

# Dollar Reserves and U.S. Yields: Identifying the Price Impact of Official Flows

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# The Paper

- Paper revisits an important question in the literature:
  - ▶ What is the impact of foreign official flows into Treasuries on U.S. Treasury yields?
  - ▶ Timely, with policy implications;
  - ▶ Builds upon estimation approach.
- Existing literature:
  - ▶ Warnock and Warnock 2009, Beltran et al 2013, Wolcott 2020
  - ▶ Different estimation techniques; arrive at similar range of estimates:  
**17-68 bps per \$100B**
- Paper's estimates substantially larger: **100-140 bps per \$100B**;
- Main questions: 1) how close to "true" effects and 2) what exactly drives this large difference with literature.

# Economic Significance of Estimates

- Estimates suggest even a few billion of Treasury purchases can move the 10-year yield meaningfully.
- March 9-18, 2020:
  - ▶ Treasury 10-year yield rose: 64 bps
  - ▶ Estimates suggest impact of FOI sales on 10-year yield: 56-80 bps
  - ▶ But broad selling pressures (dash for cash).

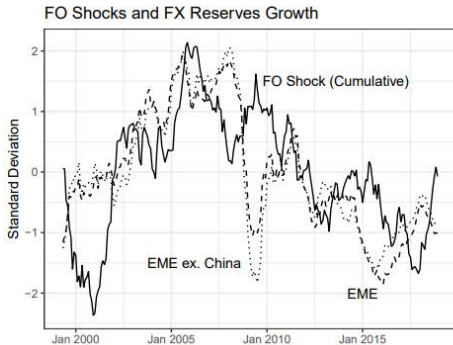
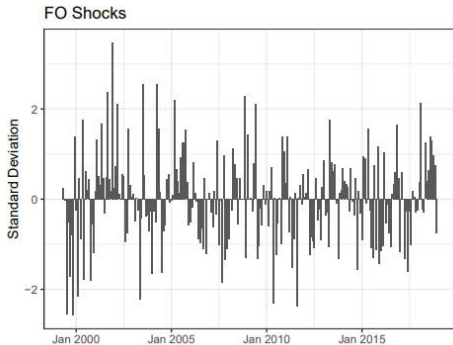
# Shock Identification Using GFC Period

- Paper exploits changes in volatility of flows after the GFC to impose heteroscedasticity restrictions on VAR
- Potential issues using GFC period:
  - ▶ 2007-2012: financial markets, Treasury yields, flows were very volatile;
  - ▶ Many confounding factors: Lehman bankruptcy, implosion of repo markets, near-collapse of Freddie and Fannie, commencement of LSAP, TARP, European sovereign debt crisis
  - ▶ These likely obscure the relationship between Treasury flows and yields;
  - ▶ Could results generalize to normal periods?
- Need to control for other factors amplifying the volatility during GFC:
  - ▶ to not bias results;
  - ▶ generalize results.

# Identification through Heteroscedasticity

- First paper in literature (FOI or LSAP) to use this approach.
- How identification strategy works:
  - ▶ Starting with a cloud of equilibrium outcomes;
  - ▶ Assume S and D curves are both a specific functional form: strong assumption
  - ▶ Most important observations: at the extremes of (Q, P) combinations
    - ★ If data all around the "center": researcher just gets insignificant coeff.
- Hard to pin down the parameters especially for large VAR systems.

# Foreign Official Shocks and Flows Data



## Simultaneity: foreign yields based controls

- Issue: global factors potentially affecting U.S. yields and foreign official purchases of Treasuries simultaneously.
- Is controlling for foreign yields sufficient to address this problem?
- Use of foreign yields factors might be problematic in this context:
  - ▶ The effect of Treasury purchases on U.S. yields often spill over to foreign yields as foreign yields are influenced by U.S. yields (spillover literature; e.g. Gilchrist, Yue, Zakrajsek 2019)
- Suggestion: Explore global non-financial variables as controls

# Comparison with QE literature results

- Estimated effects of flows on Treasury yields:
  - ▶ 88 bps per \$100B: Ahmed and Rebucci (2022)
  - ▶ 4 bps per \$100B: Li and Wei (2013)
  - ▶ Authors' explanation: foreign flows entering the U.S. economy provide incremental resources and purchasing power.
- Comments:
  - ▶ QE could have signaling effects: expect foreign official purchases to have smaller effects than QE purchases.
    - ★ signaling: further downward pressures on yields (int. rate exp. channel)
  - ▶ If no policy signaling effect of QE purchases: expect similar estimates.
  - ▶ Important to pin down as paper has implications also for QE literature.



## Other Questions and Suggestions

- Papers addressing endogeneity (Beltran et al, 2013; Wolcott, 2020)
  - ▶ incorporate feedback of yields into demand
- Choice of reporting effects in terms of \$100B while share of outstanding is what matters for estimation:
  - ▶ Interpretation and comparison with previous literature tricky as Treasury market has grown tremendously;
  - ▶ Estimate with 2021 outstanding: 88bps;
  - ▶ Estimate with 2017 outstanding: 112bps.
- Use intercept in specifications.

# Conclusion

- Ambitious paper:
  - ▶ Revisits an important question in the literature and policy circles;
  - ▶ Attempt to address valid concerns for omitted variables, endogeneity;
  - ▶ Novel for this literature shocks identification approach;
  - ▶ Results quite different from literature.
- Comments:
  - ▶ Lessons for the literature going forward (FO flows and QE)?
  - ▶ Magnitude of price impact of flows.
  - ▶ Is identification by heteroskedasticity and choice of GFC period the most appropriate in this context?