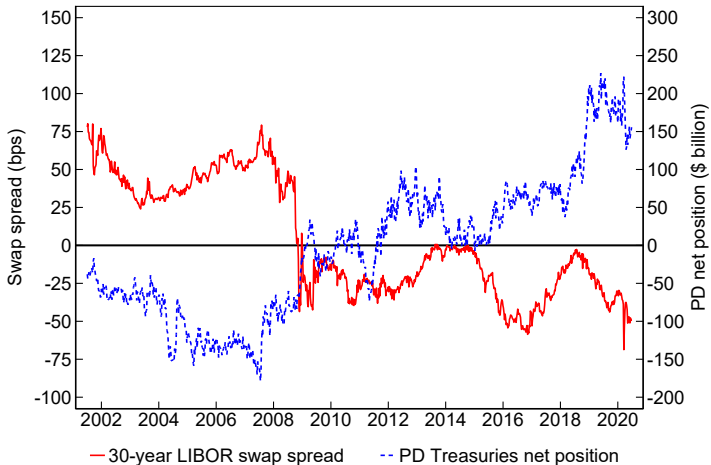# Intermediary Balance Sheets and the Treasury Yield Curve

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discussion by Aytek Malkhozov[1]

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Summary

30-year LIBOR swap spread — PD Treasuries net position

- Disclaimer: Hanson, Malkhozov, and Venter (2022)

Summary

- Bounds for the relative value of swaps and Treasuries

$$\underbrace{-CIP_{n,t} + \Delta short\ rates}_{net\ long\ bound} \leq \underbrace{r_{n,t} - y_{n,t}}_{swap\ spread_{n,t}} \leq \underbrace{CIP_{n,t} + \Delta short\ rates}_{net\ short\ bound}$$
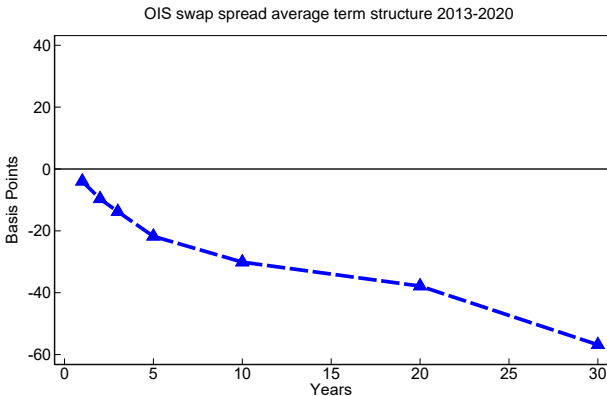
- n-period CIP deviation measures

$$CIP_{n,t} = \frac{1}{n}\mathbb{E}_t^{\mathbb{Q}}\left[\sum_{j=1}^{n-1} balance\ sheet\ cost_j\right]$$

Comments

- Balance sheet cost or convergence risk?

$$-\mathbb{E}\left[swap\ spread_{1,t}\right] \approx \mathbb{E}\left[balance\ sheet\ cost_t\right]$$

$$-\mathbb{E}\left[swap\ spread_{n,t} - swap\ spread_{1,t}\right] \approx \left(\mathbb{E}^{\mathbb{Q}} - \mathbb{E}\right)\left[balance\ sheet\ cost_t\right]$$

OIS swap spread average term structure 2013-2020

Comments

- Segmented arbitrage

    - Siriwardane et al. (2022): *Corr* [*swap spread*, *CIP*] ≈ 0.36

    - balance sheet: FX vs swap desks

    - convergence risk: CIP vs swap spread

- Treasury vs swap market perspective

    - which market prices are taken as exogenous is not important for relative pricing but relevant for interpretation, policy

    - TBAC (2021): end-user demand for swaps

- Regimes when intermediaries' net position is expected to flip

    - expected future, not just current positions determine spreads

Conclusion

- An excellent paper linking the scarcity of dealer balance sheet, interest rate swap spreads, and CIP deviations!