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Rates Research

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Liquidity regulation: How much is enough?

Regulatory focus: Liquidity

- One of the key lessons learned during the financial crisis was the importance of thick liquidity buffers for banks
  - To access when short-term financial markets (secured and unsecured) seize up and investors run
  - For example, large banks have LCR while money funds are required to hold 30% of their assets in securities with less than 7d maturities

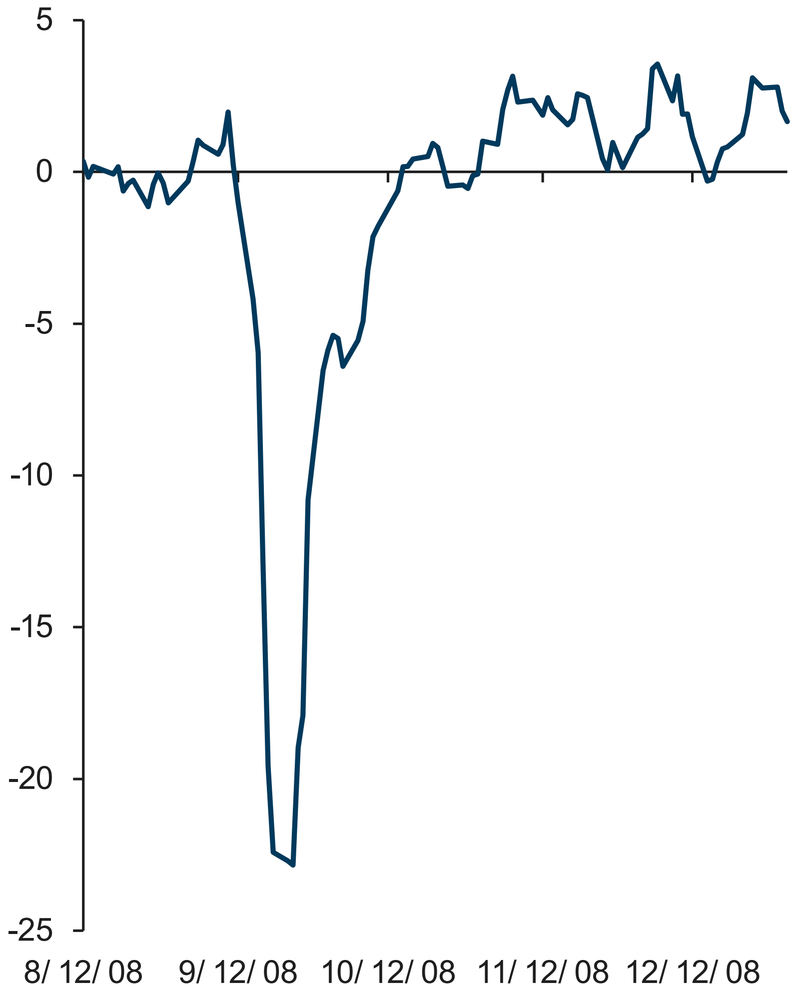
- *Can a future financial crisis be averted if banks, dealers, and money funds have thick buffers of easy-to-sell assets to meet their own needs as well as redemptions?*

How much liquidity is enough for banks?

- The Federal Reserve estimates that institutions covered by the LCR will need $2.5trn in HQLA
  - These institutions already have $2.4trn
    - Most of this is in the form of cash held at the Fed – Level 1 HQLA
    - Cash balances at the largest 12 domestic banks exceed $1.5trn
  - And 70% of covered institutions are already fully LCR-compliant – two years ahead of the mandatory deadline

How much liquidity do money market funds need?

Prime fund balances (%)



Note: Cumulative 7d decline in balances as a percent of the previous day's balance. Source: Crane's Data and Barclays

- In September 2008, cumulative 7d redemptions from prime funds reached $385bn
  - Peak 7d redemptions in prime funds reached nearly 25% of balances
    - However, some funds experienced much larger percentage redemptions
  - *Prime funds currently hold 38% of their assets in securities under 7d maturity*
- Moreover, having large liquid buffers does not prevent investor flight
  - Although it does minimize the damage from runs

Liquidity regulations are changing bank borrowings…

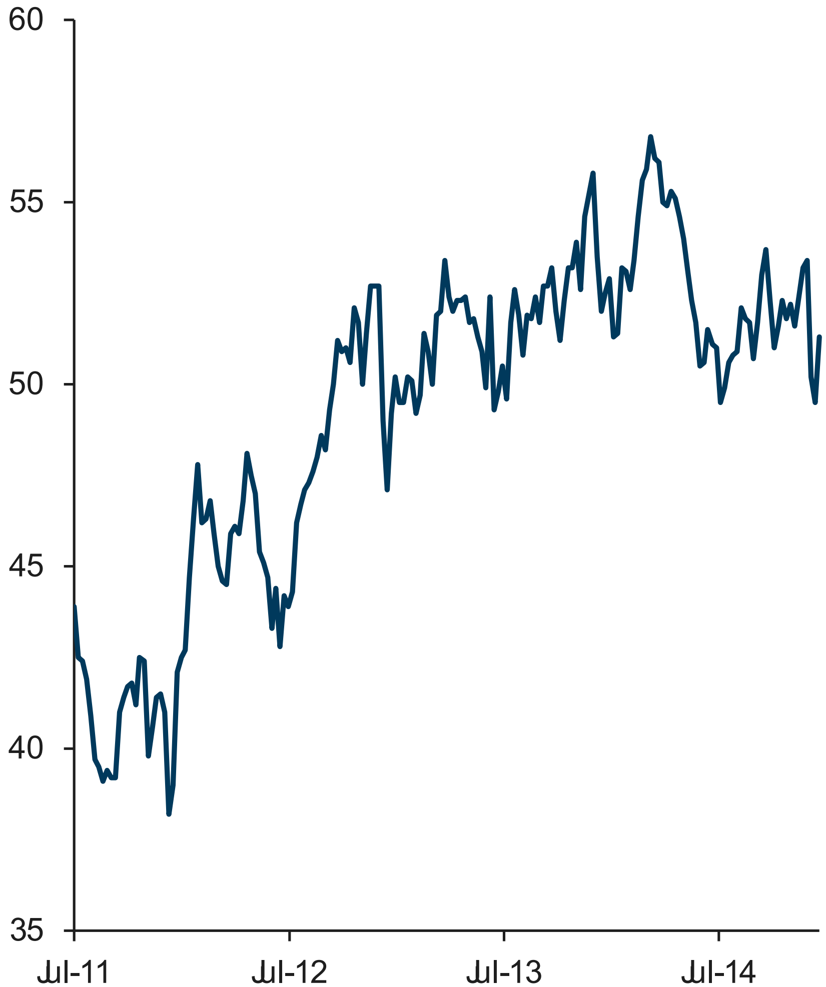
- Banks are slightly less inclined to issue short-term (under 1m) CP
  - Overall CP WAMs are lengthening

- Banks are shifting toward more LCR-friendly debt
  - By issuing more term debt (1y and longer)
  - And issuing more structured paper that allows the issuer to redeem (and extend) before the 30d LCR “hot zone” is breached
    - This type of paper fell out of favor during the financial crisis
      - Investors forced banks to bid back this paper (as well as longer-dated CP) even though banks were not contractually obliged to do so

  - *But banks still issue heavily in shorter, LCR-unfriendly maturities, given the rate spread to IOER*

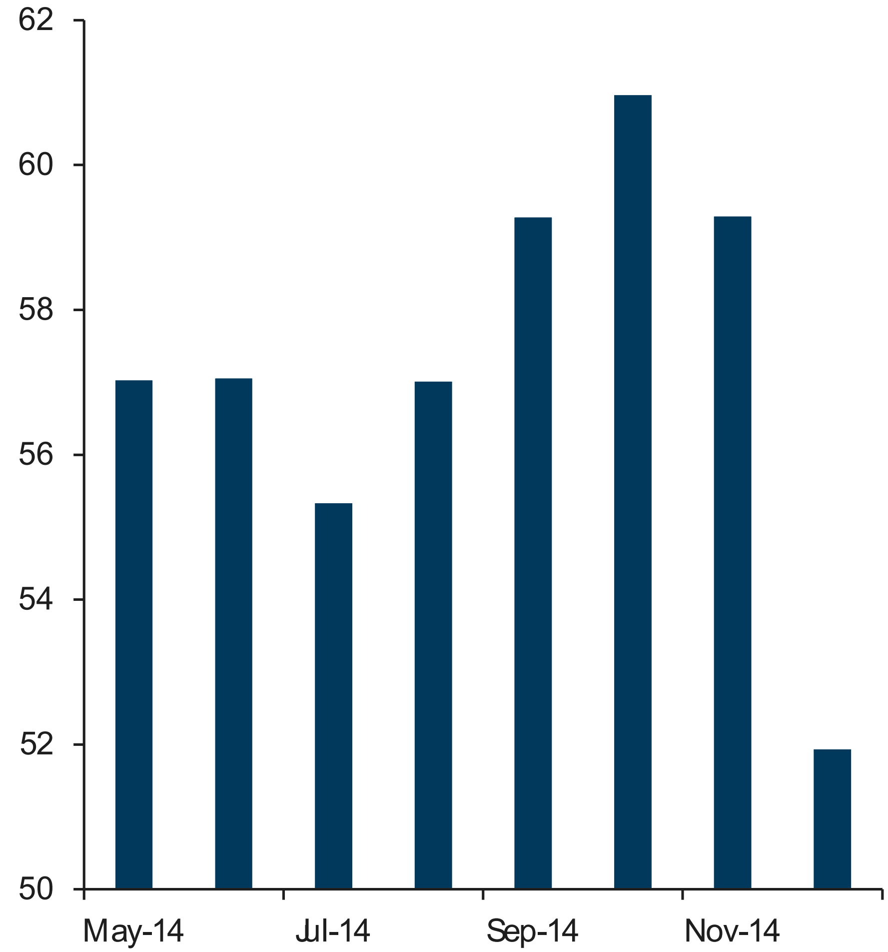
…and lengthening borrowing maturities*

All CP WAM (d)



Source: Federal Reserve

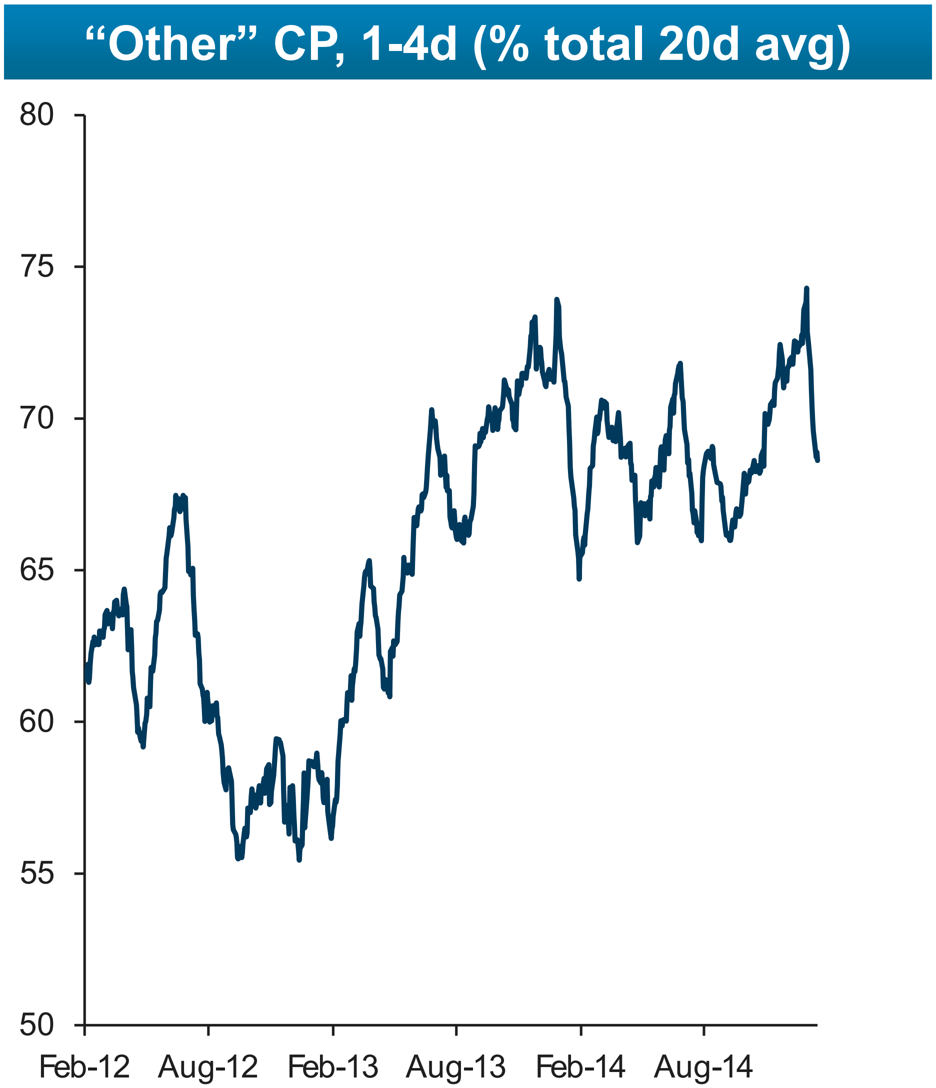
Est. Financial WAMs (d)



Note: Estimated from volume weighted data on CP and CD holdings in prime institutional money funds. Source: Crane's Data and Barclays

* Except, apparently, at year-end, when bank unsecured new issuance dries up

Although banks still issue heavily in the overnight market



Note: Other is defined as the residual left from subtracting all AA-rate CP from the Fed's total. Much of this paper is financial. Source: Federal Reserve and Barclays

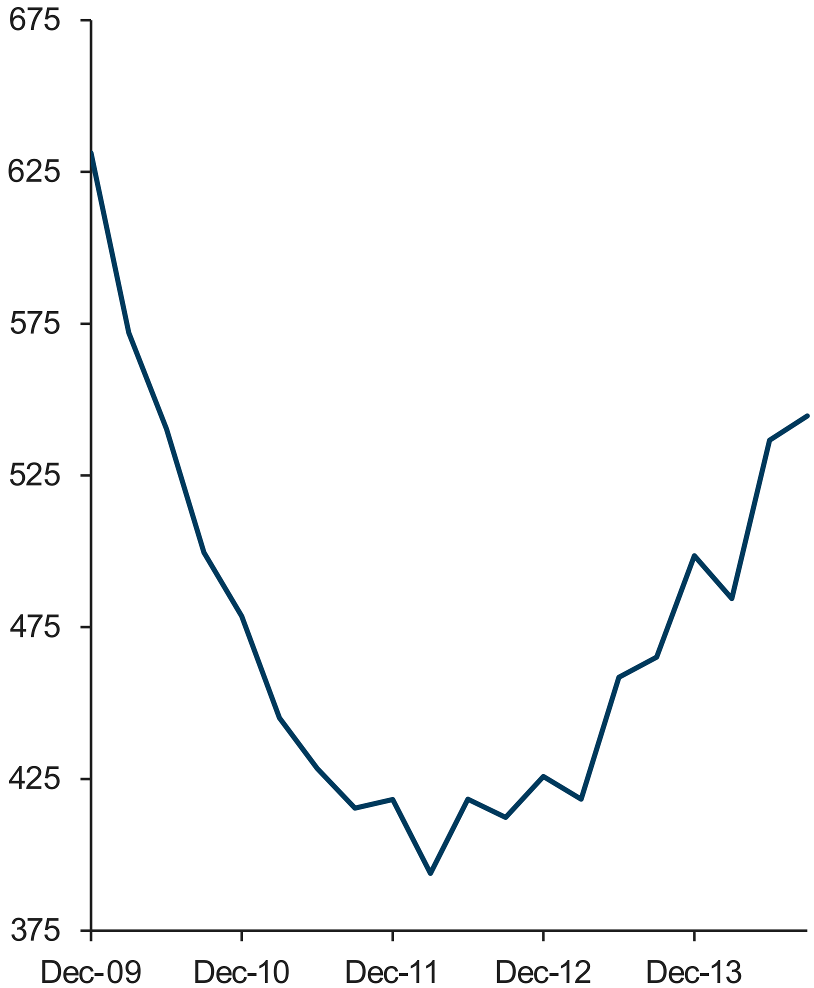
- Despite its "LCR-unattractiveness" banks are still issuing large amounts of overnight CP
  - Nearly 70% of the average daily issuance of $60bn
- Banks are using this issuance to arb IOER

LCR – the "new" reserve requirement

- The LCR limits the investment "degrees of freedom" for large banks
  - Constraining asset allocation
  - And limiting asset growth like reserve requirements used to do in the old fed funds monetary policy regime
- But unlike reserve requirements, banks are not limited to just holding vault cash and reserves at the Fed
  - They can invest in Treasuries

There are other ways to meet HQLA demand

FHLB advances ($bn)

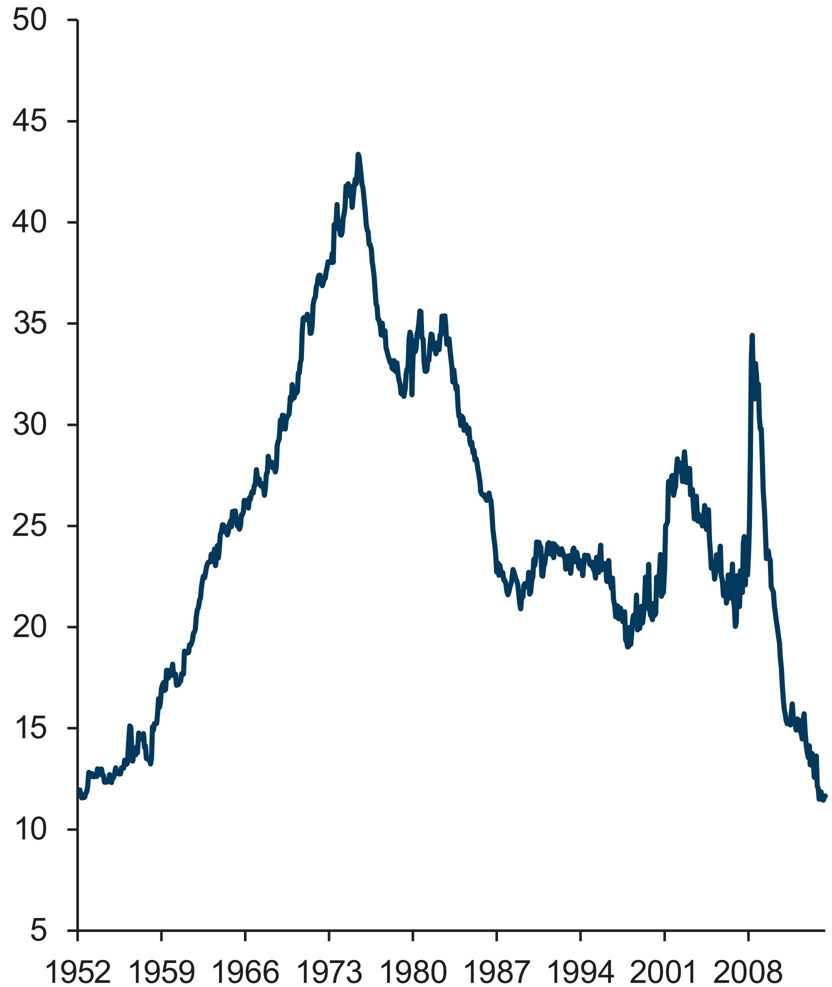


Source: FHLB quarterly reports and Barclays

- Some banks have been able to "transmute" non-HQLA assets by borrowing from the FHLBs and using the cash to buy Treasuries

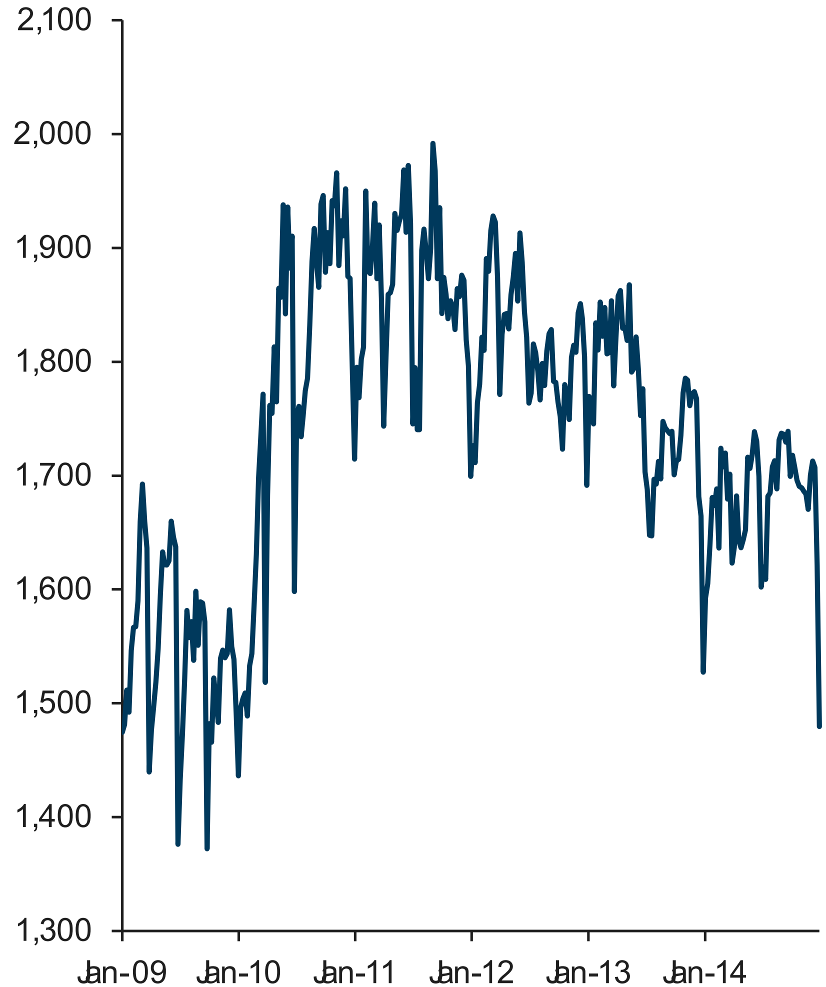
Money funds scramble for short-term investments…

Bills outstanding (% total TSYs)



Source: US Treasury

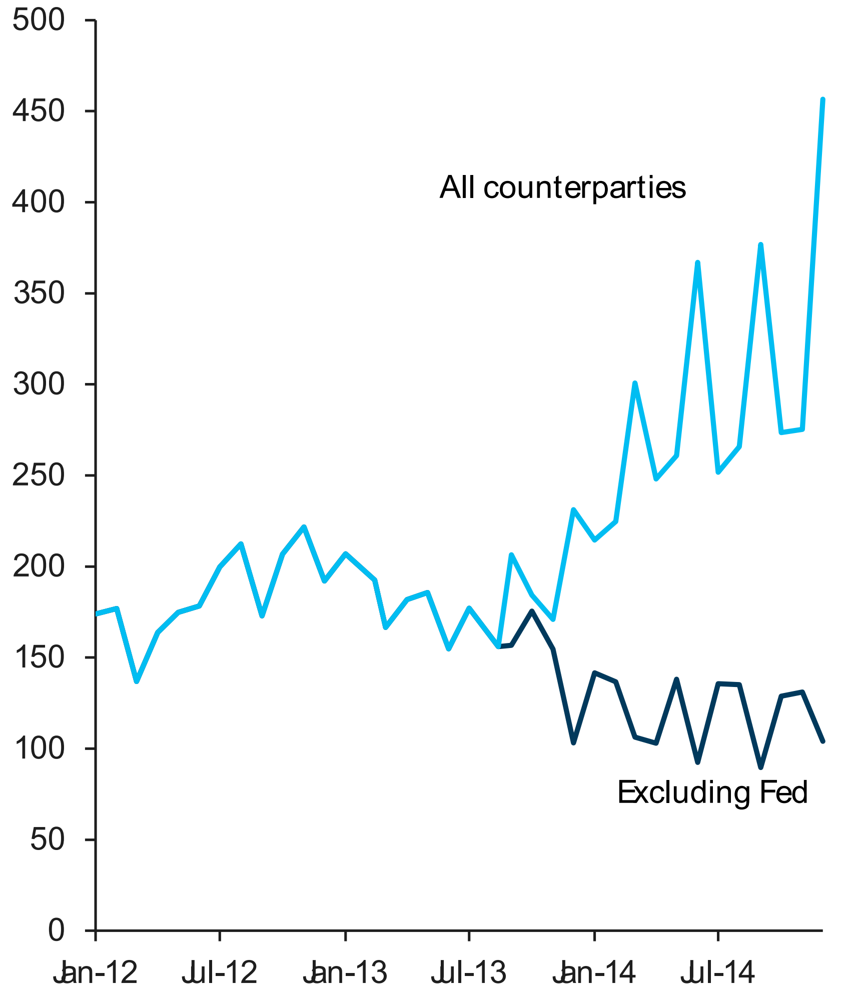
Repo from primary dealers ($bn)



Note: Against government collateral. Source: Federal Reserve

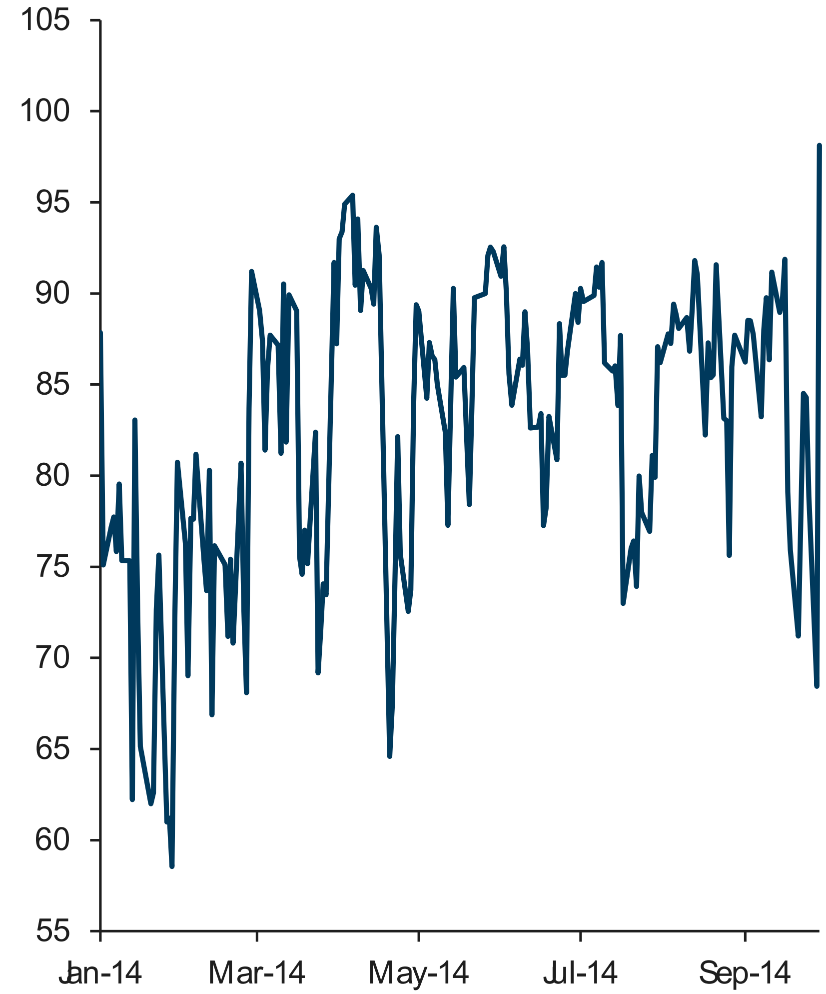
…and use the Fed's RRP program heavily

MMF TSY repo holdings ($bn)



Source: Crane's Data and Barclays

MMF RRP participation (%)



Source: Federal Reserve

Does the Treasury need its own liquidity buffer?

- Should the Treasury maintain a "prudent level of structural cash" to minimize the risk from a disruption in its access to funding markets?
  - In the past 10 years, weather, terrorist attacks and computer malfunctions have prevented the Treasury from auctioning debt on several occasions
    - Since 2009, the Treasury has maintained an average daily cash buffer of \$60bn
      - Although the Treasury targets higher quarter-end cash balances of around \$140bn
    - But its peak 5d cash outflow on Medicare, principal and interest payments has exceeded \$300bn

- An extra cash cushion would smooth out the "accordion-like" pattern in seasonal bill issuance
  - But it raises political issues with respect to how binding the debt ceiling is meant to be

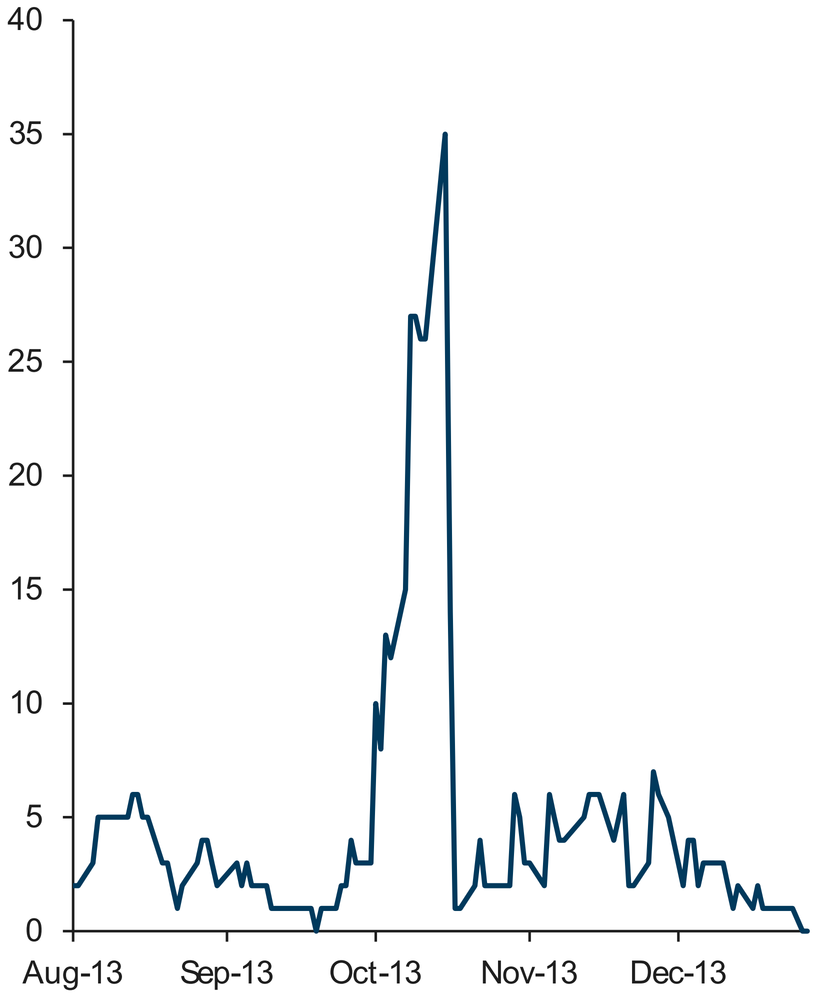
Changing dealer behavior in the bill market

Changing dealer behavior in the bill market

- Dealer activity in the bill market has changed in the past two years:
  - Lower trading volumes
  - Smaller inventories of bills
  - But, higher auction participation

Liquid security or liquid market?

4w bill yields (bp)



Source: US Treasury

- A liquid security, however, may not be liquid in all market conditions, as the October 2013 debt ceiling disruption showed
  - Bill yields spiked as investors avoided issues that matured in October
  - Market-making activity declined

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