



BANK FOR INTERNATIONAL SETTLEMENTS

# “Global liquidity and drivers of cross-border bank flows” by Cerutti, Claessens & Ratnovski

Comments by

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\* Views expressed are those of the author and not necessarily the views of the BIS

## What this paper does

- Analyses 77 countries over the period 1990-2014 (or is it 2012)?.
- LHS: BIS locational banking statistics (Table 6):
  - => long time series & adjustment for FX valuation effects.
  - Including bank security holdings.
  - Suggestions:
    - Allow a Q4 seasonal for interbank flows.
    - Discuss different behaviour of interbank and nonbank.
    - Re-run benchmark regression w/o financial centres.
- RHS: Global liquidity drivers: VIX, TED spread, "dealer bank" (?) leverage, yield curve slope (? see below), real policy rate, \$ REER, M2/credit growth.
- A particular contribution: non-US drivers for global liquidity.

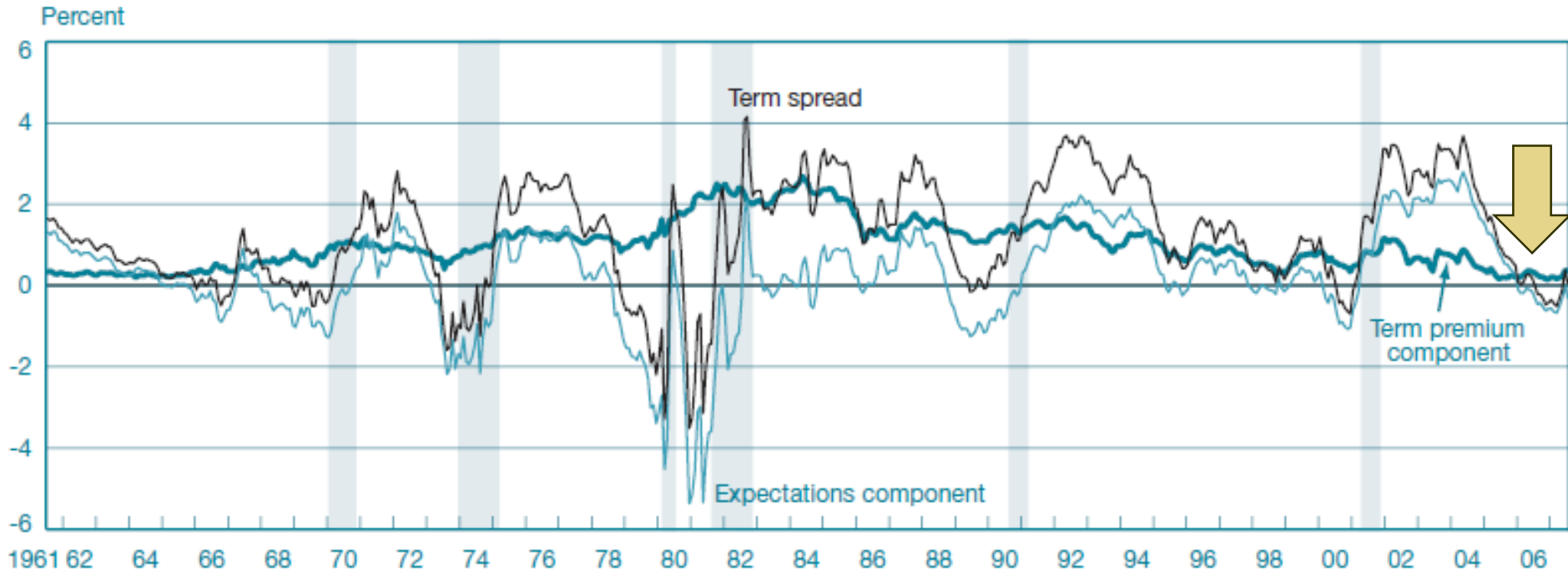
## What this paper finds: familiar results

- VIX, US broker-dealer leverage and term spread matter.
- Results for full sample driven by latter subsample, 2001-2012.
  - 2001-06 similar to 2001-2012.
- Big effects:
  - VIX 25<sup>th</sup> => 75<sup>th</sup> percentile => 5+%, 3+% for bank, nonbank
  - Leverage 25<sup>th</sup> => 75<sup>th</sup> => 5+%, 4+%

## What...finds: familiar results (con'd): term spread?

- Authors say: “term spreads...consistent with a theoretical channel where banks borrow short-term and lend long-term, making their domestic investment opportunities less profitable when the yield curve is flatter. This in turn may trigger banks’ search for yield, including in the form of cross-border lending”.
- But securities included in dependent variable, so not clear why cross-border credit is not also less profitable when yield curve is flatter.
- Versus work by Estrella (with Hardouvelis (1991) and Mishkin (1998)) that uses flat or inverted yield curve to predict recession (ie as indicator of tight money)?
- Mid-2000s: unusual case of tightening so “measured” in pace that term spread low, VIX low down, carry trades enabled?
  - Distinguish term premium (FRBNY, BIS, Board) from term spread?

# Term spread and its components



Source: Rosenberg and Maurer, "Signal or noise: implications of the term premium for recession Forecasting", FRBNY *Economic Policy Review*, July 2008, p 5.

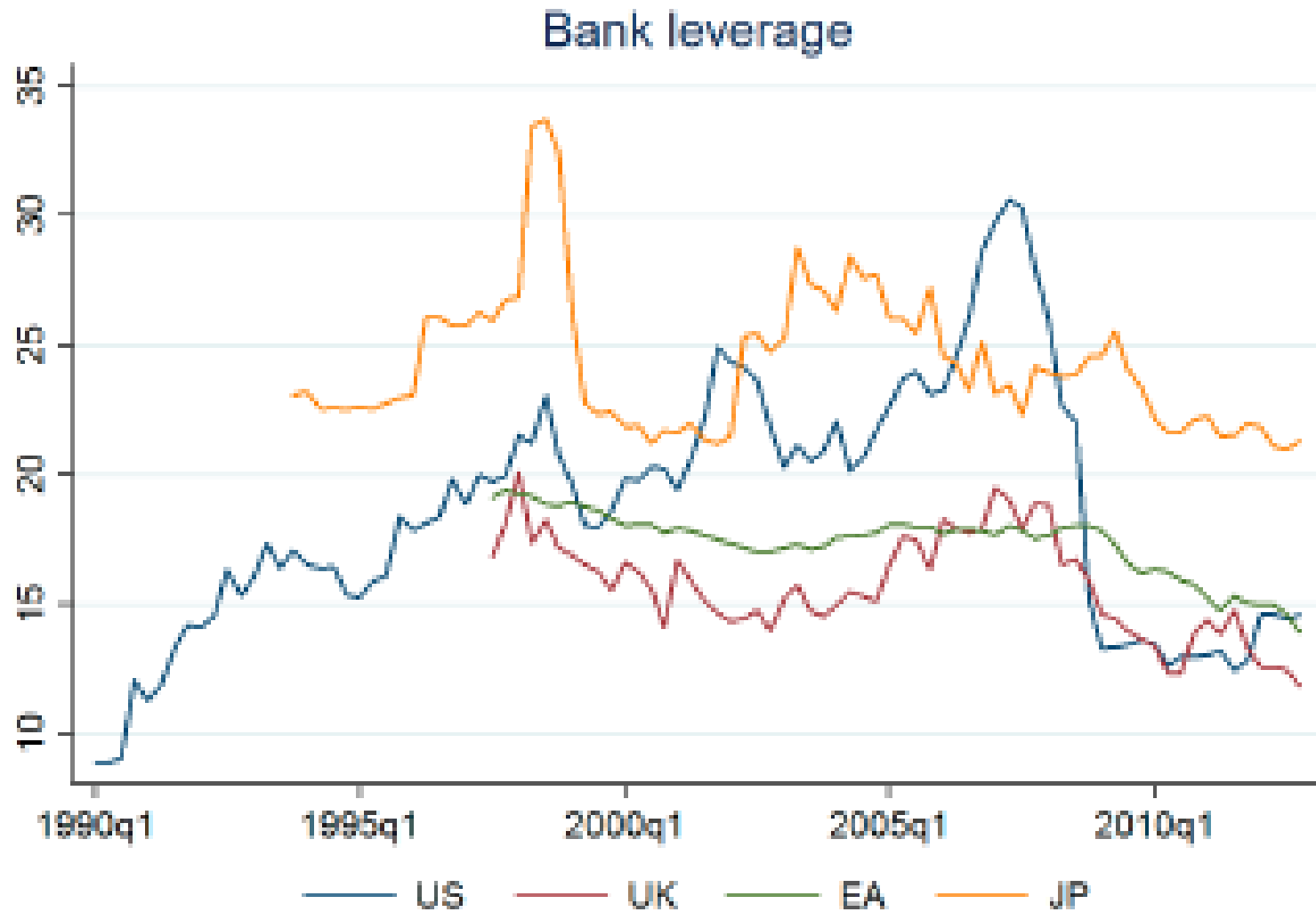
## What...finds: familiar results (con'd): interest rate gap?

- Authors find no effect of yield gap (or even negative for reduced advanced and large emerging market sample) vs Bruno & Shin in *REStud* and McCauley et al (2015).
- Could point to a problem with proxies for local credit demand, namely GDP growth and inflation.
  - Re-run yield gap without local inflation?
  - Use local credit growth instead of proxies?

## What this paper finds: European bank leverage matters

- Leverage of broad banking sector for UK and euro area from flow of funds entered separately from leverage of US broker-dealers.
- While multicollinearity prevents a head-to-head comparison, bank leverage in UK and euro area works as well as US “dealer banks” leverage for non-G4 sample.
  - Authors go too far: “UK bank leverage has a higher explanatory power than US bank leverage”:
    - US: coefficient of .364, R2 of 0.035
    - UK: coefficient of .930, R2 of 0.031, but lower variance!
- And UK bank leverage works as well for Asia and Western Hemisphere as US “dealer bank” leverage.
- Interesting result if US “dealer bank” leverage = US broker-dealer leverage, since latter based on repos, whereas UK and euro area bank leverage measure whole banking system.

# Bank leverage measures for G4

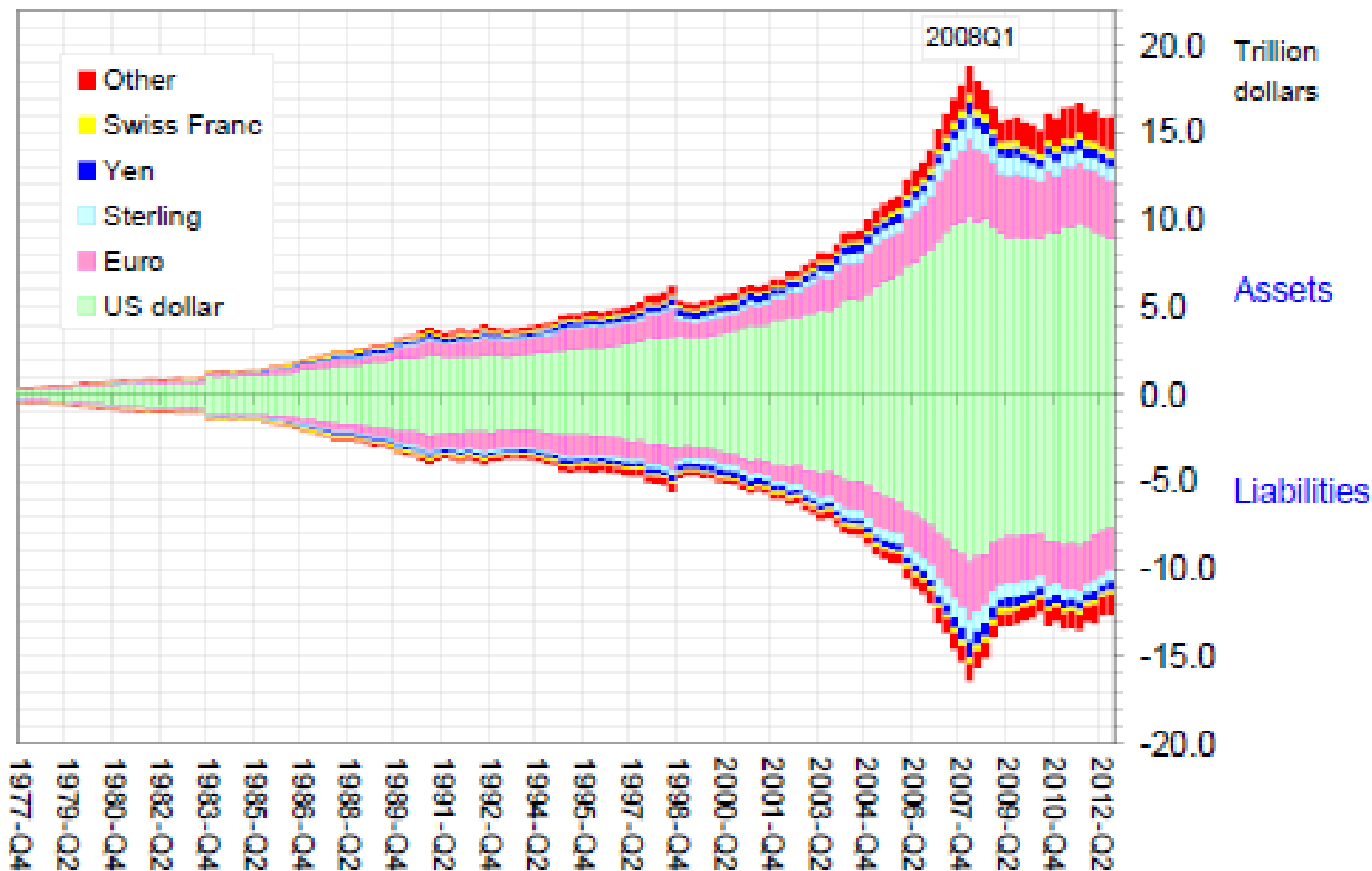




## What this paper finds: sterling drivers for global liquidity?

- Cerutti et al suggest that sterling variables drive growth of cross-border bank claims: Not just UK bank leverage but
  - £ TED
  - £ real policy rate
  - £ credit/M2 growth
  - £ REER
- And £ TED affects cross-border bank lending to Asia and Western Hemisphere.
- Problem: there is very little sterling cross-border claims.
- Broader conceptual problem: international finance assuming triple coincidence

# Foreign currency assets and liabilities of BIS reporting banks



Bruno and Shin, Cross-border banking and global liquidity, BIS Working Paper no 458, August 2014, forthcoming *Review of Economic Studies*, citing Table 5A.

## Need to free ourselves of triple coincidence?

- Tend to assume that the triple coincidence:
  - National borders—hence use crossborder stocks.
  - Economic units—UK banks respond to domestic variables.
  - Currency—so sterling yields relevant for UK banks.
- “for the UK and Euro Area, where an increase in bank deposits (part of M2) translates into larger bank balance sheets and more cross-border lending”.
- But, but, but

## Triple coincidence

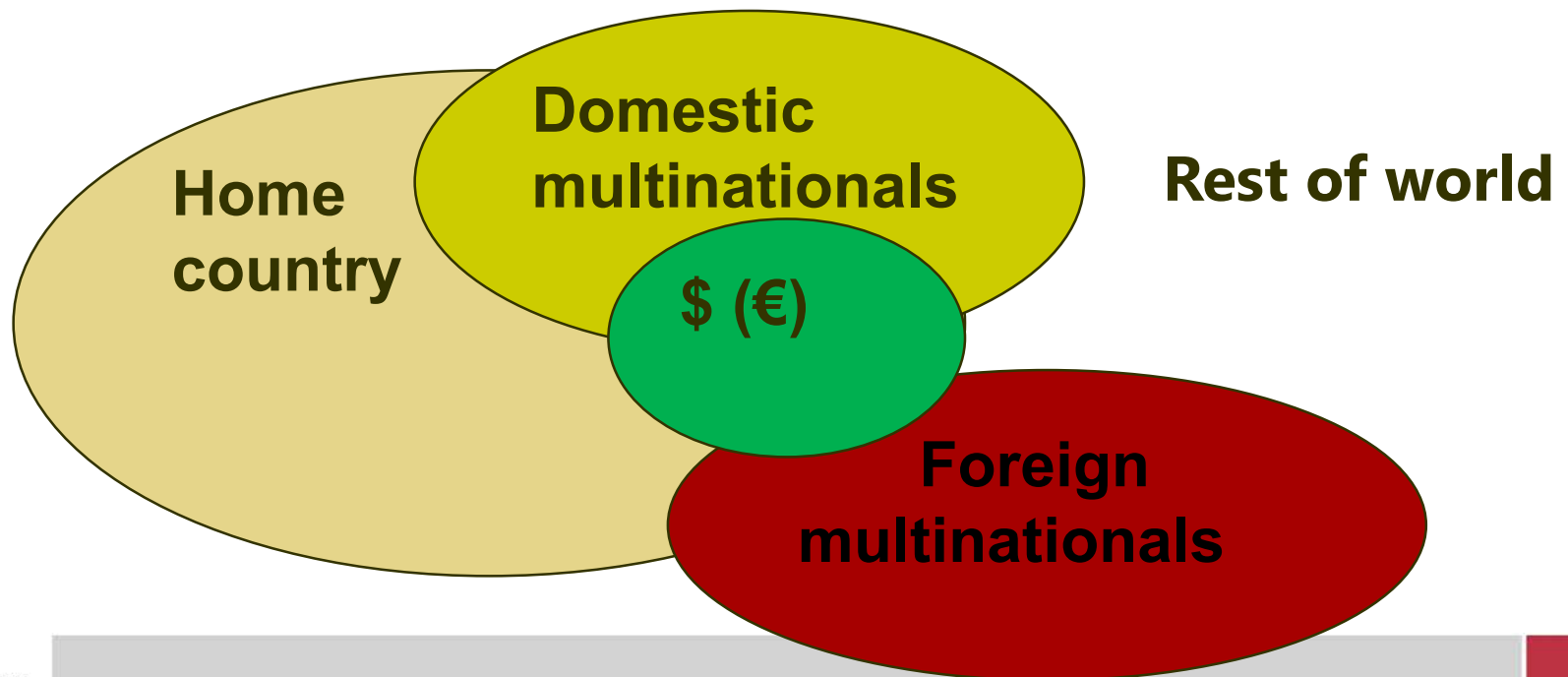
- All firms are domestic,
- All domestic assets and liabilities are denominated in domestic currency,
- Country coincides with spending units and with currency.
- Global liquidity flows out of source country to ROW through cross-border credit.

**Home country**  
**Domestic firms**  
**Domestic currency**

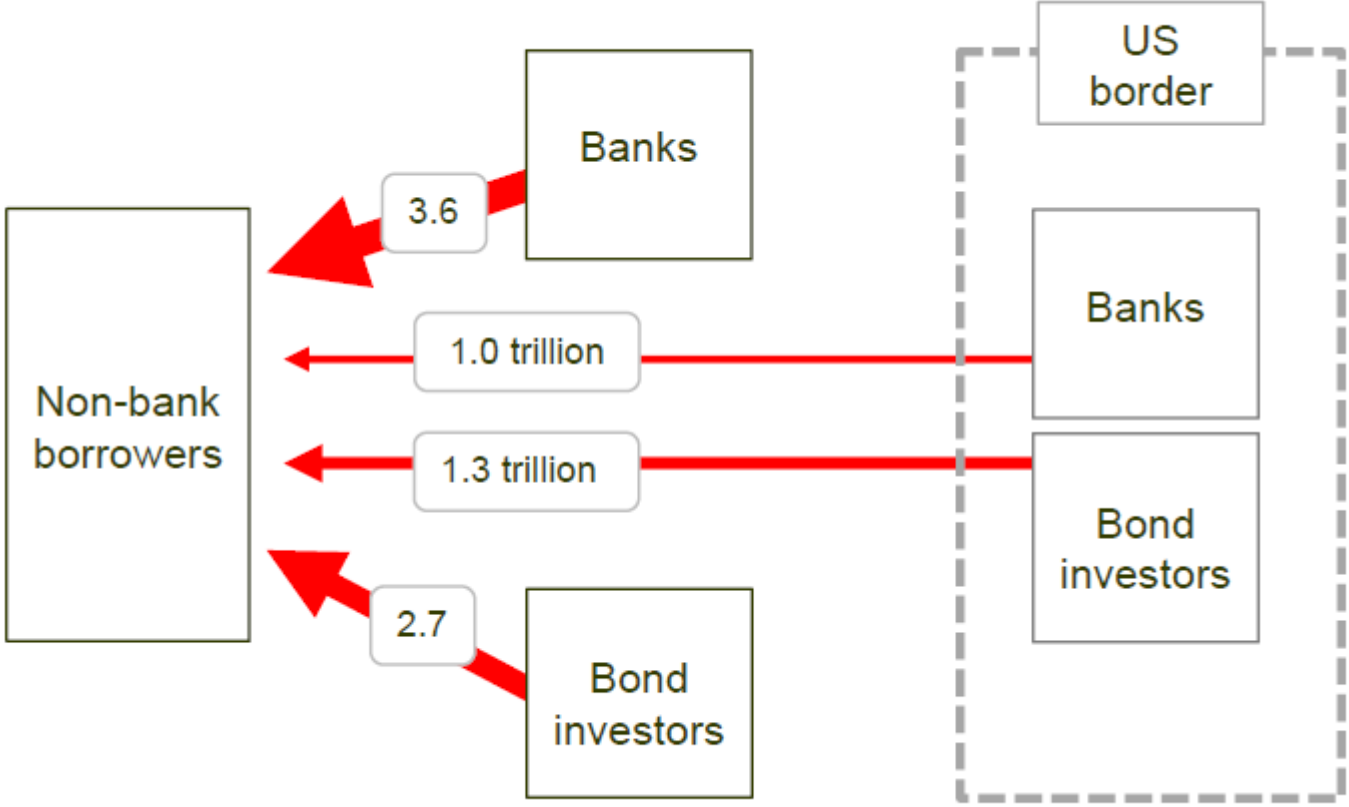
**Rest of world**  
**Foreign firms**  
**Foreign currencies**

## But, but, but

- Some domestic firms are multinationals.
- Some foreign multinationals present domestically.
- Part of the domestic banking system dollarised (or euroised)
- UK and European banks borrow and lend in dollars outside of their home countries.



# Dollar credit to borrowers outside the US, end-2013



Source: McCauley, McGuire and Sushko (2015).

## What this paper does not do

- Analyse second phase of global liquidity.
- At the margin, dollar bonds issued by nonbanks outside the United States have gained on bank loans.
- Growth of these bonds outstanding responds to term premium, which in turn is focus of unconventional monetary policy (ie large-scale bond buying) of Federal Reserve.

## Conclusions

- Paper contributes to studies of cross-border banking and global liquidity by suggesting the importance of European bank leverage.
- Given the tests reported, skeptics could take the view that US “dealer bank” leverage is sufficient, but it is nevertheless remarkable that general European bank leverage does so well.
- More thought could be given to interpretation of term spread, possibly using distinction between expectational component and term premium.
- Findings regarding role of sterling variables problematic, suggest need to free analysis from assumption of triple coincidence.
- Beyond paper lies question of effects on flow of global liquidity through bond markets and of divergent central bank unconventional policies and.