



BANK FOR INTERNATIONAL SETTLEMENTS

Assessing financial vulnerabilities: what is the right lens?

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*The views expressed here are those of the presenter and do not necessarily reflect those of the BIS.



Dick Berner's paper highlights main challenges

- Statistical challenges
 - Usability: data standards and sharing
 - Costs
- Analytical challenges
 - Identifying critical needs
 - Financial stability risk as moving target

Issue: what constitutes a core set of financial stability statistics?

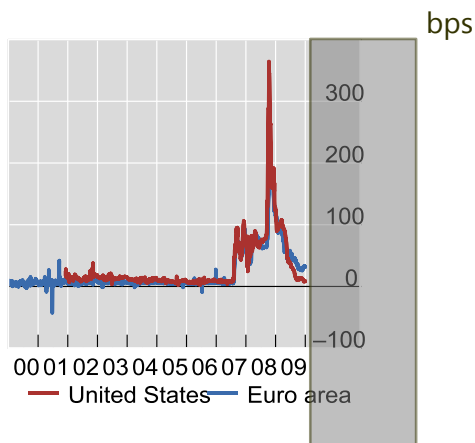
- How to capture key risks?
- How to design a system that is robust to change?



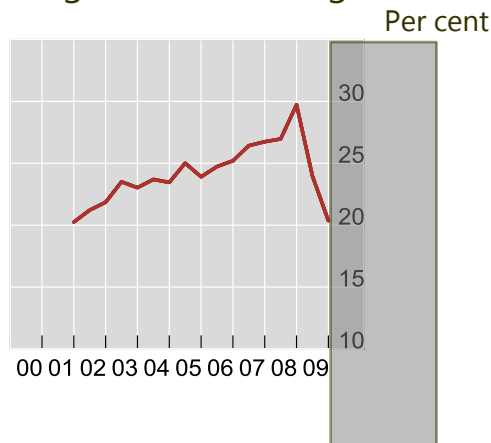
What did we miss before the crisis?

Price and quantity indicators of bank risk

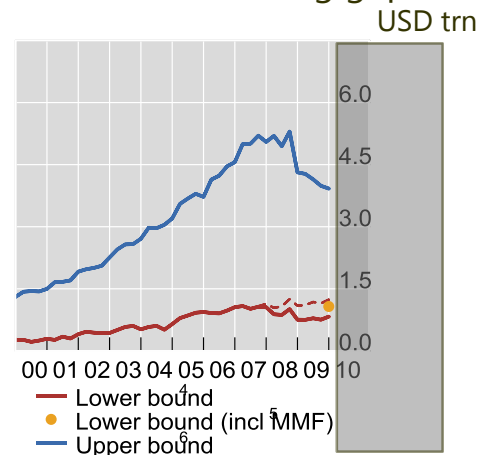
3-month Libor – OIS¹



Large banks' leverage ratio^{2,3}



US dollar funding gap



¹ For United States Libor, for the euro area Euribor. ² 20+ major banks in the advanced economies. ³ Total assets/total equity, weighted by asset size. ⁴ The dashed red line is the estimate after adding back in writedowns of assets (based on Bloomberg data). ⁵ Lower bound estimate plus estimated US dollar liabilities to money market funds (based on JPMorgan data). ⁶ Same as the lower bound estimate, but all liabilities to non-banks are assumed to be short-term.

Sources: JPMorgan; Bloomberg; Datastream; BIS calculations



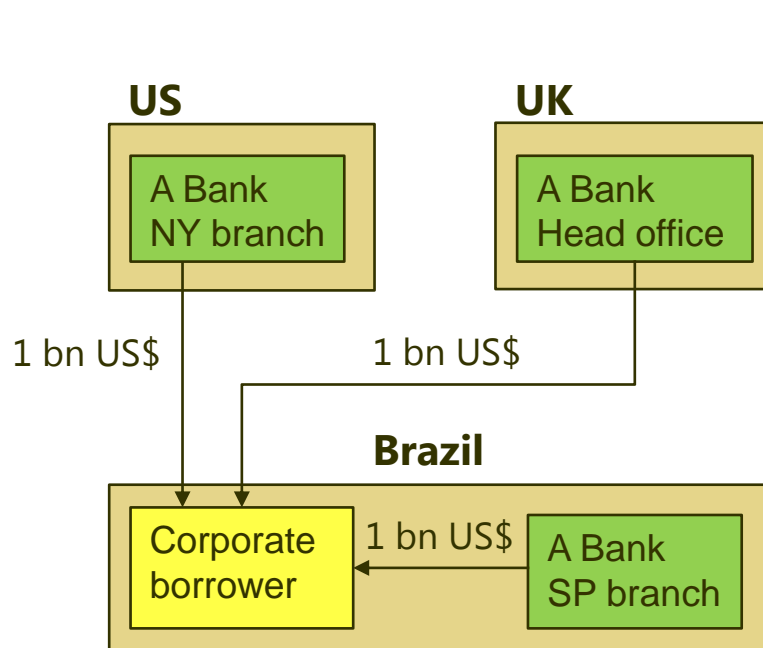
Focusing on key determinants of systemic risk

Determinants of risk	Concepts	Data needs
Leverage	Balance sheet leverage	Liabilities
	Embedded leverage	Stressed exposures, VaR
	Leverage-like behaviour	Market intelligence
Mismatches	Currency gaps	Currency breakdown
	Duration gaps	Maturity breakdown
Location	Counterparty exposure	Counterparty breakdown
	Country exposure	Country breakdown



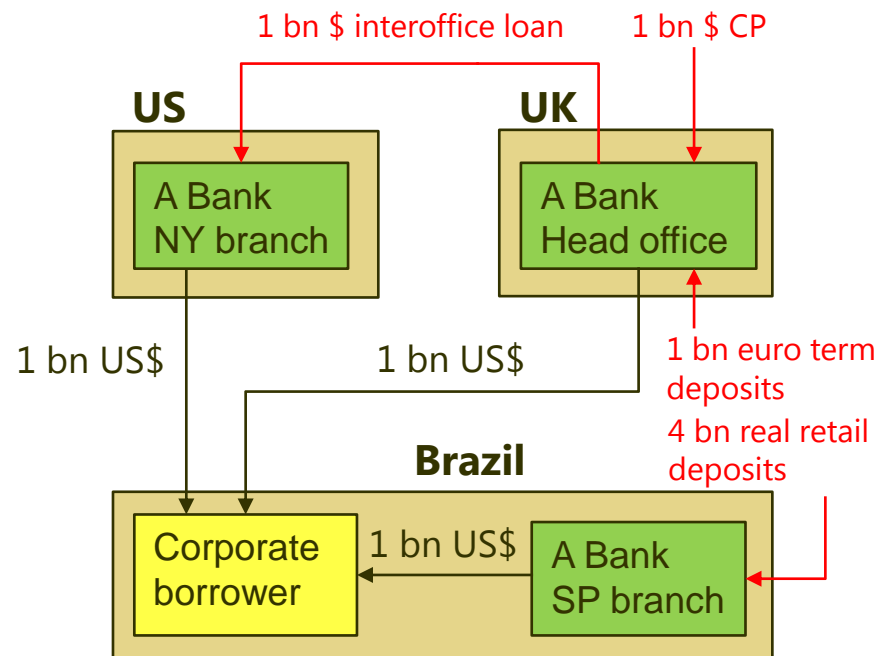
Intermediation structures matter

BIS international banking statistics as example



Residence-based data allows tracking foreign flow of credit to C

Consolidated data allows assessing Bank A's exposure to C



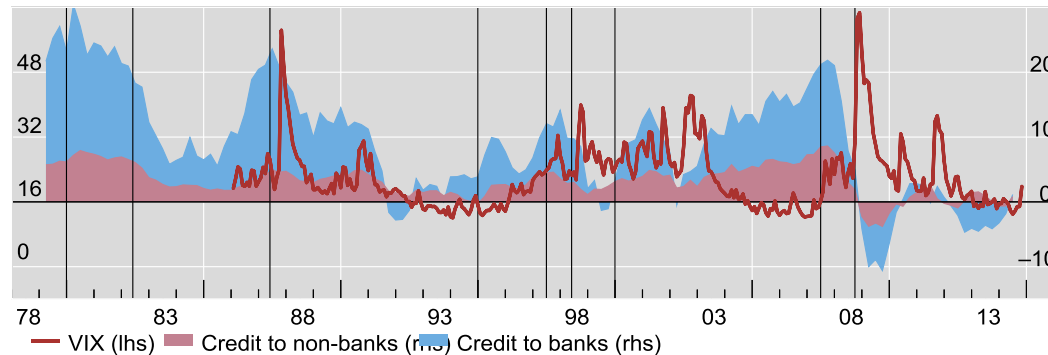
Liabilities data sheds light on Bank A's funding structures

→ **Combining data shows possible sources and transmission of balance sheet stress**



The financial system keeps evolving....

Year-on-year rate of growth in international bank claims¹



The vertical lines indicate: 1979 second oil shock; 1982 Mexican default; 1987 stock market correction; 1994 Mexican peso devaluation; 1997 Asian financial crisis; 1998 Russian default and LTCM; 2000 Nasdaq peak; 2007 beginning of global financial crisis; 2008 collapse of Lehman Brothers.

¹ Includes all BIS reporting banks' cross-border credit and local credit in foreign currency.

Sources: Bloomberg; BIS locational banking statistics by residence.



...with lending shifting from banks to markets

Emerging market economies gross corporate bond issuance¹ (weighted average)



¹ Bulgaria, Brazil, Chile, China, Colombia, Czech Republic, Estonia, Hong Kong SAR, Hungary, Indonesia, India, Iceland, Korea, Lithuania, Latvia, Mexico, Malaysia, Peru, Philippines, Poland, Romania, Russia, Singapore, Slovenia, Thailand, Turkey, Venezuela and South Africa.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter; BIS.



Elements of a way forward

- Top-down: augment flow of funds/BoP
 - Consolidated view and funding patterns
 - Priority: non-bank intermediation
 - Important: global perspective
- Bottom-up: learn to handle huge amounts of micro data
 - Quite some way to go
 - Use data for specific analytical questions
- And: make the best use of existing data!

