

Reaching for Duration and Leverage in the Treasury Market

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*The views expressed in this presentation are those of the author and do not necessarily represent the views of the Bank of England or its committees.

This paper

- ▶ Main question: *why* and *how* do mutual funds use Treasury futures?
- ▶ Limited knowledge to date on the usage of derivatives and corresponding trading strategies in the mutual fund sector
 - * Recent studies try to fill this gap (e.g. Choi et al., 2023 or Kaniel & Wang, 2022)
 - * Important implications for transmission of monetary policy, financial stability and regulations of non-bank financial institutions
- ▶ The authors use fantastic regulatory and hand-collected data (fund prospectuses) to analyze the variation in mutual funds' use of Treasury futures over time and across funds

Main findings

- ▶ Mutual funds hold large *long* positions in Treasury futures, accounting for a substantial share in the recent rise in aggregate futures notionals
- ▶ Authors attribute this to “reaching for duration” — in other words, funds aiming to replicate the duration of their benchmark index
- ▶ Use of longer-duration futures enables funds to shift from cash Treasuries to shorter-duration assets such as mortgage-backed securities
- ▶ Mainly driven by funds in the ‘intermediate investment grade debt’ (IID) segment
- ▶ Trade-off between lower trading costs (due to futures’ high liquidity) vs. increased leverage & margin call risk
- ▶ No substantial differences in returns/alpha between futures users vs. non-users, but higher duration & lower tracking error for futures users

First impression

- ▶ Extremely rich and detailed analysis (23 Tables and 12 Figures in main text + long appendix)
- ▶ But paper is difficult to digest / lacks clarity $\Rightarrow$ would benefit from cutting some summary statistics and less relevant tests
- ▶ Granularity of data offers great opportunities for further analyses that can broaden the appeal of the paper

Comment 1: Implications of “reaching for duration”

- ▶ What are the implications of the documented hunt for duration by mutual funds?
- 1. Asset prices: Impact of mutual fund portfolio shifts on treasury yields across different maturities (e.g. via shift-share instrument, GIV), futures prices, MBS, etc.
- 2. MonPol: How do funds adjust futures position in response to changes in level & slope of the yield curve?
- 3. Financial stability: Measure liquidity risks for adverse scenarios (e.g. 100bps shift in the yield curve, see Alfaro et al., 2024)
- 4. Benchmarking discussion: “Reaching for duration” as another unintended consequence?

Comment 2: Are futures users less sophisticated?

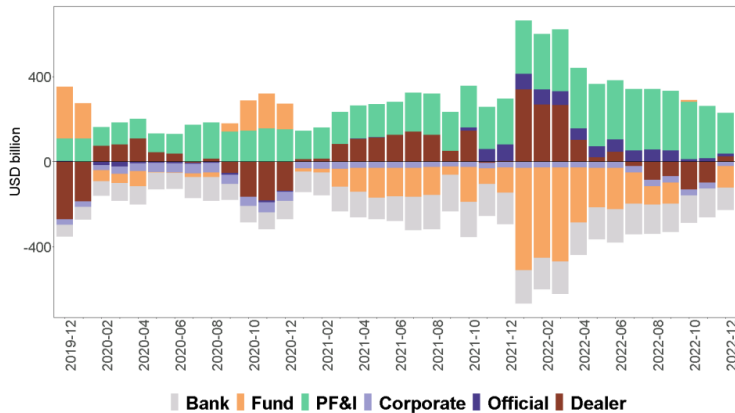
- ▶ Futures user have similar returns but higher return volatility compared to non-users ⇒ Are these funds simply “hugging” their benchmark and underperforming on a risk-adjusted basis?
- ▶ Non-futures users seem to achieve similar performance by tilting more heavily towards corporate bonds ⇒ trade-off between credit risk and liquidity risk?
- ▶ Is use of futures mainly capturing a specialization on MBS? Shift towards (relatively) low-yielding asset class seems surprising
- ▶ Funds’ market timing seems pretty poor—can you measure performance of funds’ futures portfolios?

Comment 3: Use of futures for speculation

- ▶ Funds may use futures (and other IR derivatives + repo) to extend their rates exposure
- ▶ Current discussion in the paper does not sufficiently address this concern
- ▶ Regressions suggest that futures and treasuries are not perfect substitutes, i.e. funds extend rates exposure on a net basis
- ▶ What is the friction that explains lower use of (highly liquid) long-duration interest rate swaps? Difference in trading costs seems economically small
- ▶ Data allows for more holistic analysis of funds' IR derivative trading strategies

Comment 3 cont'd: Funds' exposures in sterling IRS market

Figure 1: Net Outstanding Positions



Source: "The Market for Sharing Interest Rate Risk" by Khetan et al., 2024

Comment 4: Portfolio share regressions

- ▶ Endogeneity concerns: does futures use induce lower treasury holdings, or vice versa? Need a sharper identification strategy
- ▶ Why not use *net* notionals rather than long-only notionals?
- ▶ Heavy right tail of futures use in the cross section & ambiguity around changes in the dependent variable ($\frac{\text{Notional}}{\text{TotalAssets}}$) $\Rightarrow$ use asinh-transformation of notionals
- ▶ Control for *fund $\times$ yield level* & *fund $\times$ yield slope* fixed effects

Minor comments

- ▶ Definition of Covid crisis period seems strange—use shorter time window
- ▶ Why do futures positions change the portfolio duration of non-users?
- ▶ Show changes in equity portfolio weights for IID funds
- ▶ Weaker flow-performance relation of futures-using funds economically and statistically only marginally significant

Conclusion

- ▶ Very interesting paper, I learned a lot!
- ▶ Paper has great potential ⇒ consider alternative identification strategies and various implications of funds' use of futures
- ▶ I look forward to reading the revised version!