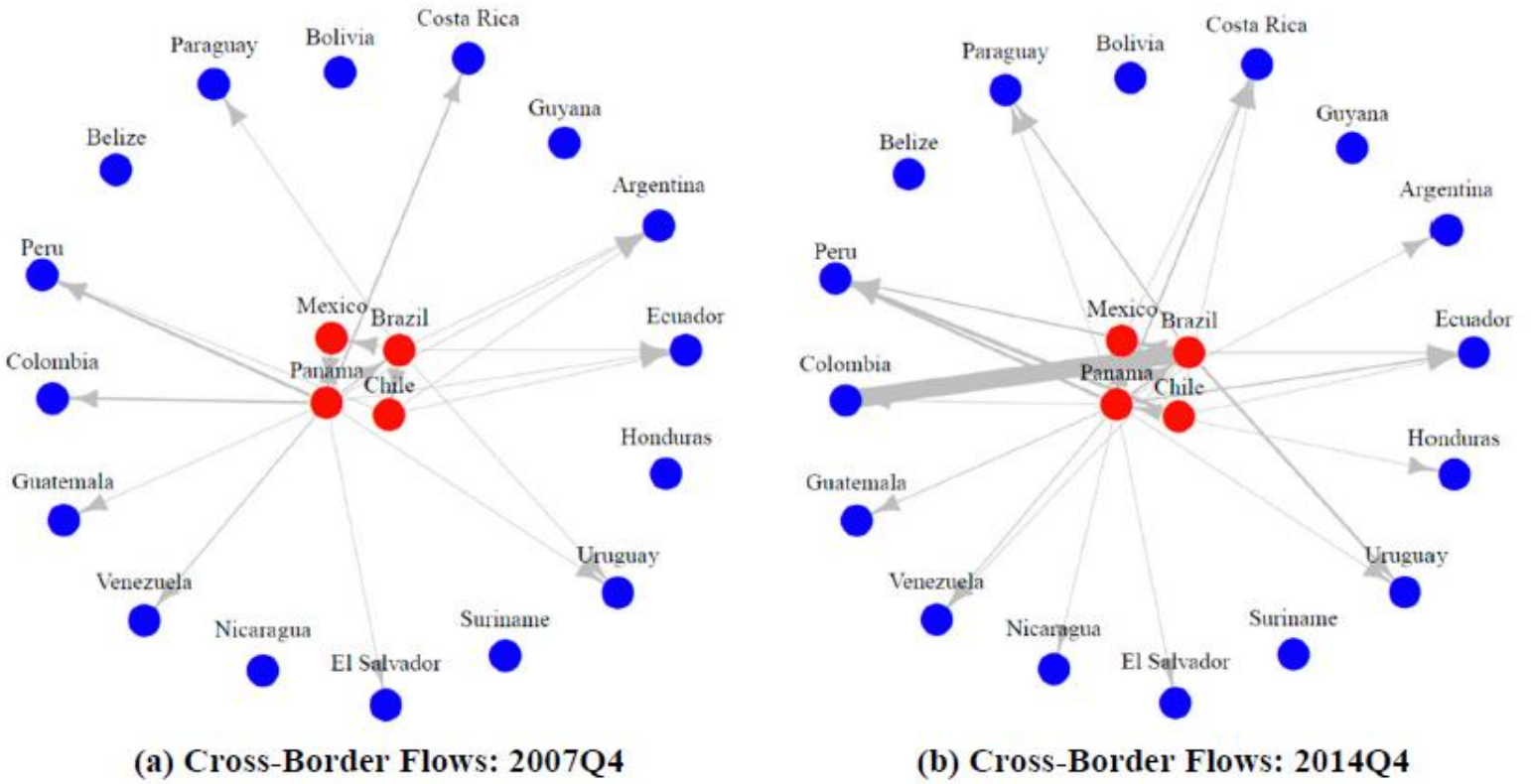
Including the claims on emerging market residents



EM banks also expanded abroad, increasingly through foreign offices…

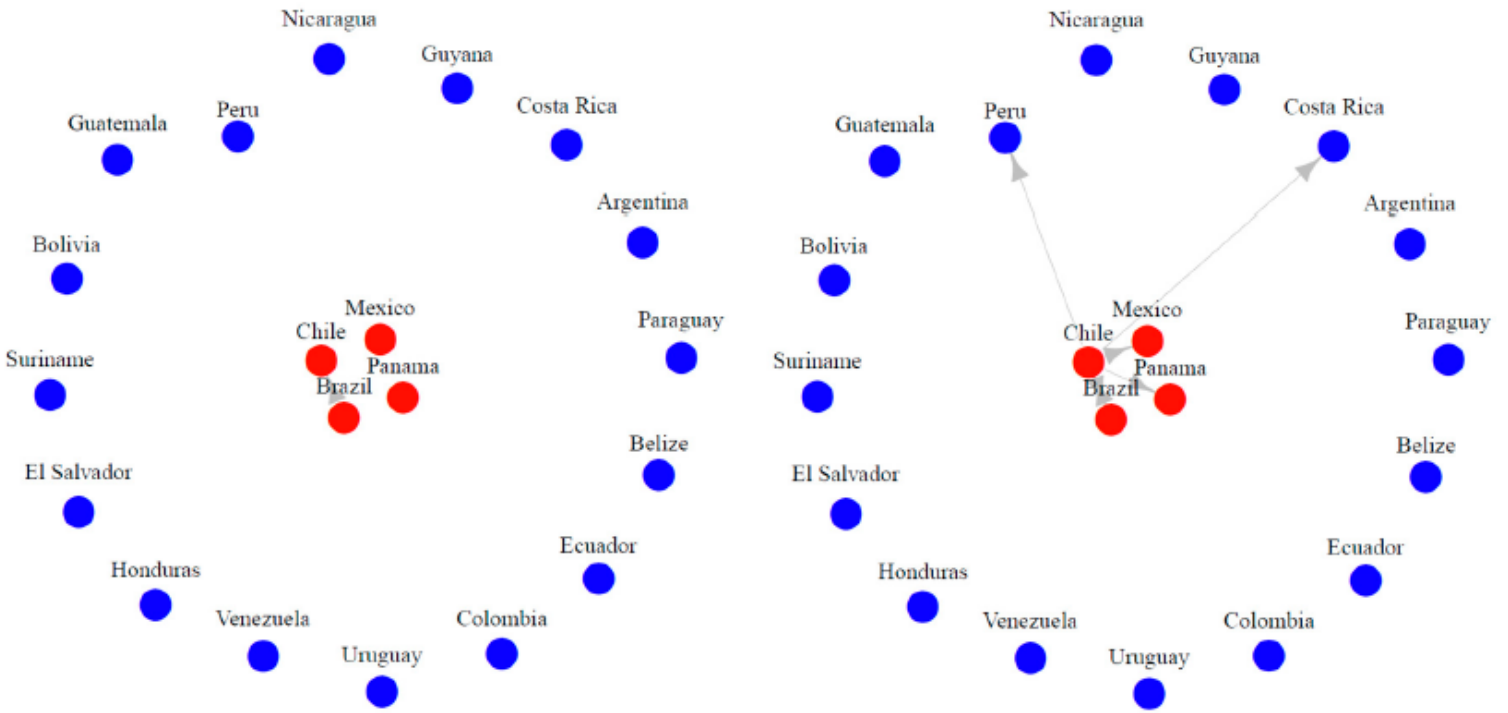


EM banks' expansion abroad has been partly regional (1)



Source: Cerutti and Zhou (2017). "The Global Banking Network in the Aftermath of the Crisis: Is There Evidence of De-globalization."

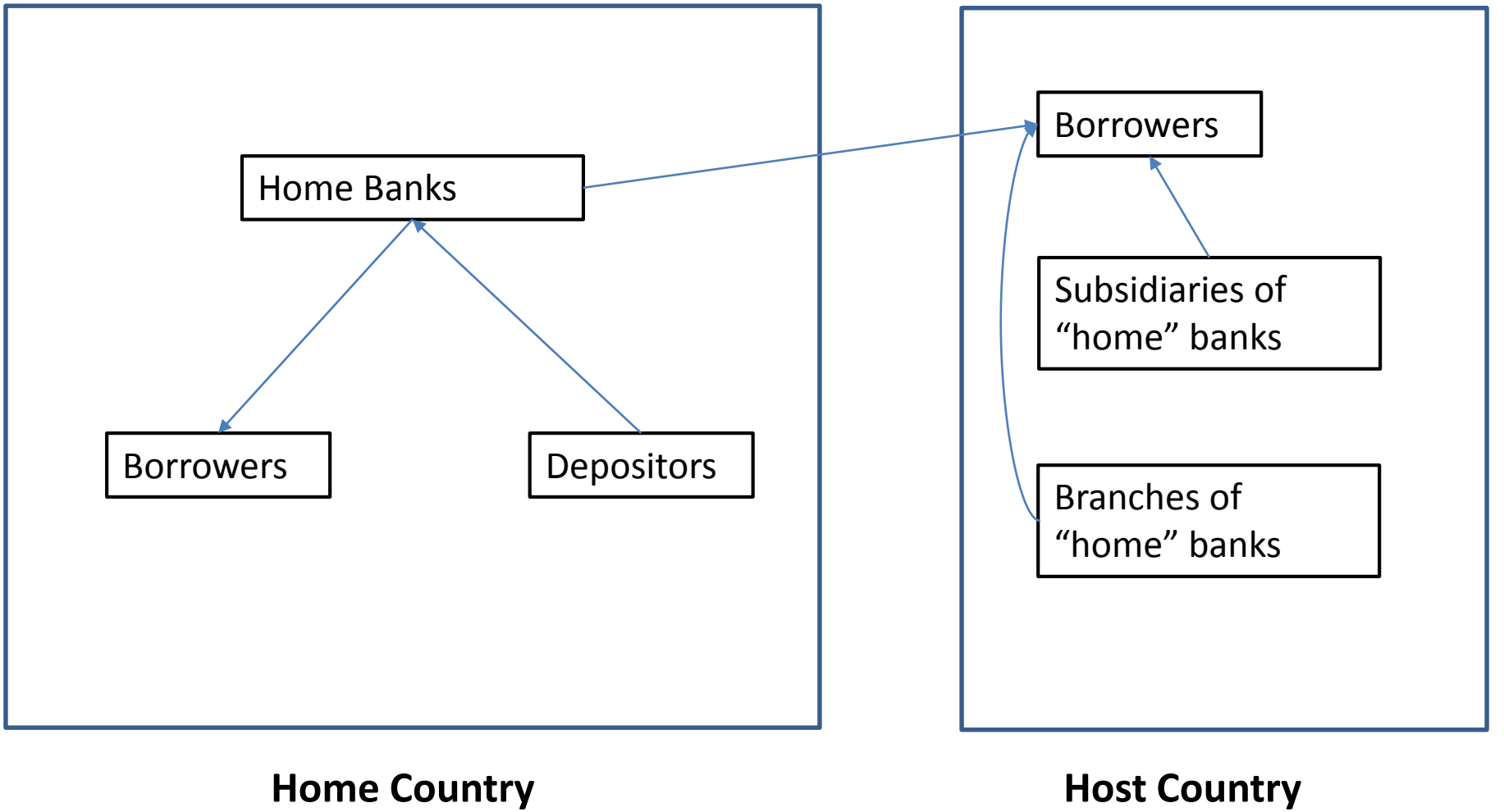
EM banks' expansion abroad has been partly regional (2)



(c) Local Flows: 2007Q4 (d) Local Flows: 2014Q4

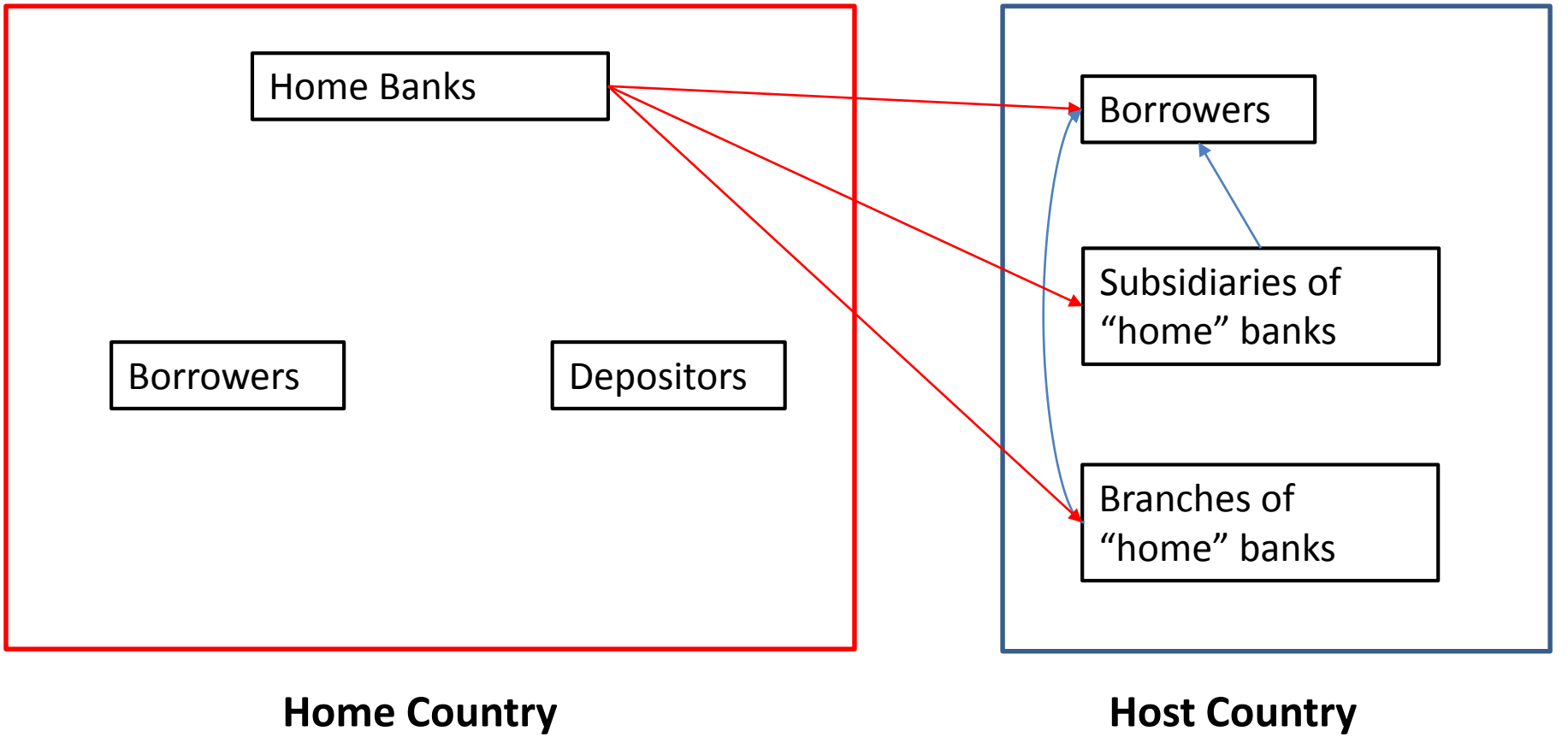
Source: Cerutti and Zhou (2017). "The Global Banking Network in the Aftermath of the Crisis: Is There Evidence of De-globalization."

Framework to analyze international banking (IB)



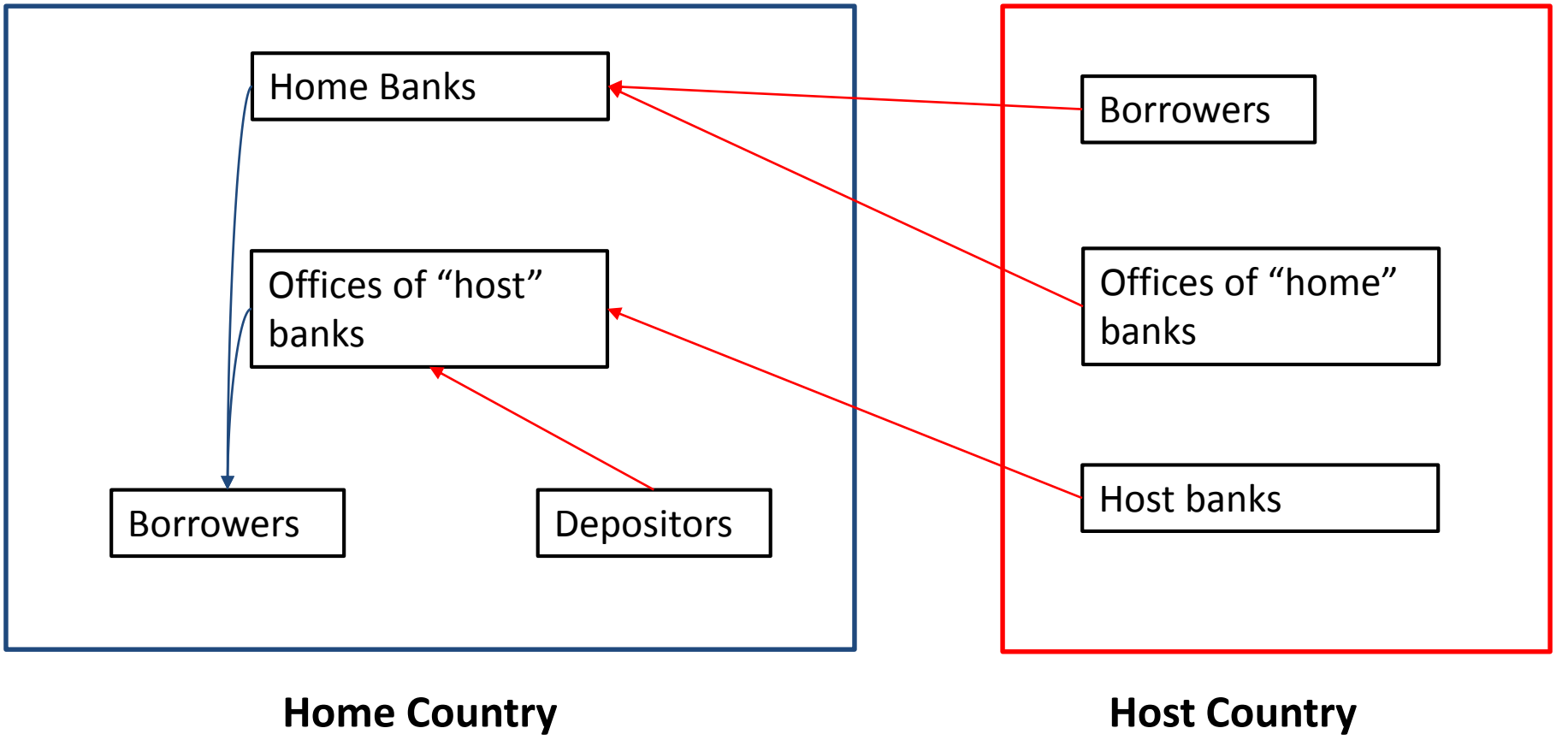
Outward transmission

Event in "home" country that spills over abroad: capital shock, funding shock, monetary policy changes, or regulatory changes.



Inward transmission

Event in “host” country that spills over to the “home” country: capital shock, funding shock, monetary policy changes, or regulatory changes.

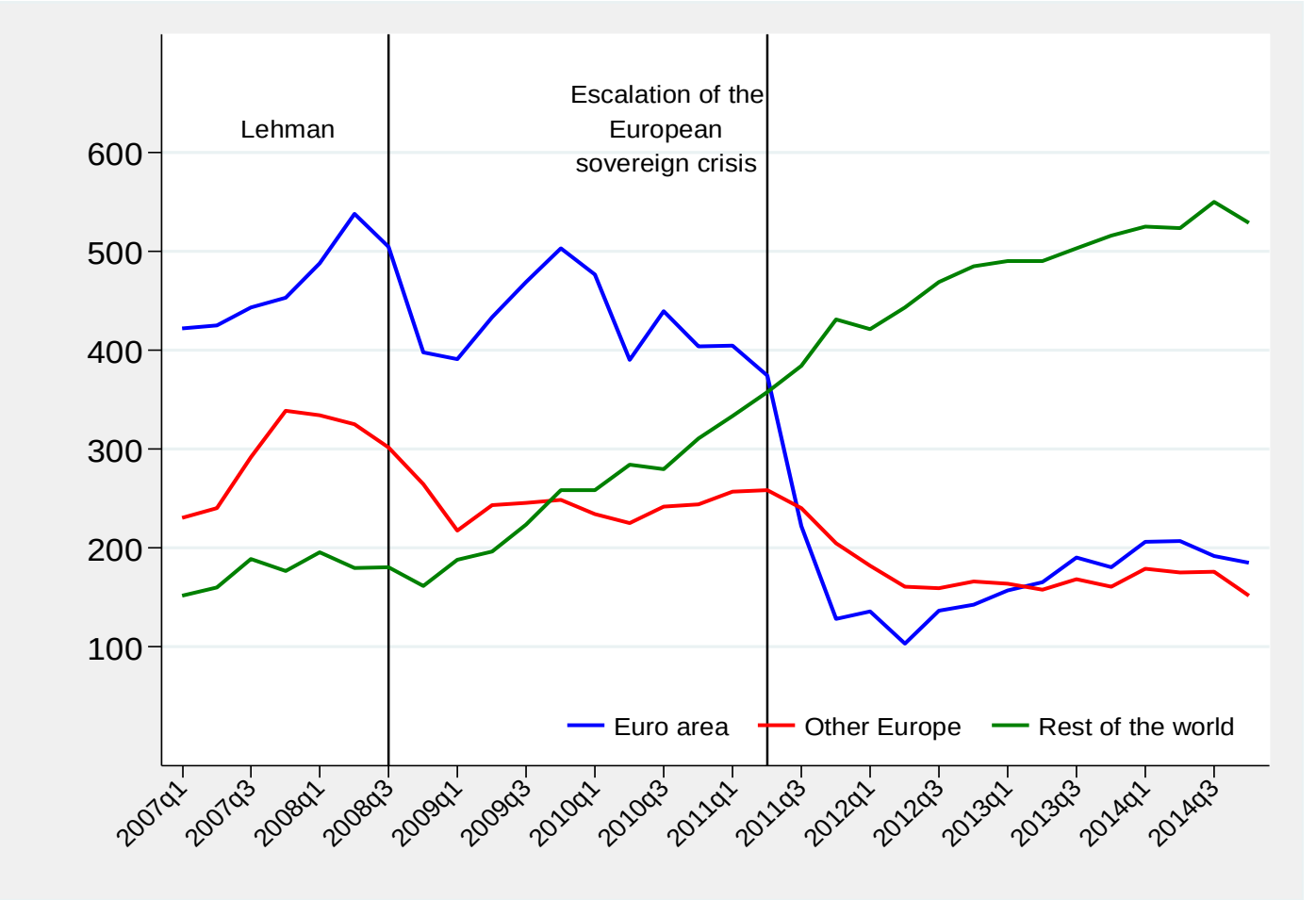


What can we learn from the academic literature? (1)

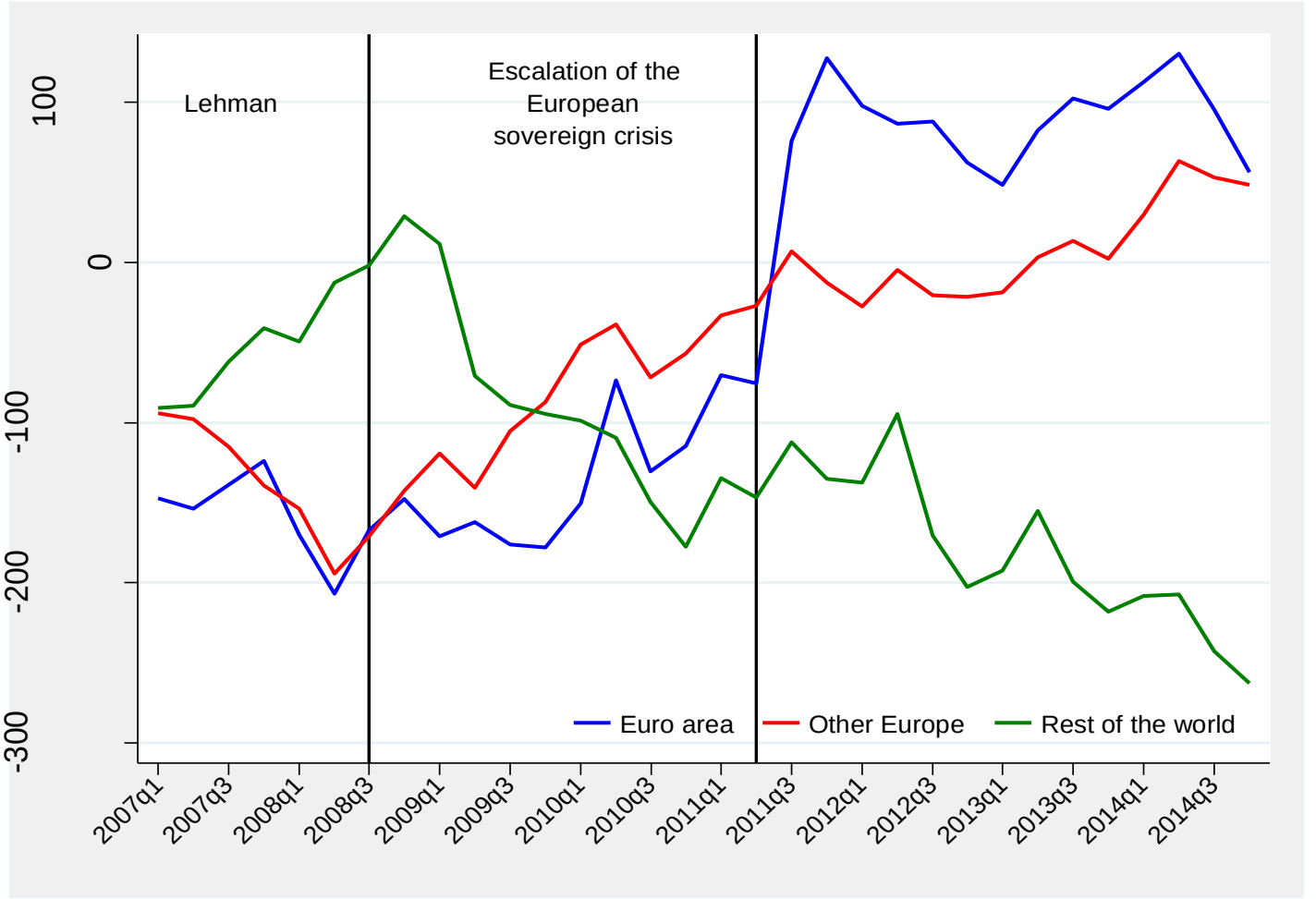
- Shocks can transmit across countries through global or multinational banks:
  - Capital shocks: Peek and Rosengren (1997); De Hass and Van Horen (2013).
  - Liquidity shocks: Schnabl (2012); Giannetti and Laeven (2012).

- These shocks have real effects: Peek and Rosengren (2000); Correa, Sapriza, Zlate (2017).

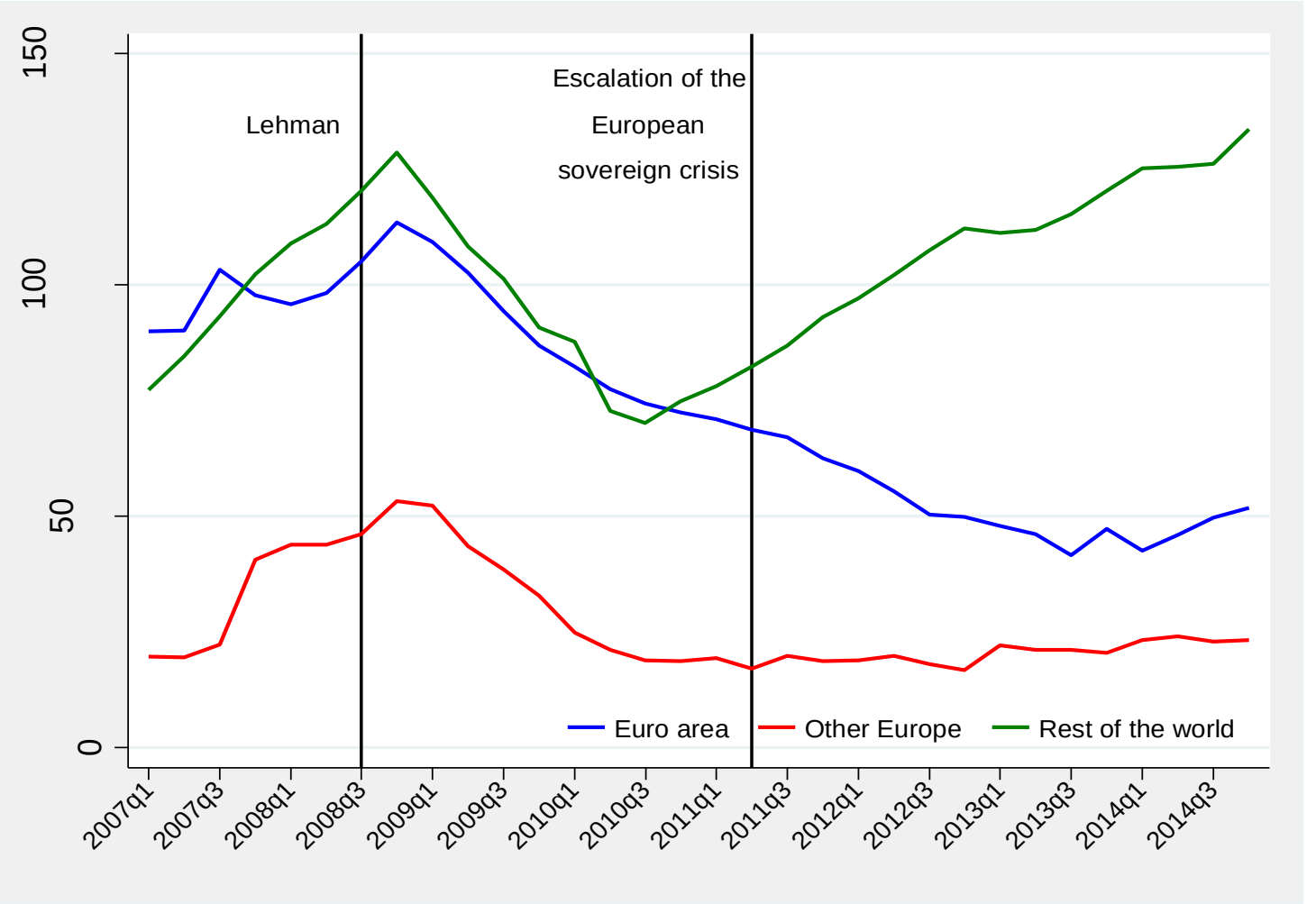
U.S. branches of euro-area banks faced a run on their deposits…



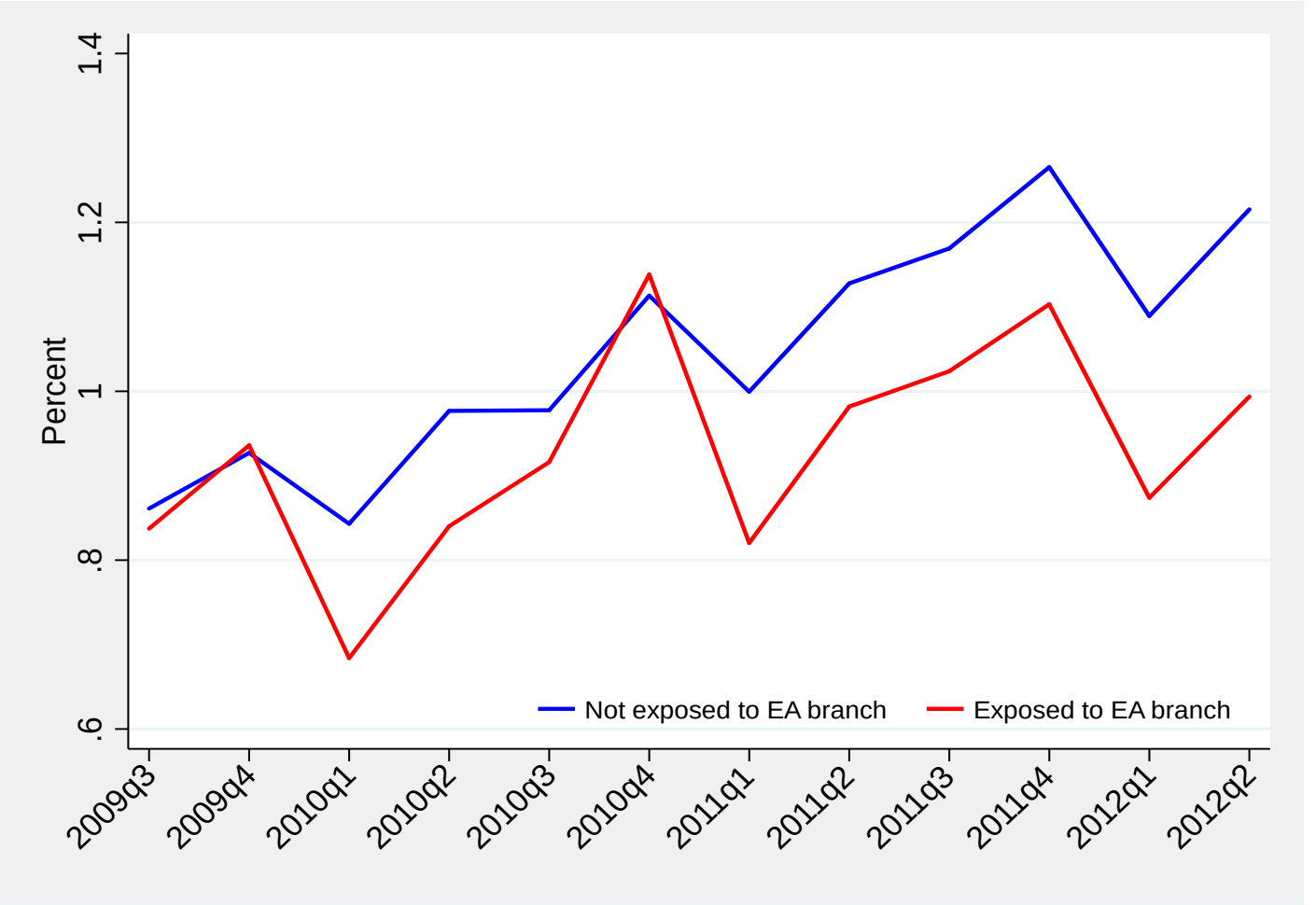
The parents provided funds to the branches…



Not enough to fully contain the impact on lending…



The funding shock affected firms' investment…



What can we learn from the academic literature? (2)

- <u>Policy actions can also spill over across borders:</u>
  - Regulatory actions: Houston, Lin, and Ma (2012); IBRN project.
  - Monetary policy: Bruno and Shin (2015); IBRN project.

The International Banking Research Network (IBRN)

- **Founded in 2012, the International Banking Research Network brings together central bank researchers from 31 institutions to analyze issues pertaining to global banks.**

- **Empirical approach of the network:**
  - Analyze (confidential) bank-level datasets, share results
  - Use **common methodology** and perform meta-analyses

- **Research topics:**
  - Adjustment of banks to liquidity risk (*IMF Economic Review*)
  - Cross-border effects of macroprudential tools (*International Journal of Central Banking*)
  - Cross-border effects of (unconventional) monetary policy (submitted to: *Journal of International Money and Finance*)

IBRN participants

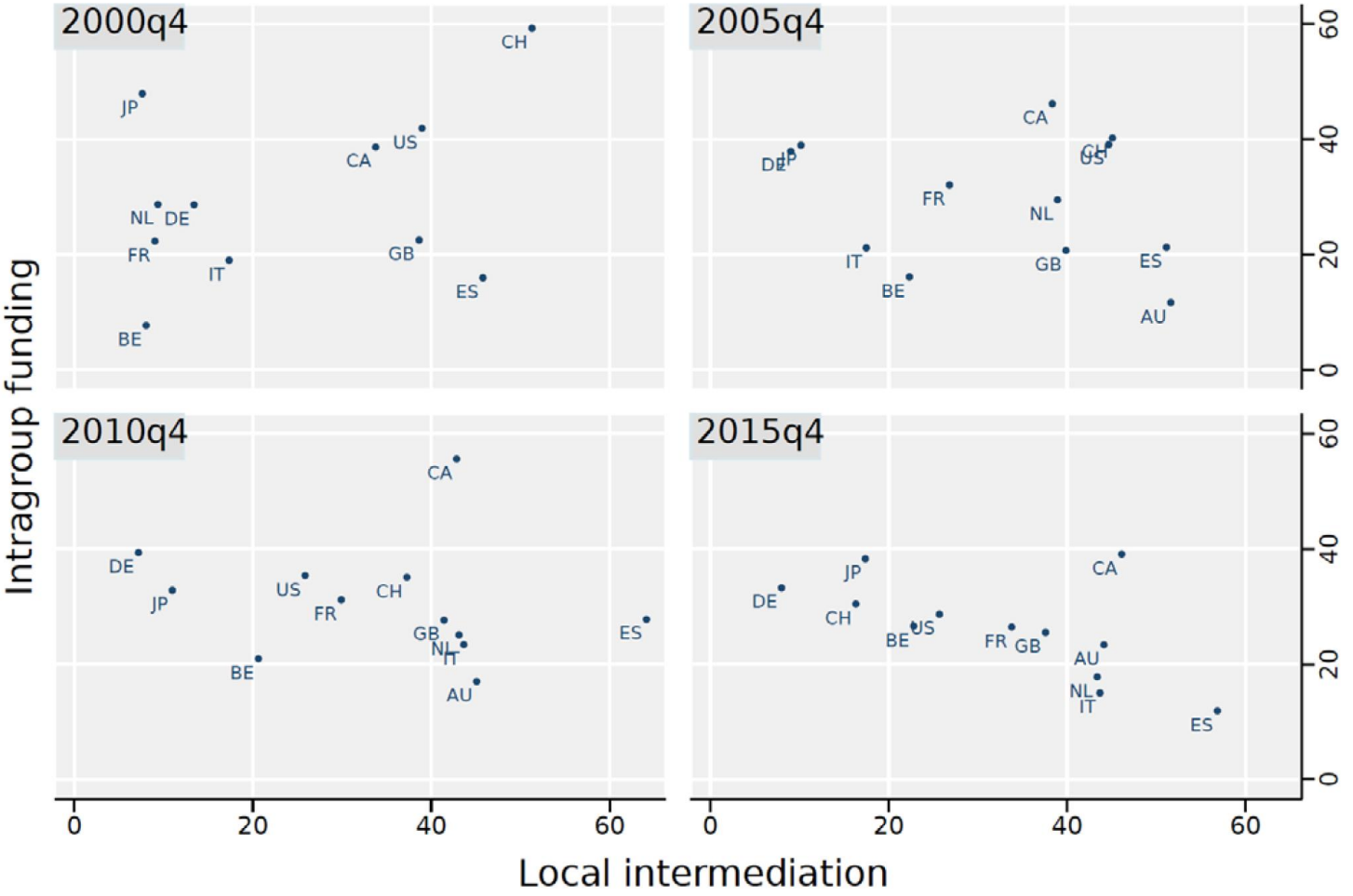
Reserve Bank of Australia	Bank for International Settlements	Oesterreichische Nationalbank
Deutsche Bundesbank	Hong Kong Monetary Authority	Central Bank of Chile
Banque de France	Central Bank of the Republic of Turkey	Bank of Korea
De Nederlandsche Bank	National Bank of Poland	Banco de Portugal
European Central Bank	Banca D'Italia	Bank of England
Bank of Canada	US Federal Reserve Board	Swiss National Bank
European Systemic Risk Board	Central Bank of Ireland	Bank of Japan
Banka of Slovenije	Bank of México	Banco de España
Sveriges Riksbank	Banco Central do Brasil	Reserve Bank of India
Central Bank of Russia	International Monetary Fund	Financial Stability Board
Banco de la República		

What can we learn from the academic literature? (3)

- Impact of shock is larger if emanating from a large AE or multiple emerging market economies.

- Transmission will depend on the business model of banks: "the degree of centralization of liquidity management and foreign operations."

Banks' business models



Source: Argimon, et al (2017). "Financial institutions' business models and the global transmission of monetary policy."

Monitoring banks from a financial stability perspective (1)

- Use granular bank (or loan)-level data on U.S. banks foreign exposures.

- Use detailed information on the activities of foreign banks in the host country: lending, liquidity position, intragroup funding, “fire sale” risks.

Monitoring banks from a financial stability perspective (2)

- To analyze risks emanating from abroad, we benchmark our analysis to the Latin American debt crisis in the 1980s, and monitor exposures relative to banks' capital levels.
  - Aggregate claims on Latin America peaked at 100 percent of U.S. banks' equity.
  - Banks were highly exposed to Argentina, Brazil, and Mexico.
  - Aggregate exposures to each of these countries ranged between 10 and 30 percent of reporting banks' equity, with individual banks holding claims representing 60 to 70 percent of equity.

Supervisory tools (1)

U.S. banks exposures abroad

- Stress testing: Dodd-Frank Act stress tests (DFAST) and CCAR incorporate an international component in the supervisory scenarios.
- Interagency Country Exposure Review Committee (ICERC): Regulations require banks to maintain reserves for assets with impaired values due to transfer risk (i.e., asset cannot be serviced in the currency of payment).

Supervisory tools (2)

Foreign banks with affiliates in the United States

- Stress testing: Significant subsidiaries are subject to DFAST stress tests. Branches may have to comply with liquidity stress testing.
- Supervision: Large foreign banks ($50 billion or more in assets) operate under an intermediate holding company and are subject to enhanced prudential standards.

Conclusion

- IB allows capital to potentially flow to those regions and countries with the greatest need.
- Distortions and externalities may generate financial stability risks.
- Regulations to enhance bank resilience and supervisory tools could be used to mitigate those risks.