What do $40 Trillion of Portfolio Holdings Say about Monetary Policy Transmission?

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Summary

- **Question:** how do investor portfolios react to monetary policy, and what is the impact on bond prices?
- **Approach:** demand system estimation combined with granular portfolio data on funds, banks, and insurance companies
- **Main Findings:** flow-driven purchases by bond funds and banks + tilt toward duration for insurers increase long-term rates, partially offset by issuance
- **This discussion:** innovative and plausible results! A few caveats:
  - Based on interest rate changes that may be endogenous
  - Treat investor flows as exogenous
  - May be based on changes that are more persistent than MP shocks

Background: the long-term rate puzzle

- Monetary policy shocks appear to move long-term rates by 0.3 – 0.5 times the change in the short rate (Gurkaynak, Sack, and Swanson (2005), Gertler and Karadi (2015), many others)
  - Puzzling given that the change in the short rate is relatively transitory
  - Even more puzzling given that the change in the long rate is also transitory
- Various existing explanations exist:
  - Fed's caution dealing with bond markets (Stein and Sundaram, 2018)
  - Leveraged investor portfolios (Kekre, Lenel, Mainardi 2024)
  - Imperfect asset substitutability (Christiansen and Krogstrup, 2022)
- This paper will decompose this pattern using a rich demand system

What the paper is doing

- The authors estimate a demand system period-by-period to get the slopes of demand/supply and the loadings on characteristics (shifters)
  - Combined with a market clearing condition + flows, this gives us yields
  - Can decompose changes in yields into components by holding others fixed
- Once this is done, regress these components on the change in interest rates

$$\Delta y_t(c) = \alpha + \beta \Delta r_t + \gamma X_t + \varepsilon_t$$

- Note: nothing special or structural about monetary policy here
  - Could use any shock series of interest on the right hand side
  - Flexible, but not really identified

1. Endogeneity concerns

- We are looking at the response to a change in the interest rate rather than an identified monetary policy shock
  - Although the authors control for contemporaneous macro factors, could still be correlated with conditions that drove the rate change
  - Makes causal relationships harder to interpret
- Example: flight to safety during bad times
  - Short-term interest rates rates fall while investors also move into LT treasuries, pushing down LT yields
  - Model can explain this through changes in taste for characteristics and flows to funds that hold LT treasuries, but not causal
- What if the Fed changes rates in response to LT bond yields?

2. Portfolio weights vs. flows

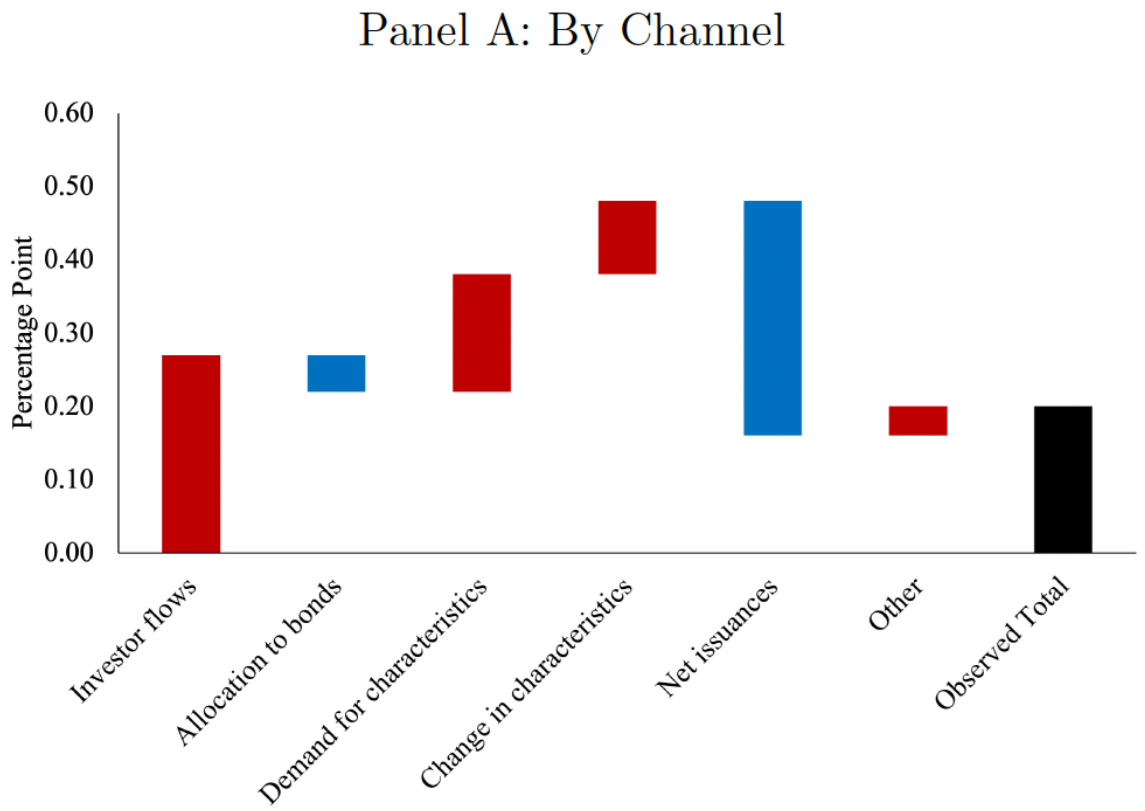
- I find the distinction between portfolio shares and flows confusing for funds
- Imagine households believe LT treasuries are too cheap. They can:
  A. Have their mutual funds shift their portfolio weights toward LT treasuries
  B. Shift their investments toward funds with a higher weight on LT treasuries
- These seem isomorphic to me
  - Only A is allowed as an endogenous price response in the model
  - But B actually seems much more straightforward for investors
  - And B accounts for the vast majority of funds' contribution to LT rate response
- Not clear to what degree these reflect different fundamental sources, and what we are missing by not endogenizing flows

2. Portfolio weights vs. flows

- This could also lead to some concerns about the flows-based instrument
- Let's continue our thought experiment (household LT treasury demand ↑)
  - They will buy funds that hold these bonds
  - Flow-based instrument implies instrumented LT treasury price ↑
  - But bond funds may also tilt toward LT treasuries to attract investors in a way not predicted by price, biasing the IV
- Theoretically, this can be taken care of with the principal components, removing common flows seeking exposure to the same characteristic
  - But we are only removing a single principal component from a rich market
  - Doesn't seem like enough to absorb many "directional" moves

2. Portfolio weights vs. flows

- Causality between issuances and flows also seems challenging
- Paper finds that investor flows are closely offset by issuances



2. Portfolio weights vs. flows

- Causality between issuances and flows also seems challenging
  - This paper takes the framing that the issuances are responding to the flows
  - Alternative: households would find bonds cheap after issuance, increase flows to funds investing in those bonds
  - Exogenous household demand (flows) make alternative channel impossible
- In principle, the estimates can give some clues to this
  - Estimates can decompose shifts in supply (loadings on characteristics) from shifts along the supply curve (response to change in price)
  - Although this exercise seems particularly exposed to the potential endogeneity bias in fund flows just discussed

3. Thinking about persistence

- This paper shows that the initial change and subsequent reversion in LT rates following a change in ST rates:
  - Is associated with an initial increase in institutional demand for LT bonds
  - That is later offset by increased issuance of LT bonds
  - Implies shock not really reverting but instead moving from prices → quantities
- But recall that the initial monetary policy shock reverts too!
  - Should investor demand also return to baseline?
  - If so, we now have “too many” bonds, price reversion should overshoot
  - Might be because short rates we are using are more persistent than MP shocks
  - If so, may be overstating issuance response relative to a true MP shock

4. The role of MBS

- One major component not driven by flows is demand from life insurers
  - Instead, tilt their existing portfolios toward long-duration treasuries
- Paper has a very interesting explanation for this based on MBS
  - Because prepayment is more appealing when rates are low, the duration of MBS is increasing with rates
  - For an institution with a fixed duration target, this should make them shift out of MBS and into LT treasuries following a decline in rates
- Great idea with interesting economics.
  - To validate it, would be great to show decomposition of MBS yields
  - Seems like this effect should operate largely through MBS-treasury spread

Conclusion

- Exciting paper using a granular asset demand system to decompose the response of bonds to changes in interest rates
  - We knew that net demand for these bonds must be changing to influence yields
  - Now we have new clues into whose demand is changing and why
  - Flows to bond funds + banks, tilt for insurers, offset by new issuance
  - Novel results that will provide great targets for structural models
- Results are intuitive, but may come with a few caveats
  - Based on interest rate changes that may be endogenous
  - Treat investor flows as exogenous
  - May be based on changes that are more persistent than MP shocks