Discussion of

"A PREFERRED-HABITAT MODEL OF TERM PREMIA, EXCHANGE RATES, AND MONETARY POLICY SPILLOVERS"

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Intro

- A great and clearly motivated paper advancing our understanding of the **transmission mechanism of QE**
- Focuses on the **portfolio-balance channel of QE** and provides the mechanism through which it impacts FX, domestic and foreign yield curves
- Presents a framework with a vast potential for **policy applications**:
  - Exploration of spillovers of monetary policies at home and abroad
  - Evaluation of QE versus QT impacts
  - Analysis of simultaneous and consequent implementations of conventional and unconventional policies
  - Role of the financial intermediation sector and its constrains for monetary policy transmission

What the paper does

- Extends the seminal model by [Vayanos and Vila (2021)] to a rich two-country model with FX risk
  - Preferred Habitat (PH) investors demand bonds of a specific maturity from a specific jurisdiction
  - Currency traders demand foreign currency
  - Global arbitrageurs can trade two types of bonds and the currency
  - Central banks purchase bonds and affect the bond supply
  - 5 (five!) risk factors: 2 correlated stochastic short rates, 3 independent stochastic demands for bonds and currency
  - Calibrate the model to 1986-2021 US and German/EA data
- Study domestic and international transmission of conventional and unconventional monetary policy (UMP) shocks
  - *UMP has strong international spillover effects but not conventional MP*
  - *UMP affects FX similarly to conventional MP*

Main discussion points

- **Model assumptions for policy applications**

1. Realistic policy environment:
   - *What is the role of zero lower bound (ZLB)?*
   - *Inflation risk?*
2. Joint transmission of conventional and unconventional monetary policy shocks:
   - *Are shocks to policy rate and QE uncorrelated?*
   - *Implications for QT?*
3. International spillovers:
   - *Are policy rate shocks across countries correlated but not QE shocks?*
   - *Is there a special role for USD?*

Inflation Risks and ZLB

- **Inflation risk** is an important determinant of the US and German yield curves

- Since 2009, the **ZLB** has been key for the monetary policy implementation, affecting choice of policy tools, yield curve dynamics and shock transmission

- I am very much aware that including inflation risk (6th!) or imposing ZLB is not feasible (the model would not have a closed form solution)

- An alternative is to calibrate the model to **real yield curve and FX data**
  - Demand shocks are transmitted via real term premia
  - No explicit lower bound for real rates

Joint transmission of conventional and unconventional monetary policy shocks

$$\Gamma = \begin{bmatrix} \kappa_{iH} & 0 & 0 & 0 & 0 \\ 0 & \kappa_{iF} & 0 & 0 & 0 \\ \kappa_{\gamma,iH} & \kappa_{\gamma,iF} & \kappa_{\gamma} & 0 & 0 \\ 0 & 0 & 0 & \kappa_{\beta} & 0 \\ 0 & 0 & 0 & 0 & \kappa_{\beta} \end{bmatrix}, \quad \Sigma = \begin{bmatrix} \sigma_{iH} & 0 & 0 & 0 & 0 \\ \sigma_{iH,iF} & \sigma_{iF} & 0 & 0 & 0 \\ \boxed{0} & 0 & \sigma_{\gamma} & 0 & 0 \\ \boxed{0} & 0 & 0 & \sigma_{\beta} & 0 \\ \boxed{0} & 0 & 0 & 0 & \sigma_{\beta} \end{bmatrix}.$$

- Policy rates/shock and QE factors/shocks are uncorrelated.
  - In practice, two monetary policy tools are not used in isolation.
  - Empirically, estimated Vayanos and Vila (2021) model on the US data suggests the shocks are correlated (Kaminska and Zinna (2020))
  - This would also allow for a signalling effect of QE

Spillovers of conventional and unconventional monetary policy shocks

$$\Gamma = \begin{bmatrix} \kappa_{iH} & 0 & 0 & 0 & 0 \\ 0 & \kappa_{iF} & 0 & 0 & 0 \\ \kappa_{\gamma,iH} & \kappa_{\gamma,iF} & \kappa_{\gamma} & 0 & 0 \\ 0 & 0 & 0 & \kappa_{\beta} & 0 \\ 0 & 0 & 0 & 0 & \kappa_{\beta} \end{bmatrix}, \quad \Sigma = \begin{bmatrix} \sigma_{iH} & 0 & 0 & 0 & 0 \\ \boxed{\sigma_{iH,iF}} & \sigma_{iF} & 0 & 0 & 0 \\ 0 & 0 & \sigma_{\gamma} & 0 & 0 \\ 0 & 0 & 0 & \sigma_{\beta} & 0 \\ 0 & 0 & 0 & \boxed{0} & \sigma_{\beta} \end{bmatrix}.$$

- The model implication of stronger QE spillovers are consistent with the evidence of substantially increased monetary policy spillovers post 2009 (e.g. Albagli, Ceballos, Claro, Romero, 2019).
- How much does the result depend on the assumption that conventional monetary policy shocks are correlated, but not QE?

Further suggestions

- The model is symmetric. In reality, the US government bond market and USD play special roles.
    - Calibrating demand parameters with larger weights for the US asset demand?
- The paper would be timely for the QT analysis
    - Unanticipated purchases vs anticipated sales
    - Role of the pace vs stock
    - QE only vs QT joint with conventional monetary policy
- Policy event study, e.g. Costain, Nuno, Thomas (2022), Gilchrist, Wei, Yue, Zakrajsek (2022)

To sum up

- Very important paper, with huge potential for policy implications
- A novel integrated framework for international yield curves and FX
- Advances our understanding of UMP transmission and key questions in asset pricing
- A couple of suggestions to understand the policy implications better
  - try to isolate the impacts of inflation and ZLB by calibrating the model on real rather than nominal data
  - focus more on the links between monetary policies (conventional & UMP, home & foreign) and discuss QT!