Discussion of "How do Interest Rates Affect Consumption? Household Debt and the Role of Asset Prices" by Foulis, Hazell, Mian, and Tracey

Adrien Auclert, Stanford

Macroeconomics and Monetary Policy Conference, SF Fed, March 2026

This paper

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- **Q: How does monetary policy affect consumption?**
  - Simple models (eg, textbook NK): all intertemporal substitution
  - Recent theory (eg, HANK) and empirical evidence:
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  - Recent theory (eg, HANK) and empirical evidence:
    - income effects of interest rates matter, not just substitution
    - "indirect" general equilibrium effects are very important
- **This paper**: using fantastic mortgage and consumption data for UK,
  - new estimates of the magnitude of the income effect
  - evidence that indirect GE effects work in part via higher house prices

My assessment

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- **Fantastic paper !**
  - Complements lots of excellent empirical work in this space: di Maggio et al ('17), Wong ('19), Cloyne, Ferreira, Surico ('20), Holm, Paul, Tischbirek ('21)
  - Uses same variation as Cloyne, Huber, Izletski, Kleven ('19), but different Q
  - Precise micro estimates for UK, consistent with macro est. from Cloyne et al
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Monetary Transmission in a HANK Model with Housing and Rental Sectors*

Daniel Albuquerque† Thomas Lazarowicz‡ Jamie Lenney§

November 12, 2025

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  - Precise micro estimates for UK, consistent with macro est. from Cloyne et al
  - Perfect inputs to discipline a HANK model with housing for the UK!
- Broader implication for modeling: role of collateral constraints for borrowing
  - Will hopefully spur more HANK work in this space !

My discussion

- Why “mortgage cash flow effect” is hard to isolate + what the paper does
- Data and representativeness of app users
- Isolating the house price collateral relaxation effect
- Other comments

The mortgage cash flow effect

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- Problem: it's hard to do!
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  - And even the income effect of an interest rate change is subtle!
- Next: explain the problem and how the authors solve it

Income and substitution effects of interest rates

- Consider simple two-period consumption-savings problem

$$\begin{aligned} \max_{c_1, c_2, a} \quad & u(c_1) + \beta u(c_2) \\ \text{s.t.} \quad & c_1 + a = y_1 + d_1 \\ & c_2 = y_2 + d_2 + (1 + r)a \end{aligned}$$

- y_1, y_2 labor income, d_1, d_2 div. income, asset could trade at $p = d_1 + \dfrac{d_2}{1 + r}$
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- MPC out of transitory income shock scales the income effect
  - True very broadly — why not in authors's model?

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- still not a cash flow effect (whole PV matters)
- in practice m is related to r, we need to think about that!

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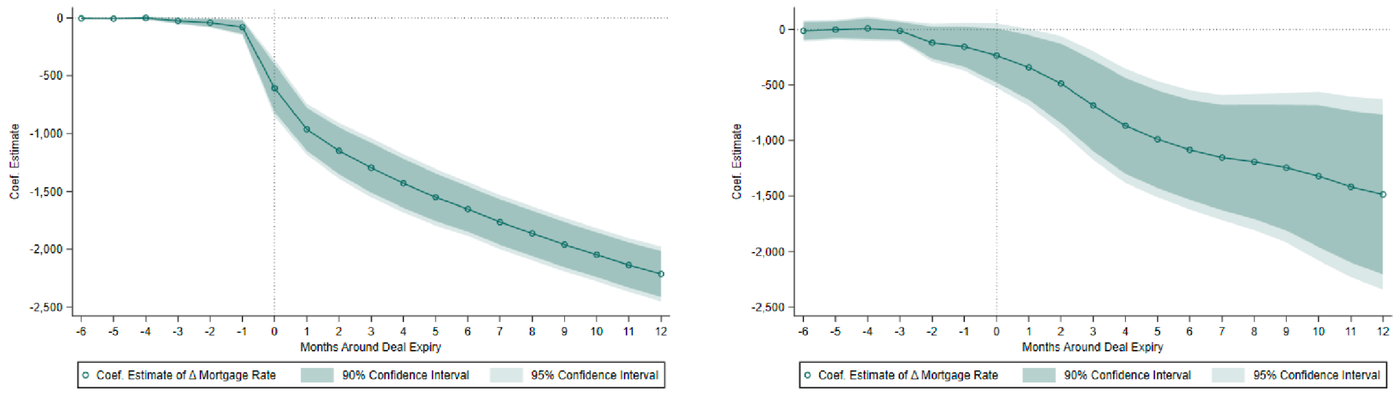
- Setting in paper:
  - Mortgage "deals" that expire at random times
  - *r* changes, but *m* changes only when the deal expires
  - Regression compares hh's with different deal expiration (but same *r*)
- If deal expiration is totally exogenous, should pick up effect from actual cash flow change, not present value effect
  - Similar to Johnson, Parker, Souleles tax rebate timing variation
  - Comparison is subtle (different deals have different PV when *r* changes)
  - Model could help us think more clearly about this !

Main finding

Figure 3: Impulse Responses to Interest Rate Changes

(a) Cash-on-hand

(b) Consumption



Notes: each panel plots impulse responses from the baseline monthly regression. For horizons $h \in [-6, 12]$ relative to deal expiry ($t = 0$), the figures plot the cumulative change in the outcome (pounds, 2015 base) per 1 percentage-point change in the interest rate. Outcomes are expressed relative to the pre-period mean over months $t \in [-6, -4]$. Shaded bands denote 90% and 95% confidence intervals for deal expiry month clustered standard errors. Both regressions include year and age fixed effects. Panel (a): cash-on-hand for the universe of mortgagors. Panel (b): reweighted consumption for households with app-based spending. Outcomes are winsorized, horizon by horizon, at the 0.1% and 99.9% level.

- Large effect!
- Pre-trend a bit short ?
- Misleading to cumulate!!
  - Should report **flow** consumption effect for comparison with models

Data sample and selection

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- Administrative mortgage data merged with consumption data from personal finance management apps ClearScore and MoneyDashBoard
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- Concern: highly selected sample of users: small % of hh that are younger, poorer, likely care more about their finances (higher MPC than pop?)
  - Authors's response: the borrowing response is similar in whole pop
  - But we care about C, and still plausible MPC out of borrowing is higher

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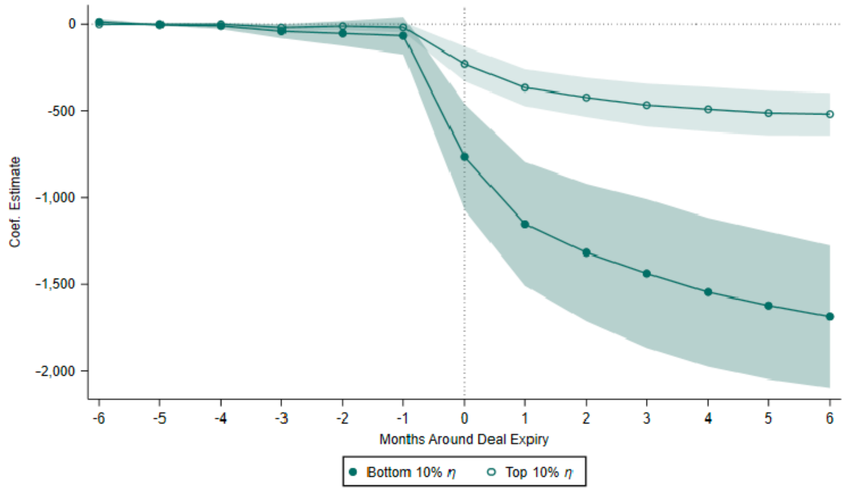
- Comparing within the same region hh's with expiring deal to one without, we difference out the housing wealth effect and only pick up the effect from the interaction between rate expiry and higher house price
- Again, this is a subtle point that the model could help clarify

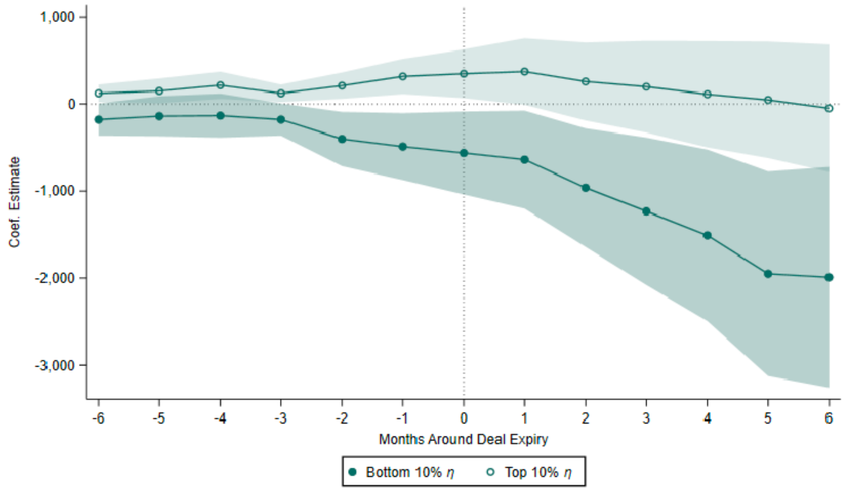
Main finding on house prices

Figure 9: Impulse Responses by House Price Sensitivity

(a) Borrowing



(b) Consumption



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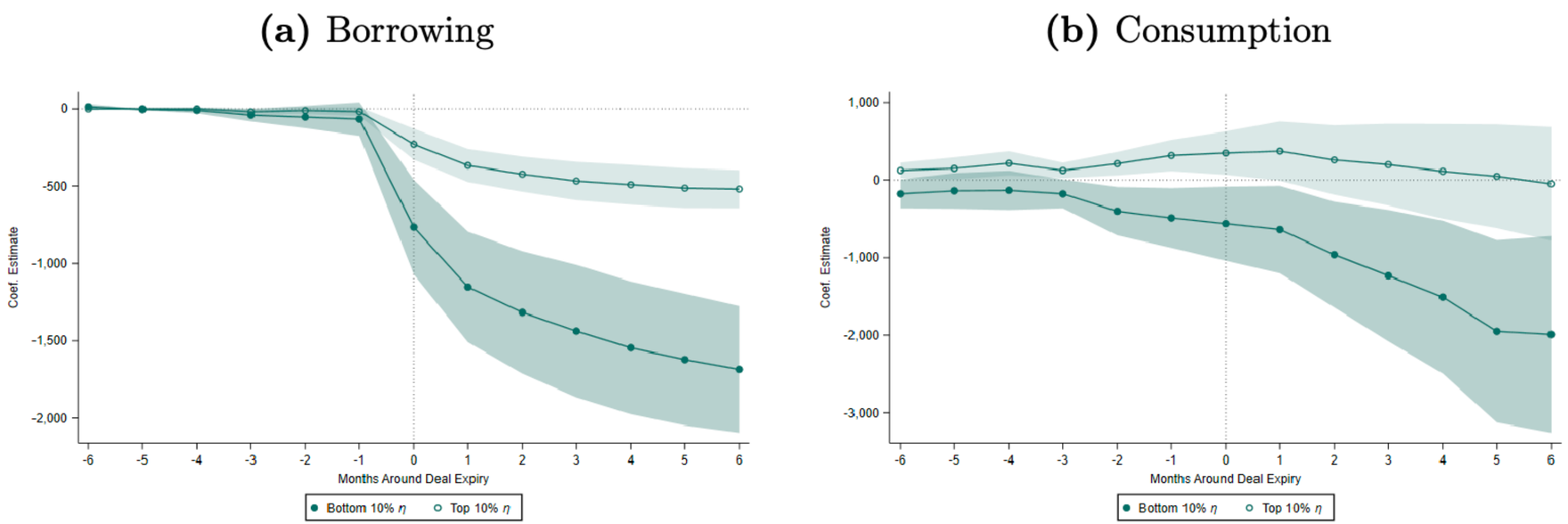

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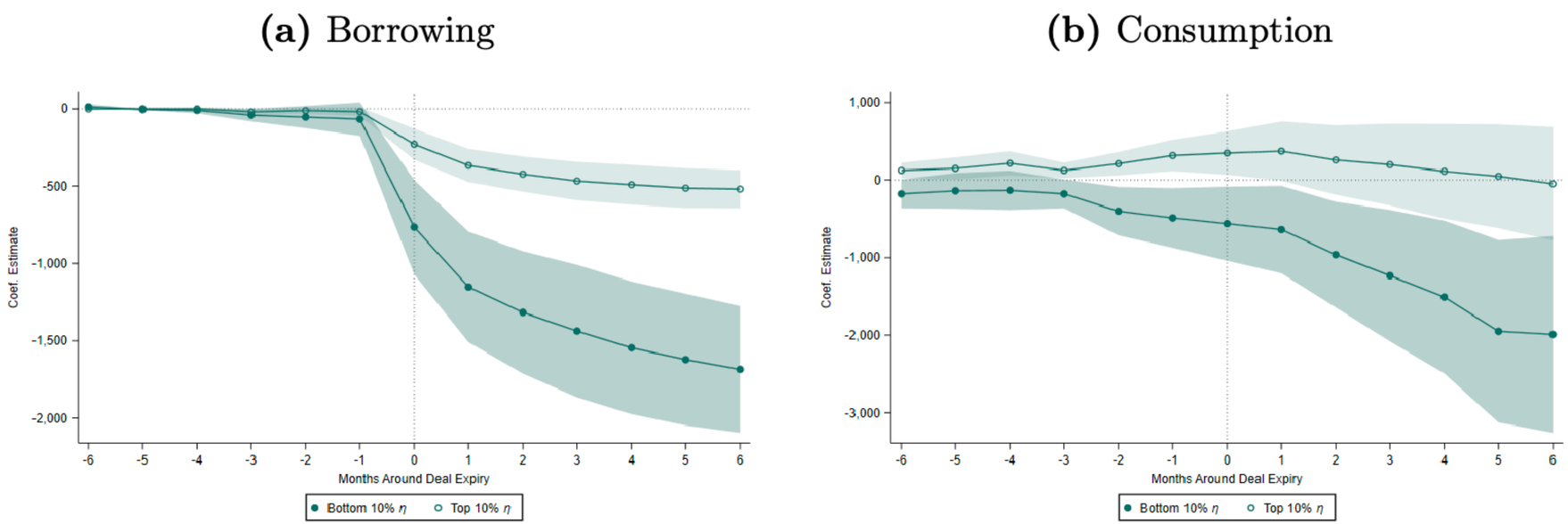

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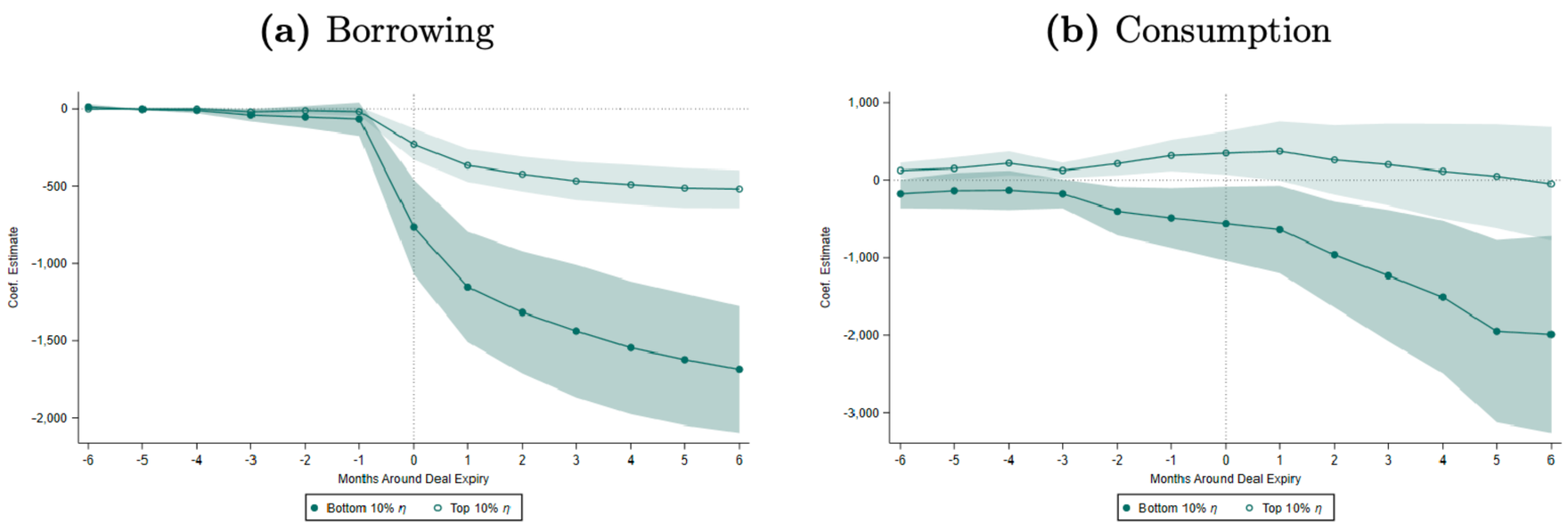

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- Note: paper title is about "asset prices", but I think this is just about house prices

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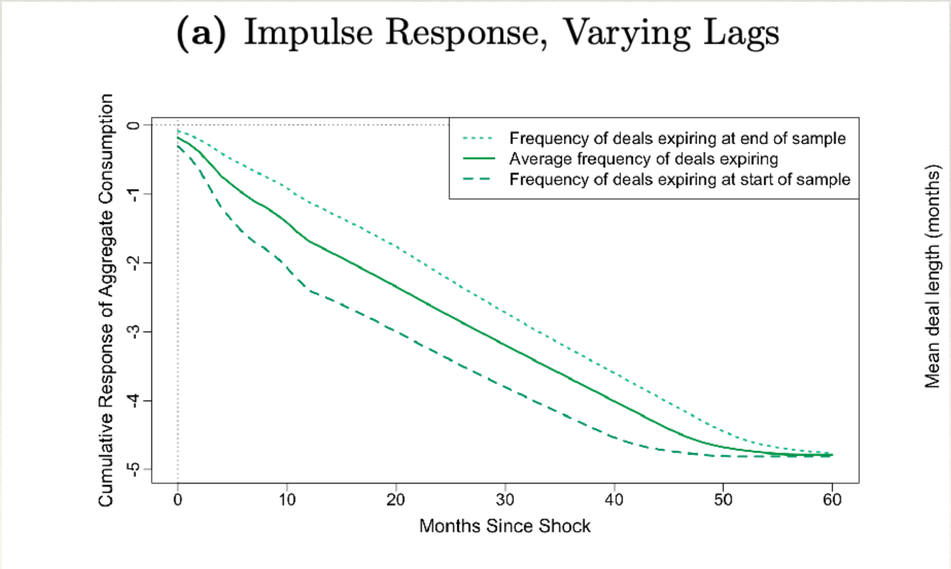
- Calza, Monacelli, Stracca: countries with variable rates have stronger overall transmission, but don't see more lags in fixed rate countries
- Implementation again uses cumulative consumption…
  The long lags are about flows!!



Other comments

- Asymmetries? Those are usually in models. There are cuts 2016-2022 followed by hikes 2022-2024 in sample
- Durables? The baseline share is low ($< 5\,\%$ of C). Models with durables imply high MPX on durables, but this depends a lot on durable depreciation. Would help to report what durables are included, info on δ

Conclusion

- Excellent paper, moving the literature forward!
- Subtle identification, model could be used to clarify what gets differenced out
- I hope models of household consumption shift attention to the house-price/collateral-relaxation effect and uses this paper's estimates to discipline it