BMO Capital Markets

Fixed Income Strategy

Mixed Messages in Money Markets | March 2019

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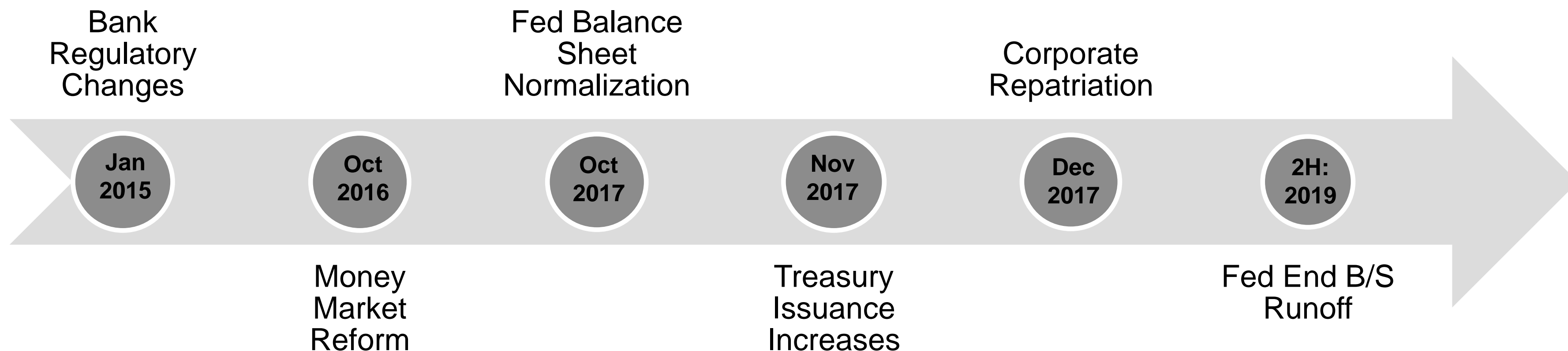
Top Seismic Shifts Impacting Money Markets



- Supply and Demand Channel - Pull and push between large amounts of cash being put to work and the supply of investment alternatives in money market space

Federal Reserve Intervenes to Keep Control of Target Rate

Seismic Shift #1: Bank Regulatory Reform

- Supplementary Leverage Ratio (SLR) - Tier 1 Capital to Total Leverage
  - Low risk assets have the same capital charge as higher risk, higher yielding assets
  - Impacted broker dealers as they hold a large amount of low-risk assets
  - Increased the cost of balance sheet intensive products – repo
  - Repo balances declined dramatically
  - Decrease in repo available as an asset class pushed investors to increase bill allocations
  - Timeframe – finalized in 2014, public disclosure 2015, implementation 2018

Source: BMO CM, Federal Reserve Bank of NY

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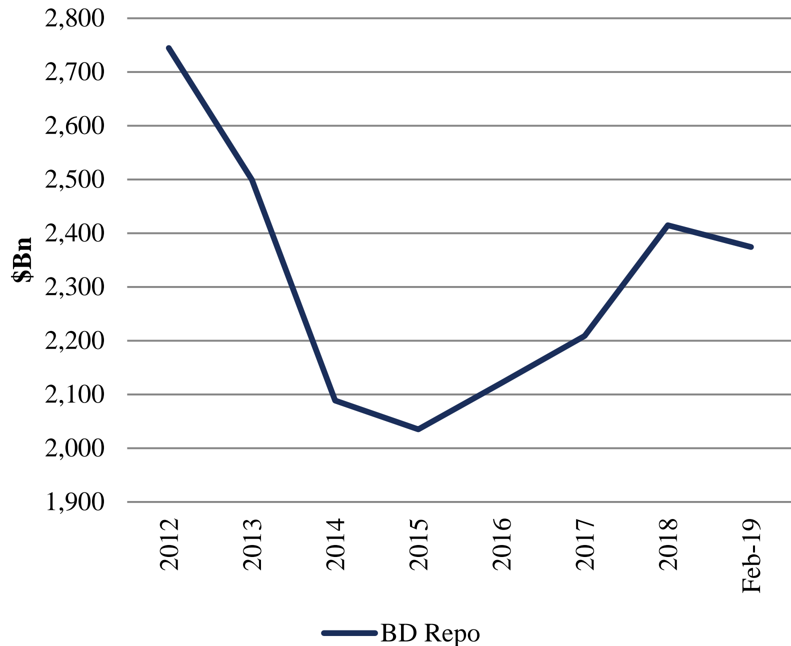
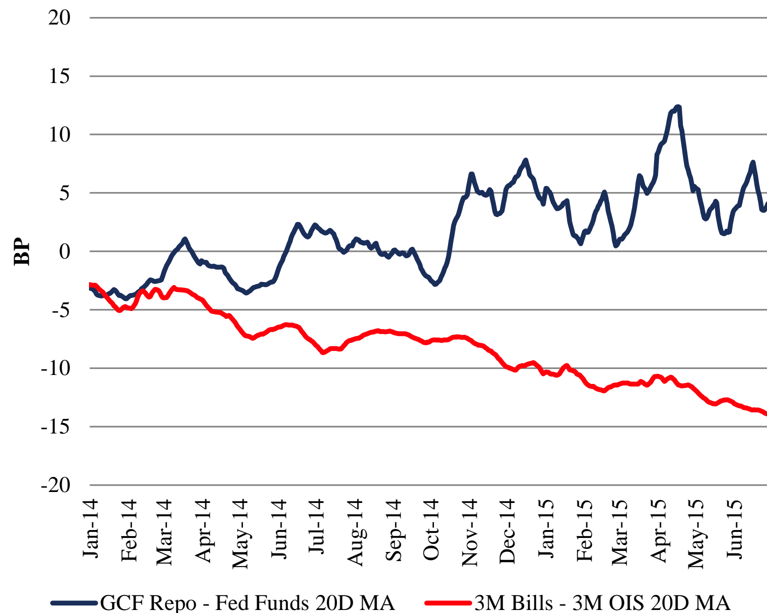
Seismic Shift #1: Bank Regulatory Reform

BD Repo Balance Fall due to Reform



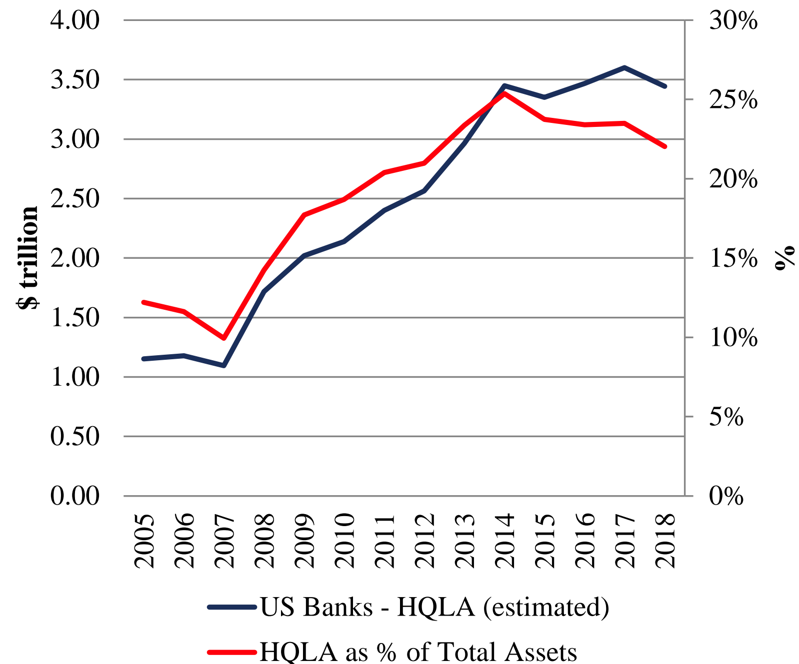
Repo Rates & Bills Yields



Source: BMO CM, Federal Reserve Bank of NY, Bloomberg

Seismic Shift #1: Bank Regulatory Reform

- Liquidity Coverage Ratio (LCR)
  - Banks required to hold large buffers of liquid assets to survive 30 days of funding stress
  - Increased demand for high quality liquid assets (reserves & Tsy)

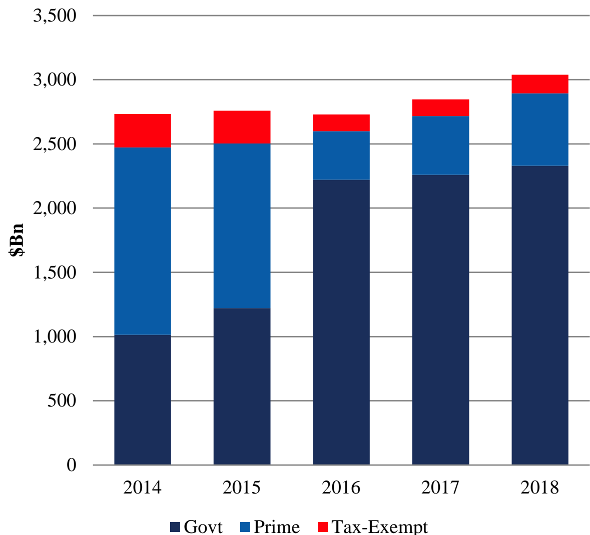


Source: BMO CM, Federal Reserve Bank of NY

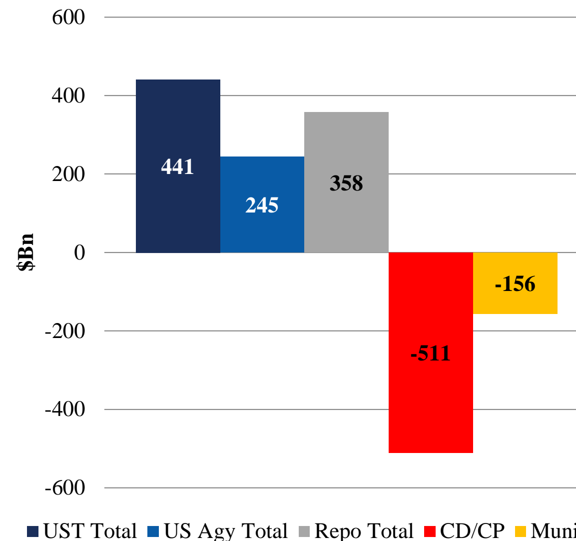
Seismic Shift #2: Money Market Reform

- Floating NAV, gates & fees for non-gov't = Shift out of prime and into Govt MMF

Shift from Prime & Tax-Exempt to Gov't



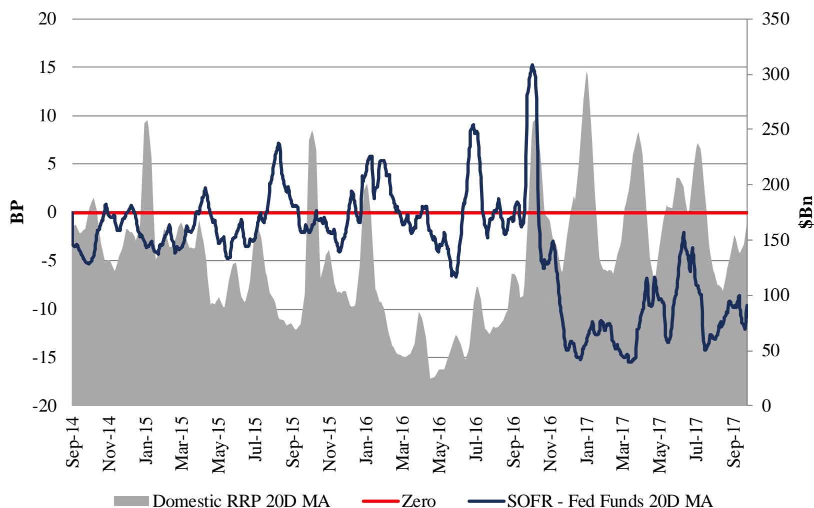
MMF Holdings – Chg 2014-2018

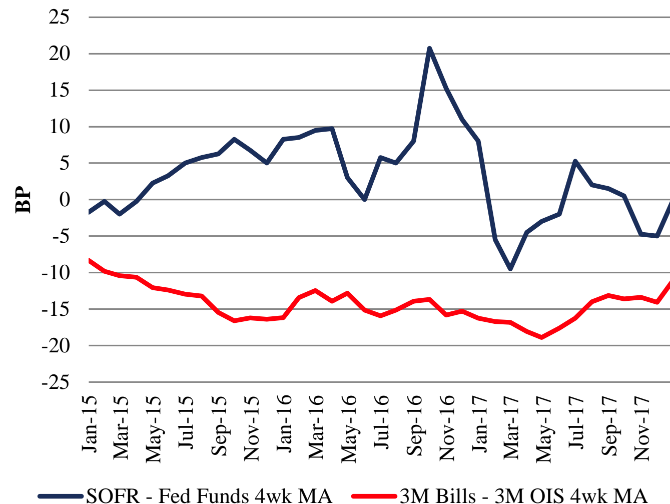


Source: BMO CM, ICI

Implications of Money Market Reform

- Increased MMF demand for short Treasuries, agencies and repo = oversupply of cash seeking eligible investments – decreased repo rates and bill yields
- Fed RRP Facility –mopped up the excess supply of cash seeking a home





Source: BMO CM Bloomberg

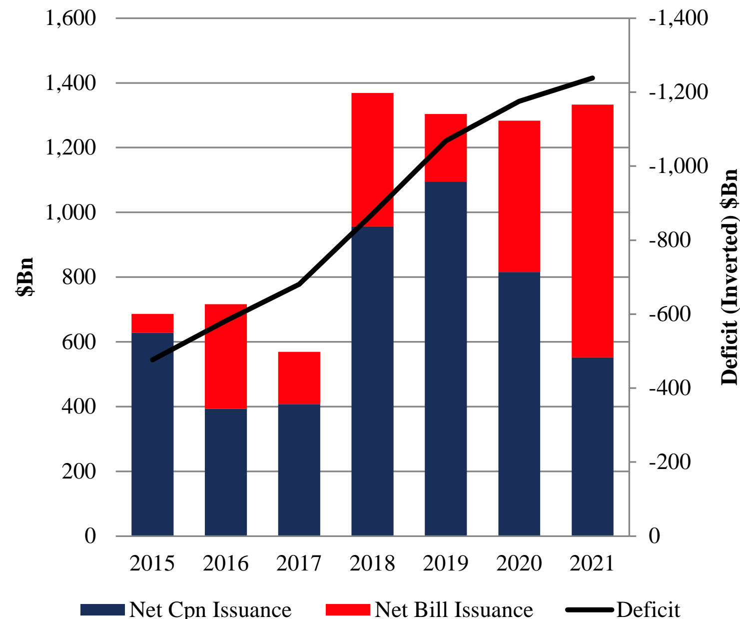
Money Market Reform Update

- Proposal to reverse some portions of money market reform
  - Floating NAV increased borrowing costs for municipal borrowers - large decrease in tax exempt money market funds holdings forced municipal borrowers to issue higher cost fixed rate securities
  - Many state and local governments can only invest in stable NAV money funds, so money market reform forced them into lower yielding US government funds
- Allows MMFs to elect to use the stable NAV approach instead of floating NAV to calculate their share price and to choose not to be subject to the mandatory liquidity fees
- Status – introduced but not enacted, bill died in the previous Congress

Seismic Shift #3: Heavy Treasury Issuance

- Net Tsy supply >$1 trillion per year
  - Deficits
  - Replacement Needs due to Fed B/S rundown
  - Basically, prior Fed purchases had financed some part of the prior deficits. The amount of SOMA runoff has to be refinanced into the public markets.
- Heavy Coupons and Bills
  - Holds current coupon auction sizes constant, so the funding difference is made up with net bill issuance.
  - Therefore, auction size increases are likely in 2021 at current deficit projections unless Fed starts buying bills.

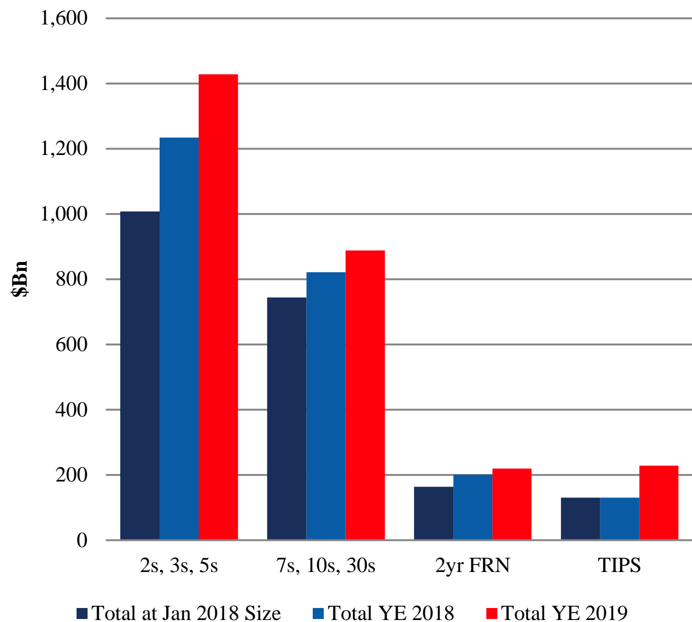
Heavy Net Treasury Issuance Set to Continue



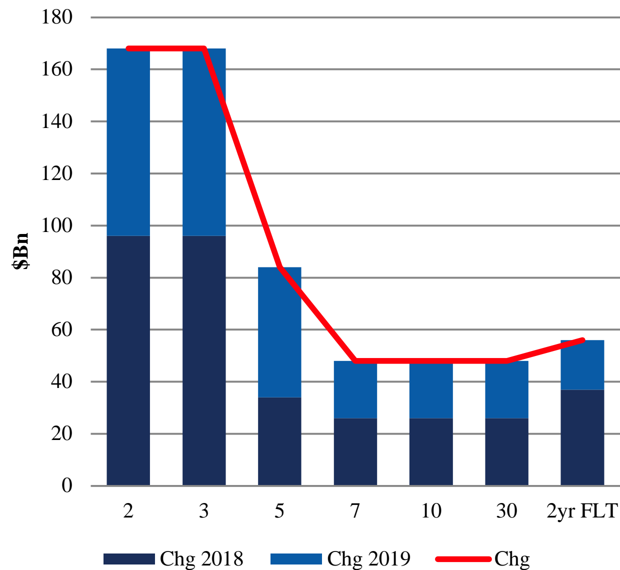
Source: BMO CM, CBO, Treasury

Treasury Supply – Front-End Weighted

Gross Issuance by Term Bucket



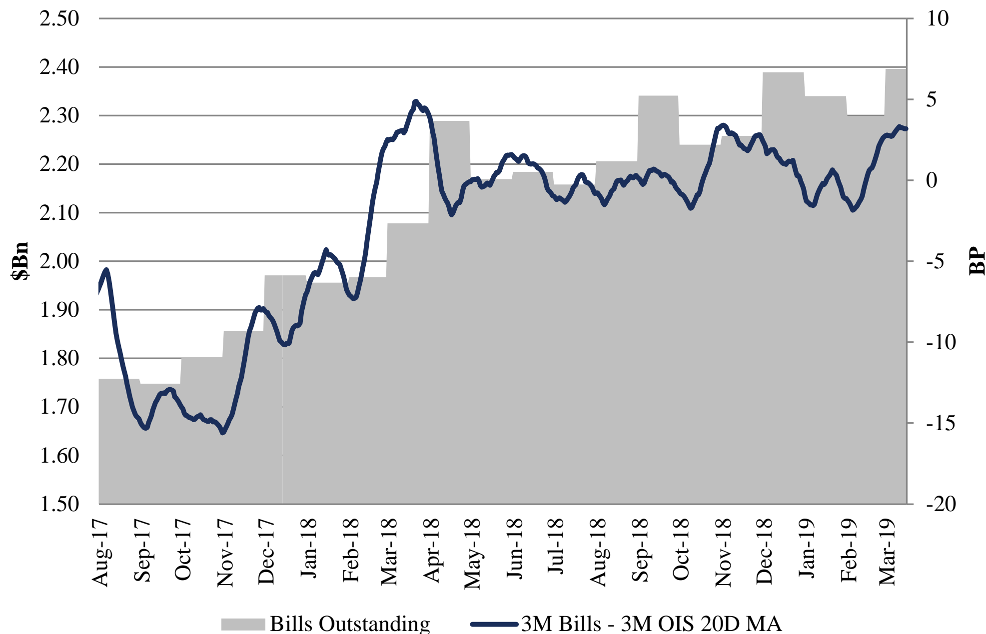
Issuance Increase from Auction Size Change



Source: BMO CM, CBO, Treasury

Impact of Heavy Treasury Issuance

- Increased bill supply pressured bill yields higher vs. fed funds



Source: BMO CM, Treasury, Bloomberg

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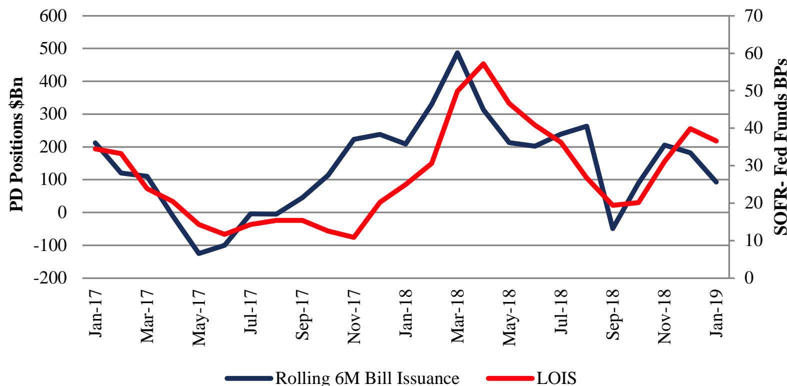
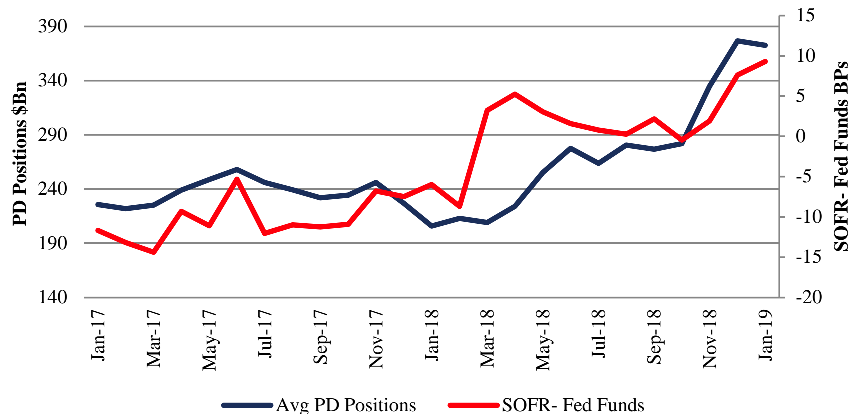
Impact of Heavy Treasury Issuance

- Periods of crowding out from Treasury Debt
  - Increased bill supply crowds out other money market investments
  - Increased coupon supply increases collateral, pressuring repo rates higher

Q1:18 Heavy Bill Issuance Cheapened Front-End



Heavy Coupon Supply Increases Repo Rates

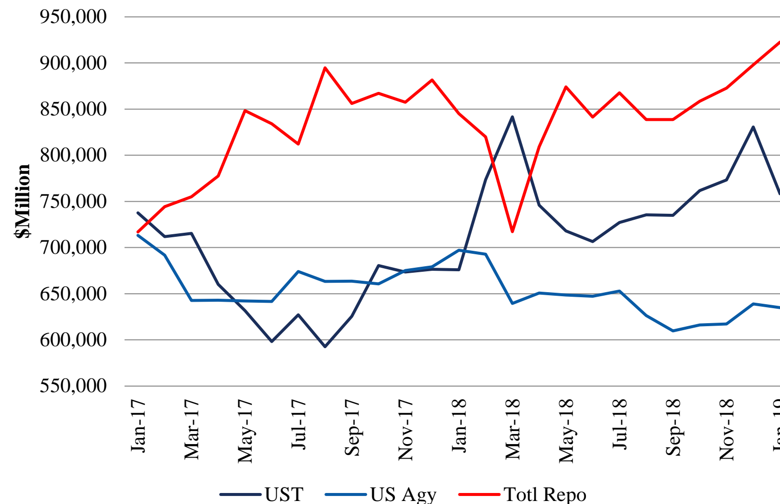


Source: BMO CM, Treasury, Bloomberg

How Does Bill Supply Crowd Out?

- Government MMFs fill up on the highest yielding assets first to the degree that they are available.
- They reallocate based on relative richness and cheapness in the marketplace within WAM goals.
- Their main asset classes are UST, US Agy and Repo.
- Increases and decreases in AUM impact the net demand for each asset class.

Gov't MMF Asset Allocation

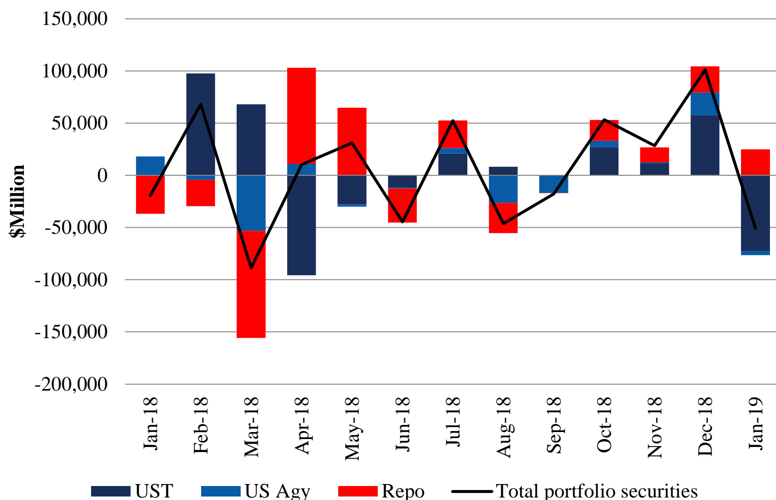


Source: BMO CM, ICI, Bloomberg

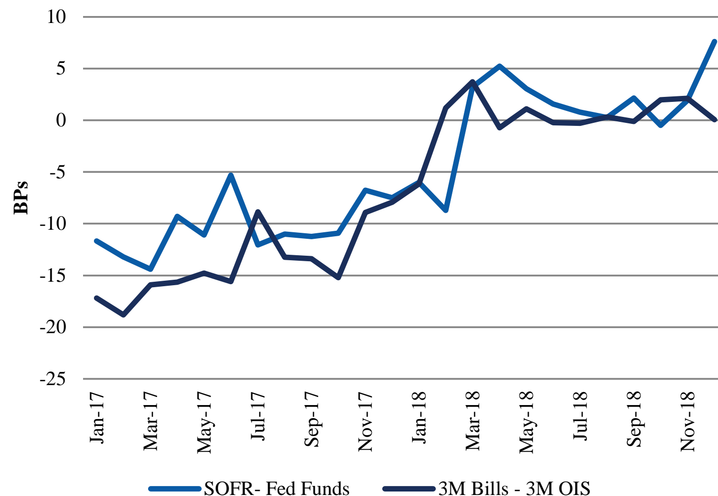
How Does Supply Crowd Out Impact Relative Yields?

- In Feb 2018 gov't MMF shifted into bills absorbing heavy issuance. They continued to increase bill holdings while decreasing agencies and repo as AUM declined. 3M bills moved higher than 3M OIS and repo rates moved higher than fed funds. We can also see the impact of heavy coupon supply on repo.

Gov't MMF Asset Allocation Change



Relative Money Market Yields



Source: BMO CM, ICI, Bloomberg

Implications Heavy Treasury Supply

- Excess collateral in system increases demand for repo financing pressuring money market yields higher all else equal
- Record levels of Treasury supply may crowd out other money market funding sources, increasing yields across the sector (basically, everyone else funds after Treasury, so higher Treasury yields mean higher yields for all other borrowers)
- Fed is likely to respond with a repo facility to mop up the excess collateral

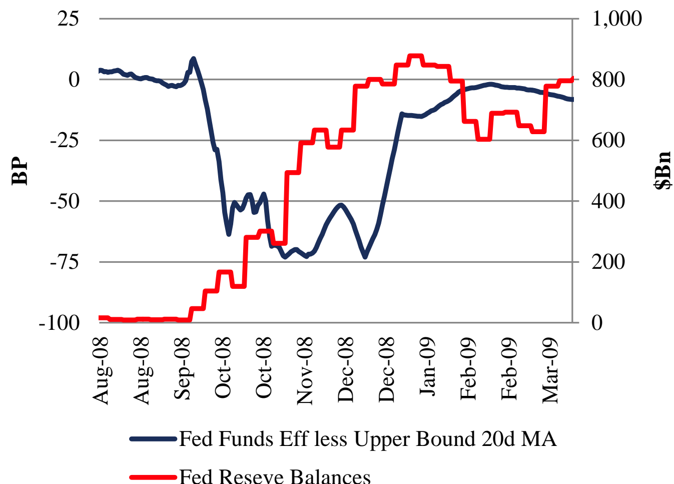
Seismic Shift #4: Fed Monetary & Operating Policies

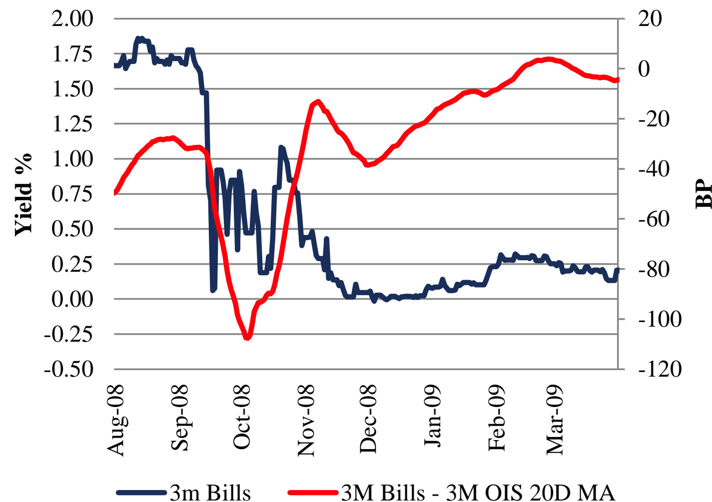
- In 2008, the Fed created a new, risk-free earning asset when it began paying interest on excess reserves.
- Paying interest on excess balances was done to help to regain control over the federal funds rate.
- This was especially important when reserves expanded during the financial crisis placing extraordinary downward pressure on the fed funds rate.

Source: BMO CM, Bloomberg

Fed Paying Interest on Reserves

- As reserves increased, the Fed lost control of the effective rate. In Oct 2008, they started paying interest on reserves, but the initial rate failed to get the effective rate under control, so they experimented a few times until the effective rate neared the target rate. There was substantial volatility in money market rates during this period.

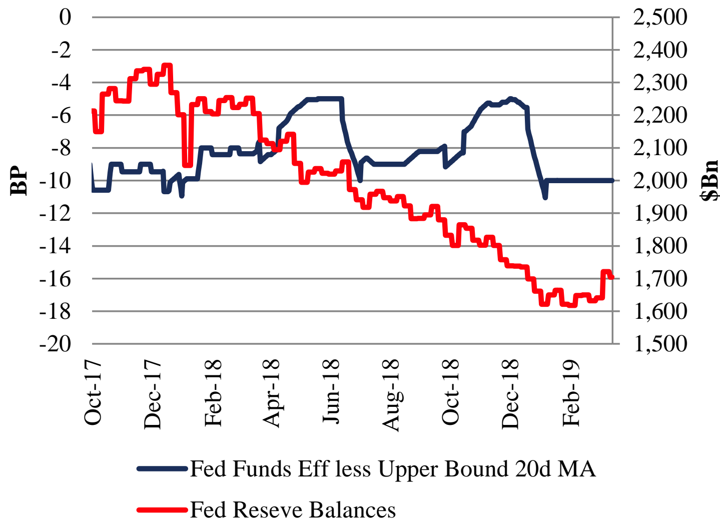


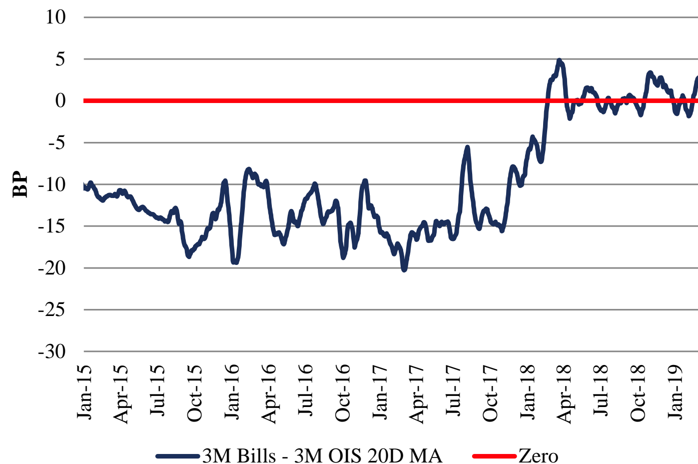


Source: BMO CM, Bloomberg

Fast Forward to Fed Balance Sheet Normalization

- The Fed started shrinking its balance sheet in Oct 2017, removing reserves from the system. This pressured fed funds effective higher – closer to the top end of the range. 3M Bills yields had been trading well below 3M OIS (proxy for term funds), but are now trading above the effective funds rate. Some of this is supply related.





Source: BMO CM, Bloomberg

Fed Responds – End Balance Sheet Normalization

- The decline in reserves coupled with the fed funds rate trading near the top of the range sparked concerns that reserves may fall below minimum bank demand. If this happened, some banks could find themselves short of reserves and have to borrow in the unsecured overnight markets, pressuring yields substantially higher than the fed funds rate.
- The Fed responded by changing its monetary policy operating framework to one with ample reserves to meet bank demand (January 2019). End B/S runoff.
- This results in high excess reserves to meet bank demand and lower Treasury bill issuance in the near-term as Treasury no longer has to replace runoff.

Problems Still Exists

- There is still too much collateral (Treasuries to be financed) in the system relative to the demand.

- Fed has been lowering IOER within the target range to keep fed funds from rising above target range, and fed funds now trading on top of IOER.

- Potential Fed Action
  - Continue to reduce IOER relative to the target rate – could happen without any changes to the upper bound.
  - Fed may implement a standing repo facility to address problem of excess collateral
  - Fed may buy bills once the balance sheet begins to grow again – which would probably coincide with increased Treasury issuance needs

Fed Monetary Policy & Intervention Actions - Implications

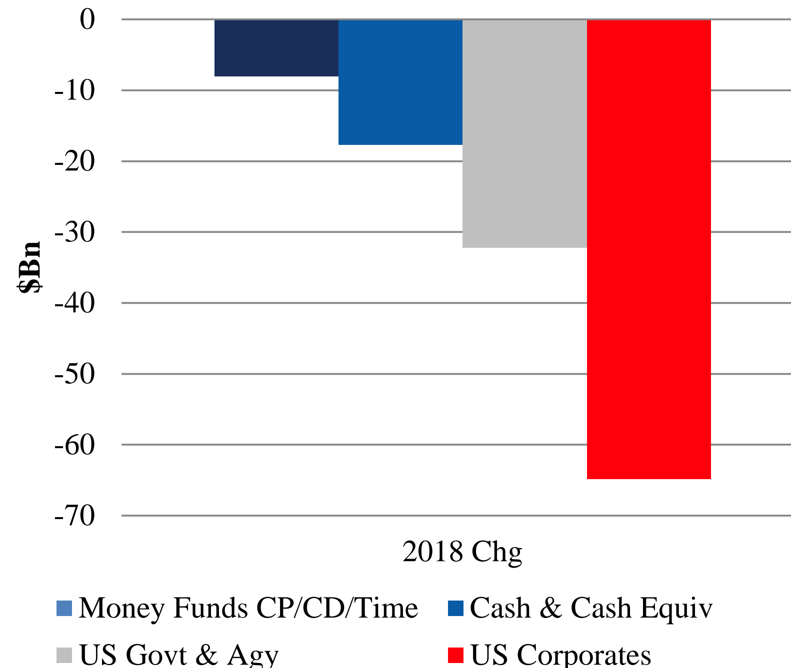
- Increase stability in money markets as reserve scarcity episodes become less likely
- Lower bill supply should reduce crowding out episodes
- Lower and less volatile money market yields on a relative basis

Seismic Shift #5: Corporate Repatriation

- Freed up foreign profits
- Profits were held in USD investments
- Largest holdings = corporate and Treasury securities

Corporate Repatriation

1. Reduced demand for these assets
2. Portfolio shedding added supply into the market as investment portfolios fell by $150bn to $600 bn since Q3:17
3. Results in choppy demand for money market products
   - Sell securities from investment portfolio = credit wider spreads
   - Park in ST money markets = vol in money market yields, but depends on flow concentration
   - Distribute to shareholders



Source: BMO CM, SEC Financials for Largest 10 Repatriated Portfolios

Summary of Mixed Signals in Money Markets

1. Treasury bill and coupon issue will continue to increase dramatically
2. Fed is likely to intervene to control the fed funds rate, adding stability to the marketplace.
3. However, sporadic periods of disequilibrium in the supply and demand channels will continue to result in periods of market volatility

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