Treasury Buybacks

Darrell Duffie, Michael Fleming, Or Shachar, Peter Van Tassel,
and Samuel Wycherley

NBER Financial Market Frictions and Systemic Risks, Fall 2025

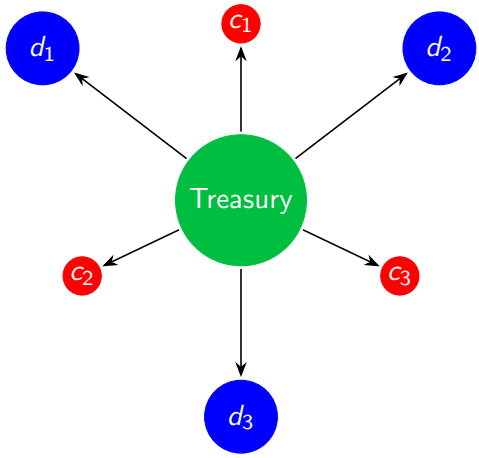
September 18, 2025

RAs: Austin Bennett, Rania Ezzane, Manan Gupta, Ryan Leal, and Rany Stephan

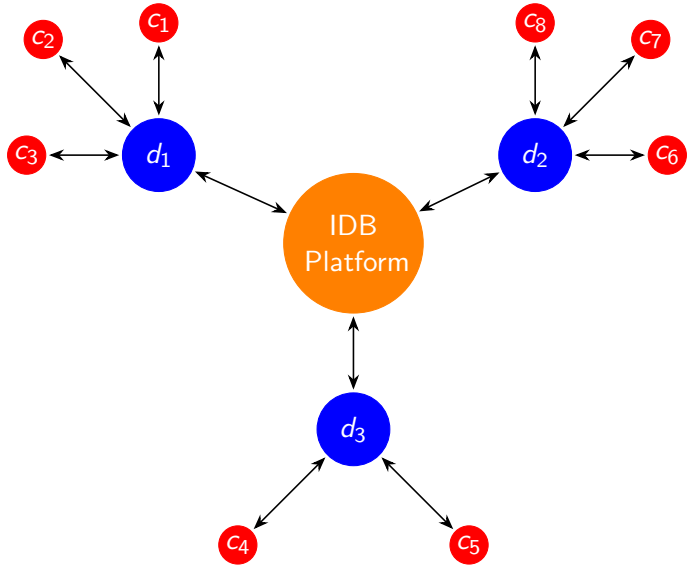
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Duffie, Wycherley: Stanford; Fleming, Shachar: FRBNY; Van Tassel: Caption Partners.
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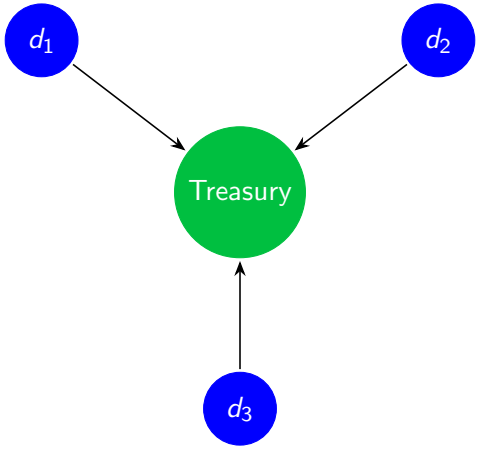
Treasury issues new liquid securities



Dealers intermediate Treasuries



Treasury buys back illiquid securities from dealers



Strong dealer demand to sell back illiquid issues

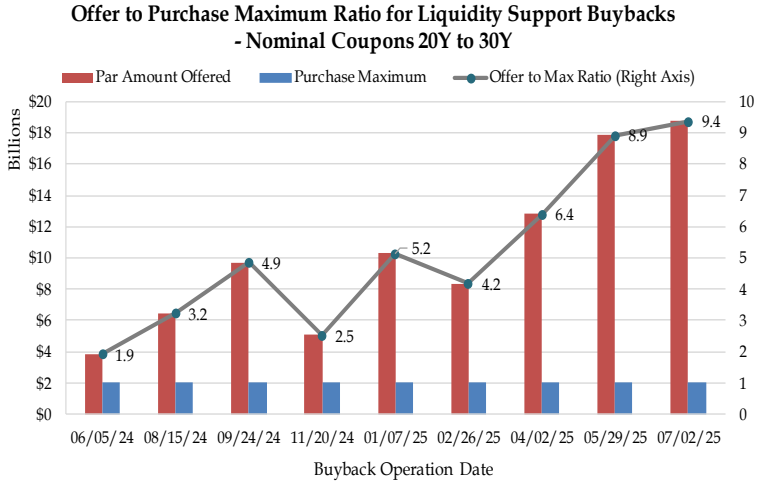


Figure: Office of Debt Management's Fiscal Year 2025 Q3 Report, Treasury presentation to TBAC.

Outline

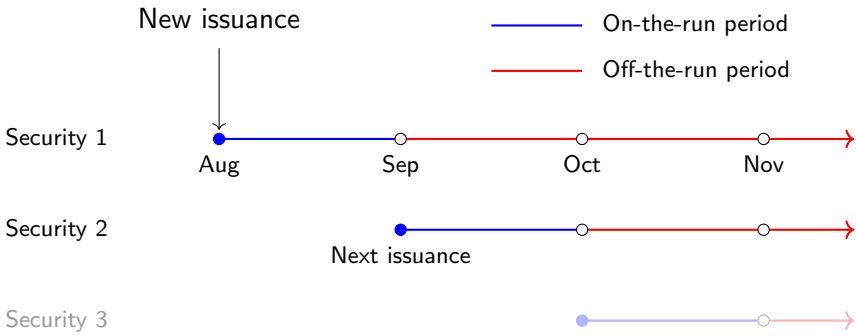
Introduction

Modeling buybacks

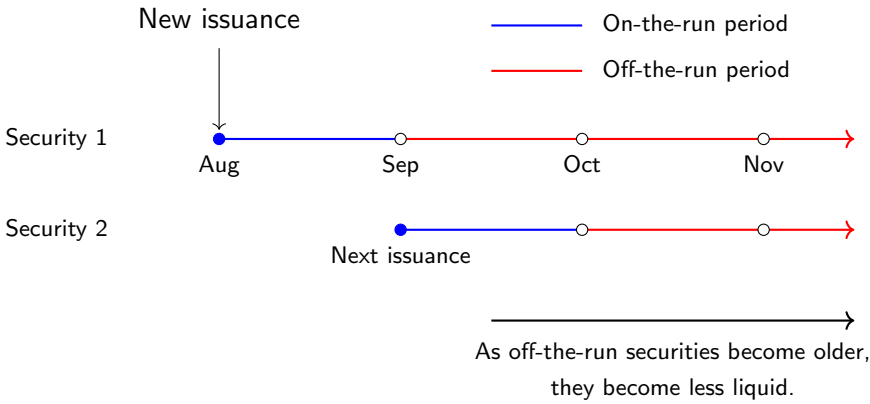
Reopenings

Conclusion

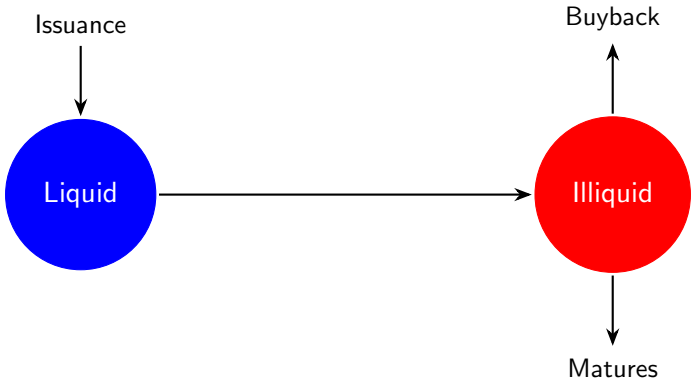
On-the-run/off-the-run distinction



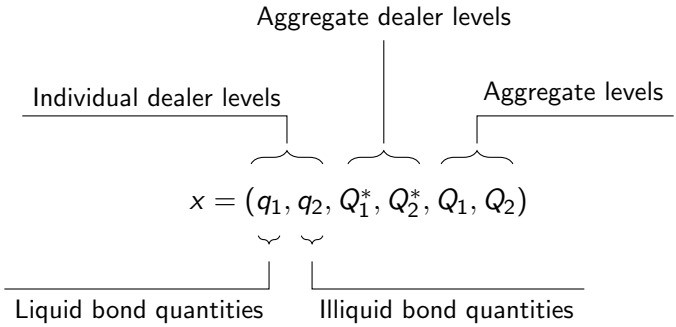
On-the-run/off-the-run distinction



Older issues are less liquid than newer issues



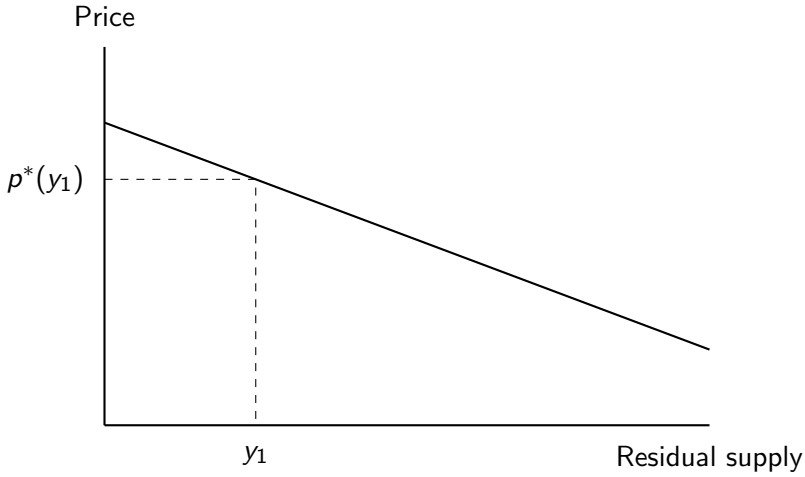
Dealer state vector



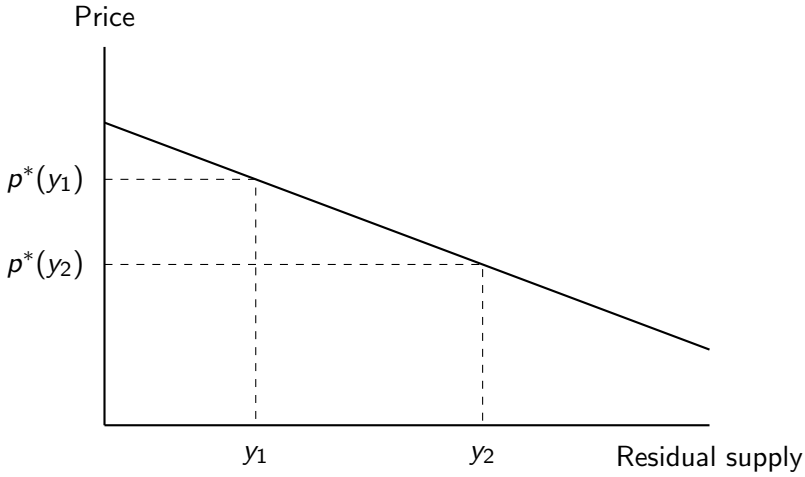
Equilibrium pricing model

- Each auction is a demand function submission game (Klemperer & Meyer, 1989).
  - Issuance and buyback auctions.
  - Secondary interdealer double-auction market.

Dealers and Treasury face price impact



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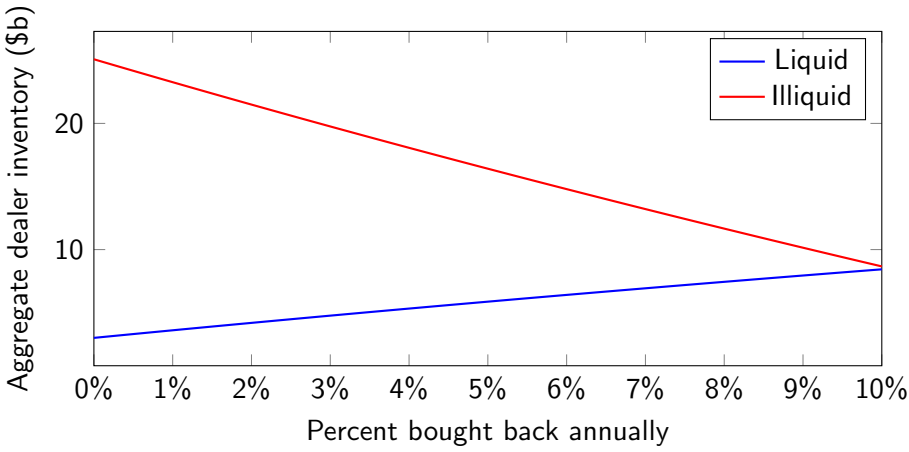
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- Dealer HJB is solved with equilibrium conjectures of other dealers' demand.
- Symmetric ex post equilibrium (Du & Zhu, 2017), solved analytically.

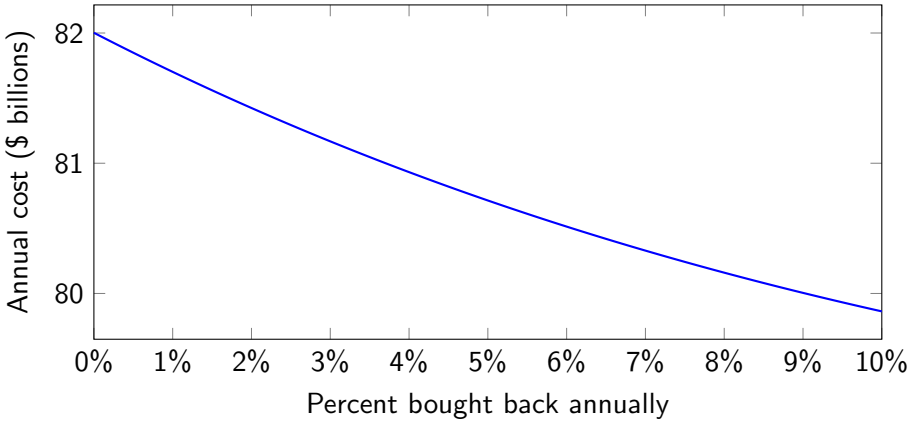
Data for upcoming model calibration

- FR 2004A: weekly report of primary dealers' positions (at the dealer-level).
- FR 2004SI: weekly report of specific U.S. Treasury securities held by primary dealers (at the dealer-level), in particular, on-the-run securities.
  - We impute off-the-run positions by "differencing" the on-the-run positions (FR 2004SI) from the total positions (FR 2004A).
- TreasuryDirect: bonds' characteristics and amount outstanding.
- Treasury TRACE: transactions data, July 2017 – June 2025.
  - We can impute CUSIP-level dealer cumulative flows from TRACE reporting.

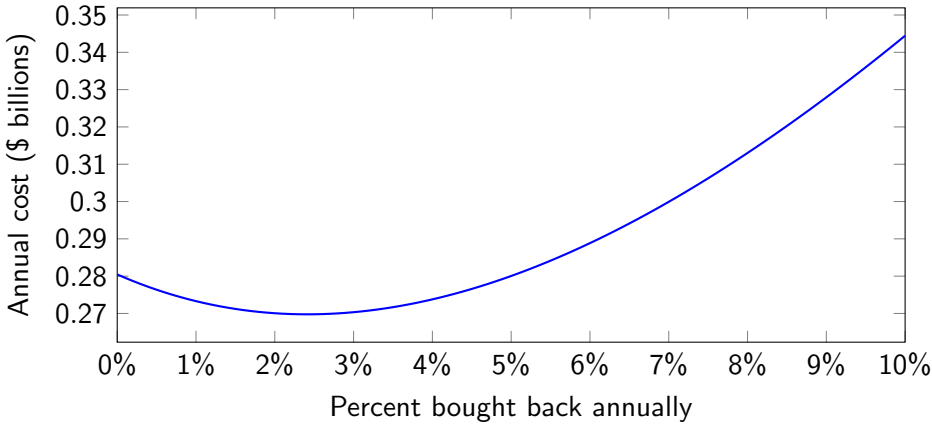
Buybacks increase dealers' holdings of liquid bonds



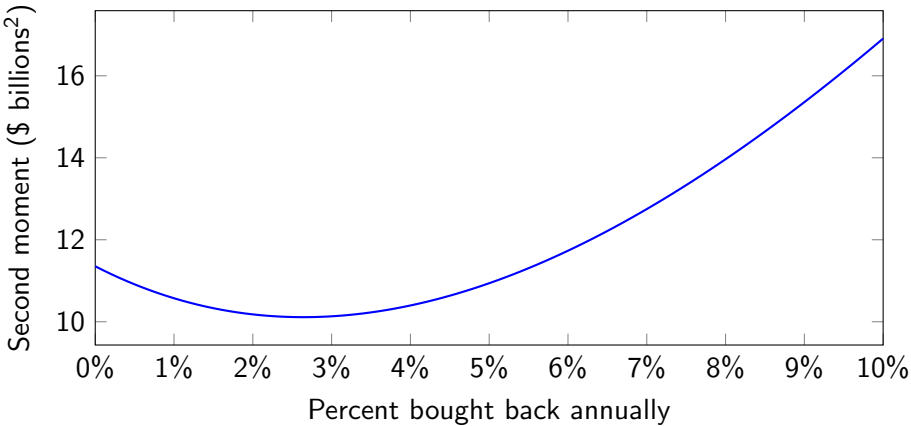
Debt servicing costs improve as buybacks scale



But sufficiently large buybacks increase dealer inventory costs



Second moment of dealer's illiquid inventory drives inventory cost effect



Buybacks improve primary and secondary market prices



Outline

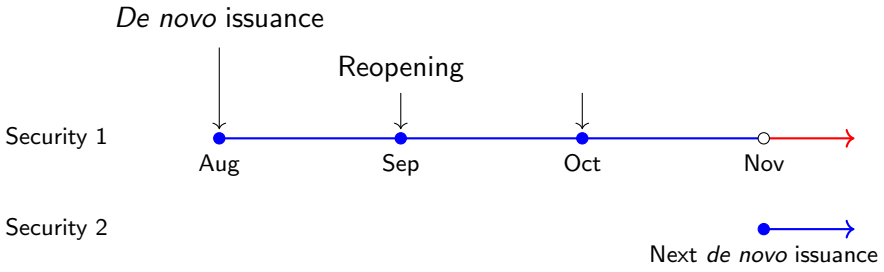
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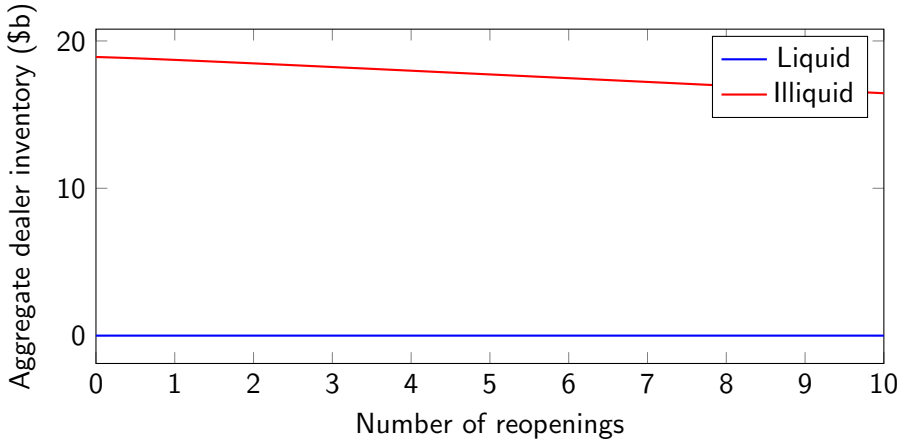
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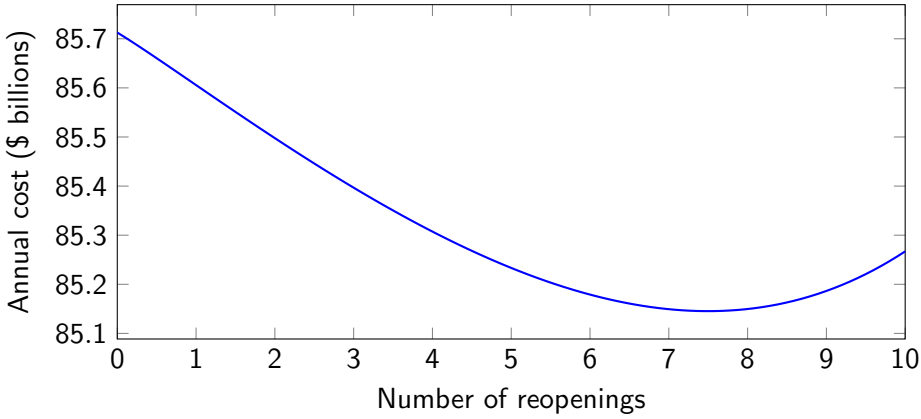
Reopenings


De novo issuance
Reopening
Security 1
Aug
Sep
Oct
Nov
Security 2
Next *de novo* issuance

Reopenings keep on-the-runs liquid for longer



Reopenings are a less flexible policy tool



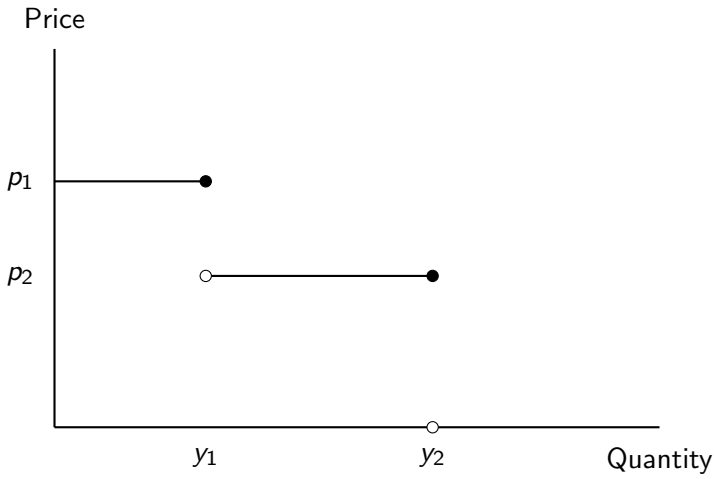
Conclusion

We have a big toolkit that we can roll out... we could up the buybacks if we wanted.

Secretary Bessent,
Comments to *Bloomberg Television*, April 14, 2025.

- Buybacks have significant potential to improve Treasury market liquidity.
  - Treasury is already increasing the frequency and size of buyback operations.
- Buybacks vs reopenings.
- Once calibrated, indicative guidance on policy direction.

Appendix: discrete bidding



Appendix: general bidding

