

# Perspectives on Reduction in Reserve Balances

Arvind Krishnamurthy\*  
Stanford University

FRBNY/SIPA conference  
Columbia University  
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# Asset Scarcity

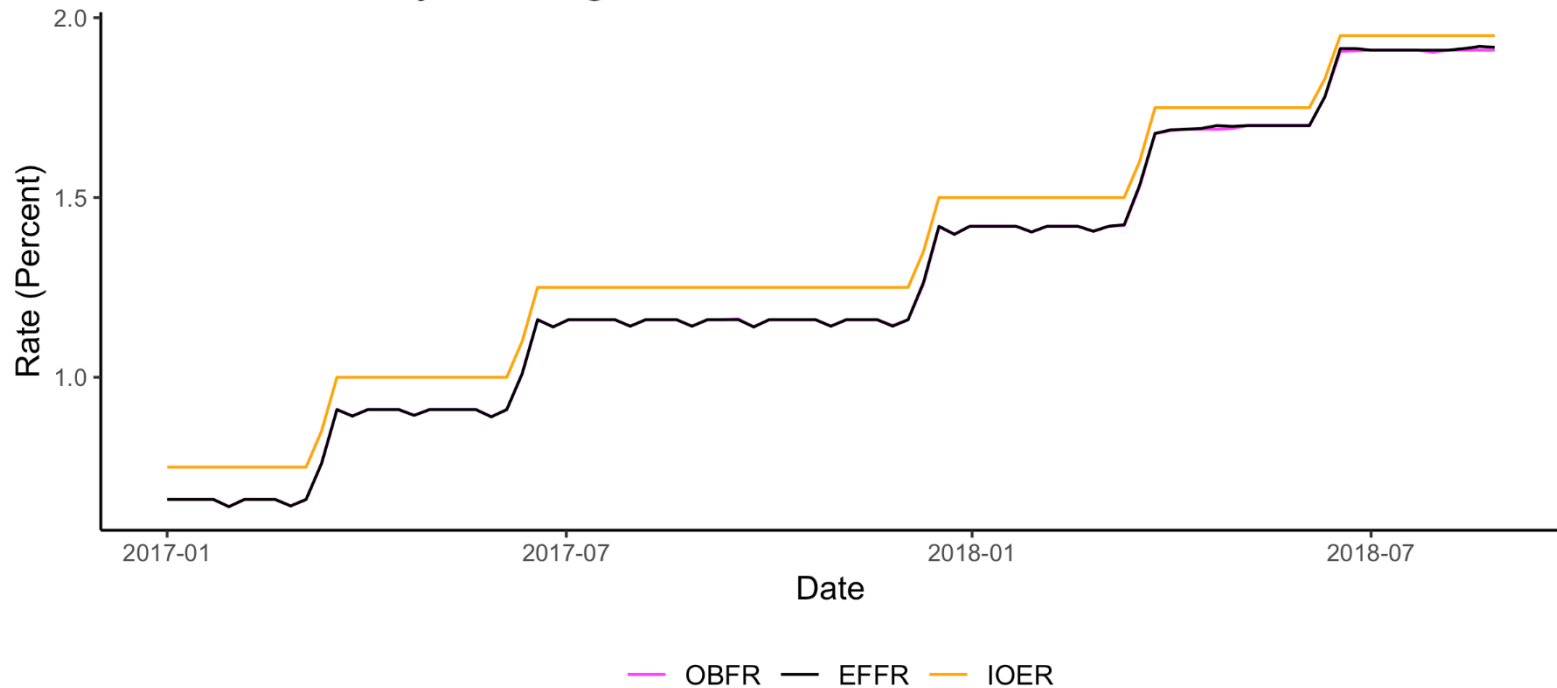
- Pre-crisis approach to steering money market rates was based on reserves scarcity
- Question going forward is how reserve reductions impact asset scarcity and monetary policy transmission
  1. Supply of bank reserves for payment needs and reserve requirements
  2. Supply of safe debt investments to the non-bank public
  3. Supply of HQLA to meet LCR

# Pre-crisis asset scarcity

- a) Pre-crisis, the Fed altered reserve scarcity to set the overnight rate:
- Positive spread between FF and IOER ( $=0$ )
  - Main side-effect of reserve scarcity was volatility and payment delays in the daily interbank market.
- b) Pre-crisis, the economy had a shortage of short-term safe debt (e.g. T-bills) available to the non-bank sector
- Main economic consequence of debt scarcity was the incentives for the private sector to create alternative safe assets.
  - Systemic concern with shadow bank growth.

# Post-crisis world: Reserves

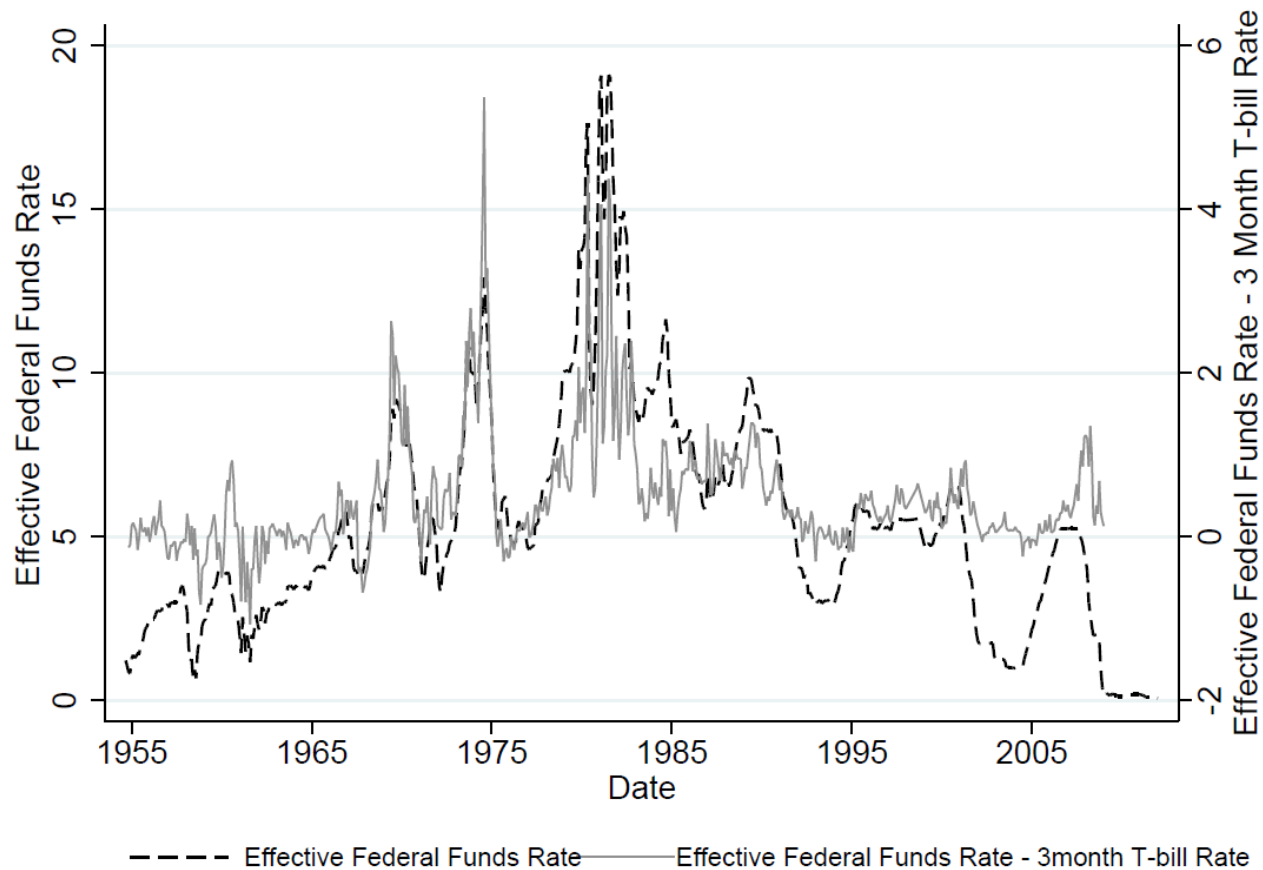
Weekly Average Rates of EFFR, OBFR, and IOER



Data Source: Federal Reserve Bank of St. Louis

# Post-crisis world: Debt to Non-banks

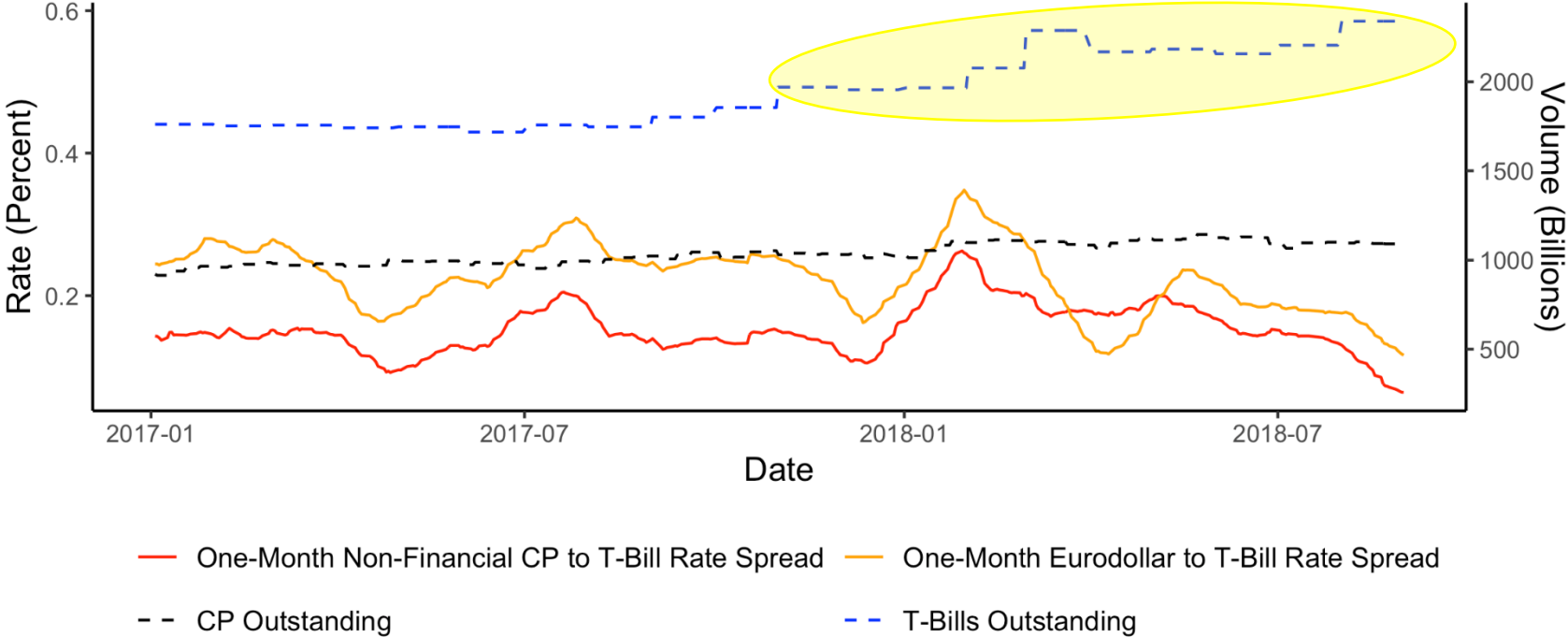
- Initially, reserve reduction shifts composition of available assets
  - More Treasury bonds
  - Less bank deposits
  - On net, increase in effective quantity of safe debt
- Later, when reserves market is tight ( $EFFR > IOER$ ):
  - Reduces bank deposits more than one-for-one with increase of Treasurys
  - Scarcity increases safe debt spreads
  - Concern is shadow banking fills the gap



Source: Duffie and Krishnamurthy (2016)

# Safe debt spreads recently

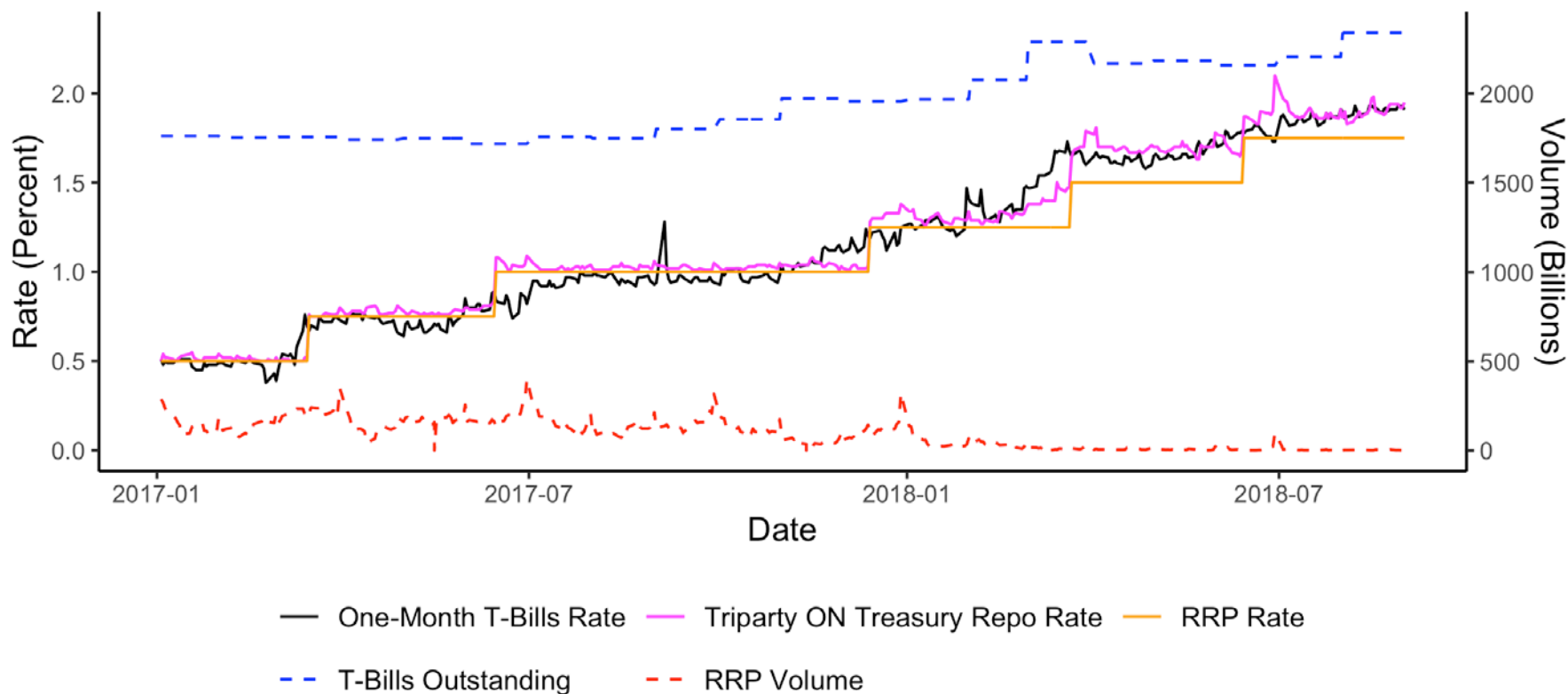
## CP, Eurodollar, and T-Bills Rate Spreads (30-Day MA) and Volumes Outstanding



Data Source: Bloomberg, Federal Reserve Bank of St. Louis, SIFMA

# T-bill supply has reduced RRP usage

## Rates and Volumes on the Treasuries Market

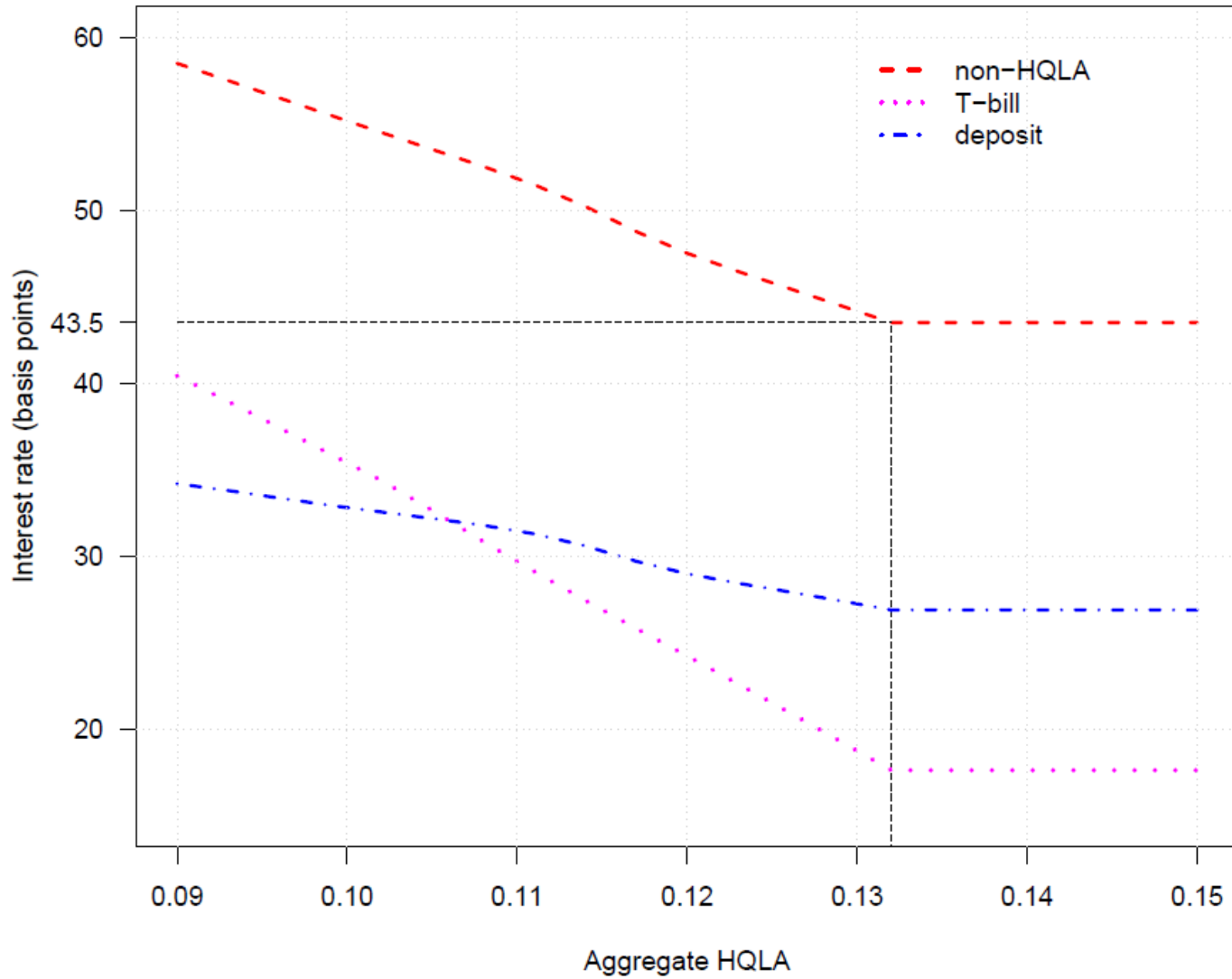


Data Source: Federal Reserve Bank of New York, Federal Reserve Bank of St. Louis, SIFMA



# Post-crisis world: HQLA

- If T-bill rates are less than IOER, then reserve reductions reduces effective HQLA
  - If LCR binds, then equilibrium rates will be altered



Source: Duffie and Krishnamurthy (2016)

# Post-crisis world: HQLA

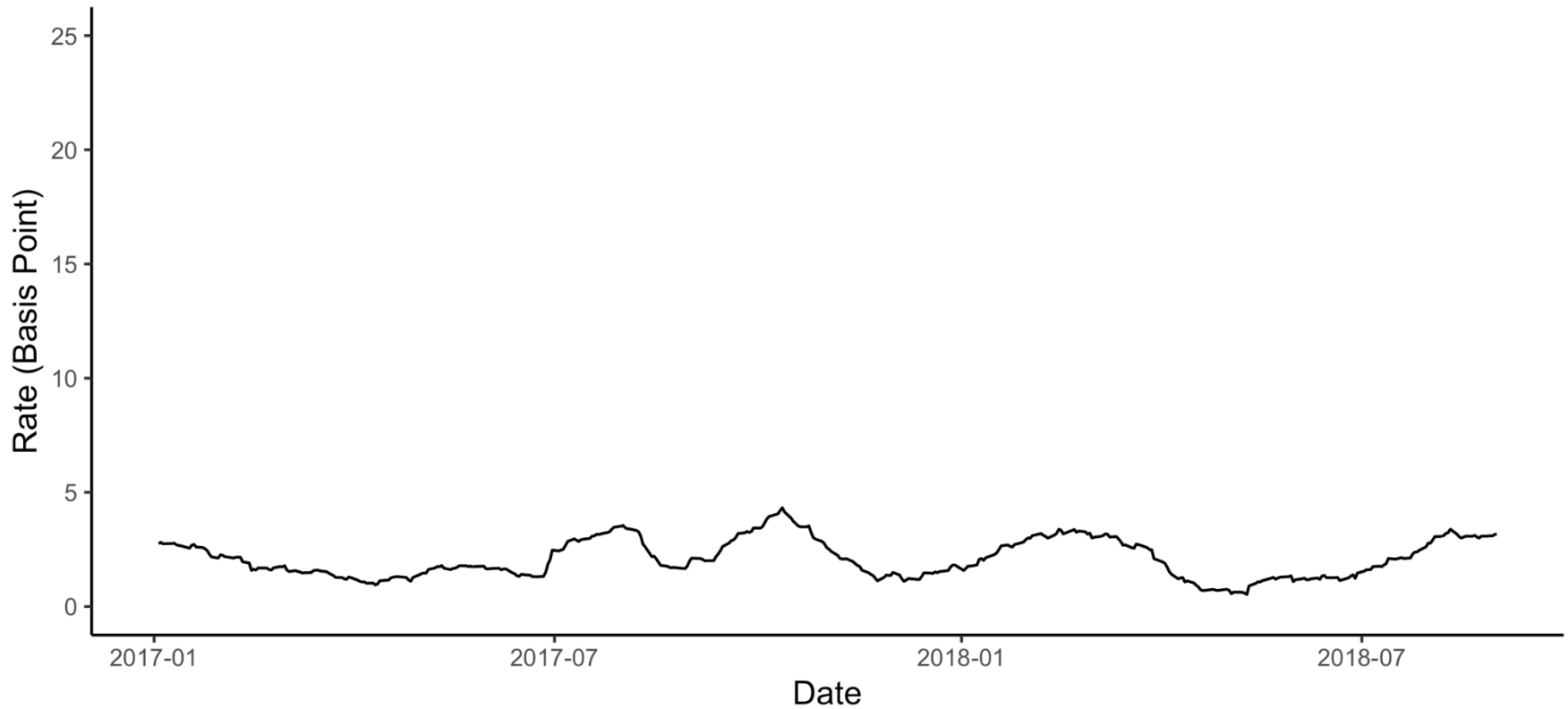
- If T-bill rates are less than IOER, then reserve reductions reduces effective HQLA
  1. If LCR binds, then reserve reductions lead to a tightening of monetary policy for a fixed IOER
    - Wider debt spreads .... Shadow banking fills the gap
  2. If LCR binds, demand for reserves becomes volatile
    - LCR requirements are on order of magnitude larger than reserve requirements
    - Fluctuations in the degree to which LCR binds drive random demands in HQLA, which if they are realized within a day lead to high frequency fluctuations in demand for reserves

# Post-crisis world: HQLA

- If T-bill rates are less than IOER, then reserve reductions reduces effective HQLA
  - If LCR binds, then equilibrium rates are higher and more volatile
- If T-bill rates exceed IOER, then reserve reductions are closer to neutral
  - Both reserves and Treasurys are level 1 HQLA
    - Possible impact through the maturity structure of Treasurys
  - High frequency concern remains

# Is HQLA impinging on LCR?

Monthly Moving Average of MBS-Treasury Repo Spread



Data Source: DTCC

# Summarizing: As reserves fall

- Scarcity in interbank market
- Possible scarcity in non-bank availability of safe-debt
  - Eased by increase in T-bill supply
- Possible scarcity in HQLA
  - Eased by increase in T-bill supply
  - Volatility concern indicates Fed should leave substantial excess reserves in the system