Discussion of The dollar exchange rate as a global risk factor: evidence from investment by Avdjiev et al. (2017)

Signe Krogstrup[1]

[1]Research Department, International Monetary Fund

Annual Research Conference of the International Monetary Fund
Washington DC, Nov 2-3, 2017

The views expressed in this presentation are those of the authors and do not necessarily reflect the position of IMF, its Management or its Board.

Outline

Background: The Global Financial Cycle Debate

- A common factor drives global capital flows and asset prices:
  - Calvo Leiderman Reinhart 1993, Forbes Warnock 2012, Rey 2015.
- How important?
  - Forbes Warnock 2012, Rey 2015, GFSR 2017: Important.
  - Cerutti et al 2017 - not so much.
  - Krogstrup and Goldberg, work in process: depends.
- Policy implications:
  - Role of exchange rate regime (Rey 2015, Giorgiadis and Mehl 2016, many others).
- Open questions:
  - Many!
  - What drives the global factor? Conceptual vs empirical question.
  - What impact does it have on real economic activity?

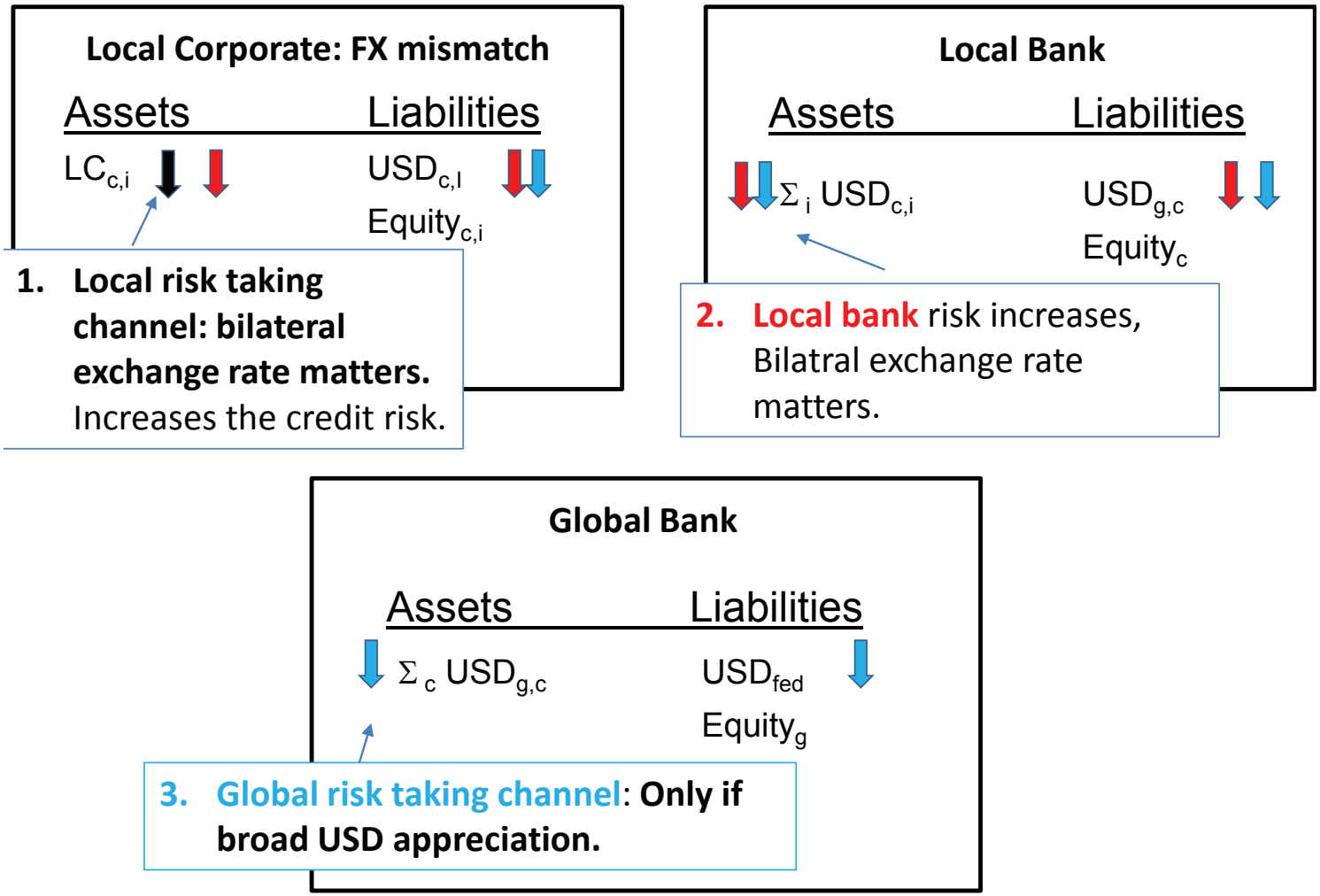
The contribution of this and earlier papers

- Focus on the USD as a global risk factor. Present empirical evidence for effect on investment globally:
  - Macro, VAR: i^*, gross USD bank inflows, I, the USD and the VIX.
  - Micro, panel regression of firm level investment on the USD interacted with sectoral external financing need.

- The USD global risk factor is presented in earlier work (Bruno Shin 2015 and related papers).

- Three main ingredients for the global risk taking channel of the USD:
  1. EM corporates are short in USD.
  2. Globally integrated banking sector intermediates USD funds.
  3. Bank balance sheets are not FX mismatched but driven by leverage constraints that respond to risk (VaR or regulatory).

The global risk taking channel of the USD



Identification of local vs. global: bilateral vs. broad USD.

Outline

Overall Comments

- Important contribution to the literature:
  - Empirically establishes link between broad USD and local investment.
  - USD can drive real variables in a globally synchronized fashion.
- Important potential implications for trilemma debate: Taken literally, if USD depreciates:
  - Loosens financial conditions globally, boosts local investment, demand.
  - Monetary policy tightened locally, local currencies appreciate.
  - Global systemic policy impact: further broad USD depreciation!
- Is all this empirically relevant? This paper suggests yes, but more can be done about causality and identification.
  - Tie empirical framework tightly to conceptual mechanisms.
  - Address causality and endogeneity issues head on.

I. Causality

The paper interprets empirical relationship between broad USD and global investment as global risk taking channel. But:

- **The USD is not exogenous**. Alternative story: USD as carry trade funding currency and impact on USD.
  - Carry trade on: High returns on EM investment, short USD long EM $\rightarrow$ increased USD supply in global FX markets $\rightarrow$ USD depreciation.
  - Carry trade unwinding: Drop in EM returns or global bank balance sheet constraints (Brunnermeier et al 2009), $\rightarrow$ reduced USD supply in global FX markets $\rightarrow$ USD appreciation.
- If carry trade dynamics are persistent, can VAR ordering USD before flows address it? Local interest rates or spreads should be controlled for to capture carry trade incentives.

II. More on Causality

- To address causality questions, empirical setup could be tied more closely to the global factor story.

- USD should affect investment through:
  - corporate USD short positions leading to credit quality deterioration $\rightarrow$
  - global bank leverage contraction.

- **The global risk taking mechanisms can be investigated directly:**
  - Data is available from BIS locational statistics as well as for US broker dealers (US flow of funds).

Are EM non-banks short USD?

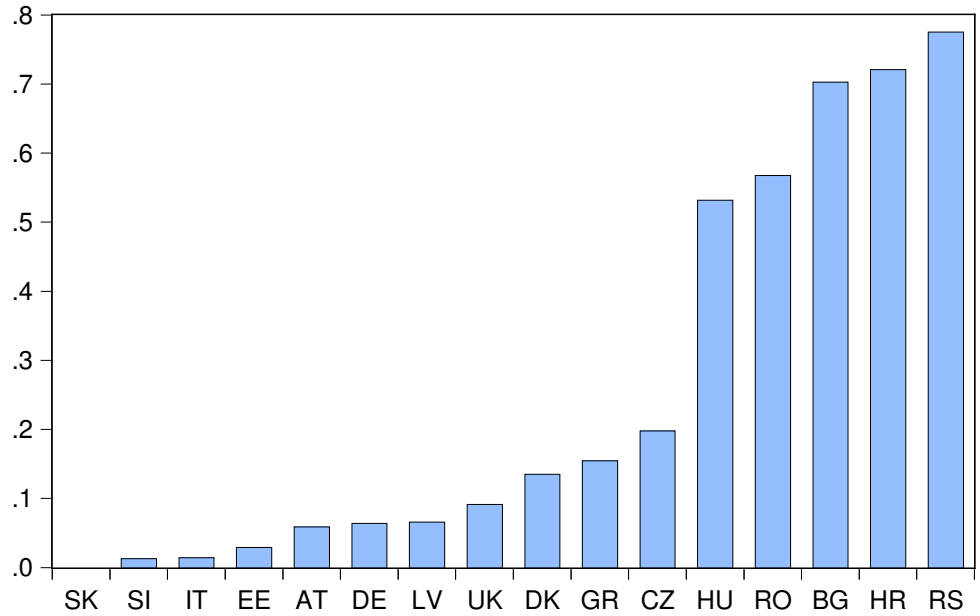


Figure: Share of bank lending to non-financial firms in FX.
European countries, average 2010-2016. Source: SNB Swiss franc lending monitor.

- Giorgiadis and Mehl (JIE 2016): AEs are increasingly net long FX.
- Would result in opposite effect of USD on global liquidity.
- The broad USD is driven primarily by advanced country currencies.

US broker dealer leverage growth and the broad USD

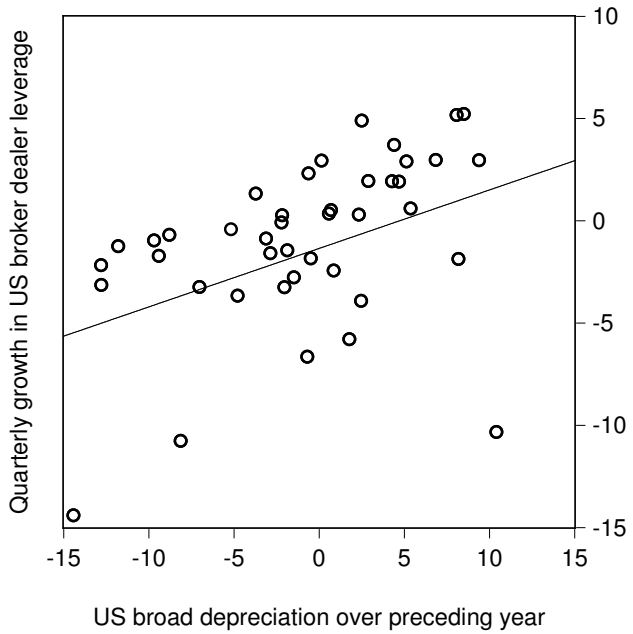


Figure: Growth in US broker dealer leverage and change in US neer, quarterly 2006-2016. Sources: US National Accounts, Federal Reserve.

- Alternative regression variable or additional analysis to establish link from USD to global leverage and liquidity.
- $\frac{BDL - BDL_{-1}}{BDL} = -0.7 - 0.26 \cdot \frac{USD_{-1} - USD_{-5}}{USD_{-1}}$ ($pval = 0.01$, $R2 = 0.10$).

Identification and Role of Exchange Rate Regime

- The empirical setup does not include broad and bilateral USD together: Since these are correlated, no separate identification of local and global balance sheet channels.
- **Low hanging fruit**: Plug both in together in VAR and regression.
  - Sufficient independent variation: The broad USD index is driven primarily by the EUR!, not EM currencies.
- **Can exchange rate regime be used for identification?**.
  - Countries with USD pegs should have no local balance sheet effect,
  - but should be affected by global liquidity. Regression excludes these.
- Broader point on role of exchange rate regime in capital flow responses to global risk conditions (Goldberg Krogstrup, work in progress).

All in all

- An interesting paper and a promising contribution!

Smaller points and questions

- What is the role of US monetary policy in driving the global risk taking channel (the USD is not exogenous)?
- Why use gross bank inflows and not net bank FX inflows in VAR? Hugely different implications for results, in my experience. The two move very differently, lots of operations which net out and might be irrelevant.
- It would be nice to come up with a better and more convincing measure of exposure to global financing conditions in the micro exercise, for example one that is directly derived from firm balance sheets. Could share of FX lending to non-bank firms from the BIS data be used? It would be country, not sector, specific.
- On structure of the paper: It might be easier on the reader to separate the macro and the micro studies and complete presentation of each.