Market-Based Corporate Lending

Growth of Corporate Bond Mutual Funds

Another lesson is that the success of the Fed’s corporate bond program to date should not be interpreted to suggest that reforms are not needed. Instead, the reforms are even more critical since they likely raised expectations of such interventions again in the future. But less intervention in private credit markets is important for the efficiency of financial markets: Financial markets will perform better without an expectation of future government support and interference. Less intervention is also important for preserving central bank independence for monetary policy. In the near-term, there may also be risks that arise from possible ambiguity about the Fed’s objectives. With an uncertain economic outlook, bond prices may well fall again if fundamentals were to deteriorate. Investors might be surprised if the Fed were not to accelerate purchases because it would purchase only if markets were to become dysfunctional again—an objective consistent with the traditional lender of last resort role. They instead might have come to the view that the Fed would respond to falling prices, an objective closer to monetary policy. While purchases could achieve both objectives, the ultimate success of the corporate credit program will be helped if investors know what to expect.

2. Corporate bond market

The corporate bond market has grown rapidly in the past decade, reaching about $9.6 trillion in 2019, up from $5.5 trillion in 2008. The investment-grade (IG) bond sector is about six times the size of the high-yield (HY) sector (Ohara and Zhou, 2020). Corporate bonds provide well over half of the debt financing for domestic nonfinancial corporate businesses, similar to the share in the UK and much higher than elsewhere in Europe.

As the corporate bond market has grown, ownership has changed dramatically. While insurance companies remain the largest holder, mutual funds increased their holdings more quickly and exceeded $2.2 trillion in 2020 Q1 (Figure 1). Net assets of long-term mutual funds that invest primarily in corporate bonds have risen substantially since 2008: investment-grade corporate bond mutual funds rose to $2.159 billion in 2019 from $738 billion in 2008, and net assets of high-yield corporate bond mutual funds rose to $337 billion in 2019 from $116 billion in 2008 (Investment Company Institute).

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3. Concern about financial stability risks associated with bond mutual funds:
   - Like banks they offer daily liquidity though underlying assets are illiquid
   - Forced sales could lead to price dislocations
   - Potential for spillover effects on leveraged financial intermediaries

Concern was borne out in the Covid crisis
Covid Crisis and Corporate Bond Mutual Fund Performance

- Very large redemptions from corporate bond mutual funds in early March (Falato, Goldstein, Hortacsu, 2020)
- Corporate bond mutual funds sell Treasuries and most liquid bonds to meet redemptions (Ma, Xiao, and Zeng, 2020)
- Selling pressure on Treasuries and investment-grade bonds results in large price declines, increase in corporate bond spreads – Flight away from quality
- Large price dislocations (Haddad, Moreira and Muir, 2020):
  - CDS bond basis for IG credit becomes very negative (spreads on bonds widen relative to CDS spreads)
- Dealers do not step in to arbitrage these pricing dislocations despite having (or perhaps because they have) small presence in corporate bond market
- Spreads tighten only when Fed announces bond-buying program
• ~150bn drop in money market fund assets, 30% drop in institutional assets; 10% drop in retail assets
• Top 10 prime institutional sponsors have $440bn of assets according to Crane’s MMF database. On average a 30% drop in assets in one month.
• Two large bank sponsors saw drops of 55% and 60% and provided support for their funds by purchasing assets
And another bailout

- **Money Market Mutual Fund Liquidity Facility (MMLF)**
  - Fed collateralized funding for banks to purchase paper held by money market fund as of 3/23/20
  - Collateral value based on amortized cost (not fair value or market value) and no haircut on funding
  - Treasury provides $10 billion of credit protection
  - Non-recourse to the borrower
  - About $54 billion of borrowing under the facility (about 1/3 of the drop in prime MMF assets)

- **Commercial Paper Funding Facility (CPFF2020)**
  - Fed lends to SPV to purchase term commercial paper
  - Reduces strain on commercial paper market indirectly helping MMFs
  - Relatively modest utilization (~$4 billion)
The bailout stopped the run

Large Outflows from Prime and Muni MMFs Abate after the Facility’s Inception

![Chart showing large outflows from Prime and Muni MMFs abating after the facility's inception.](chart1.png)

Notes: The lines represent the cumulative percentage flows starting March 2, 2020. The vertical bar marks the day of the facility’s inception.

Rates on 30-day Commercial Paper Ease

![Chart showing rates on 30-day commercial paper ease.](chart2.png)

Source: Board of Governors of the Federal Reserve System.

Notes: AA ABCP is asset-backed commercial paper. CP is commercial paper. The vertical bar marks the day of the facility’s inception.

New Facility Drives NAV Recovery

![Chart showing new facility drives NAV recovery.](chart3.png)

Notes: This chart plots the tenth percentile of the net asset value (NAV) of domestic prime and muni MMFs. The vertical bar marks the day of the facility’s inception.

The Indirect Effects

Offshore USD MMFs are funds domiciled abroad that, similarly to domestic MMFs, invest in dollar-denominated money-market instruments with short maturity and high credit quality; also similarly to domestic funds, they can be broadly classified into government and prime funds, depending on whether they hold mainly public or private debt. They mainly cater to institutional investors.

As the charts below show, from March 4 to March 23, offshore USD prime MMFs lost $90 billion of their AUM (23 percent of the industry size), whereas offshore USD muni MMFs saw losses of $63 billion (27 percent of their industry size).

The SEC MMF Rule Implemented in 2016

- Floating NAV for institutional prime and institutional municipal funds; fixed NAV preserved for all other funds

For all funds except Treasury and Gov’t funds:

- Liquidity Fees
  - MMF can, at its discretion, impose fee upon redemption of up to 2% if liquid assets fall below 30%.
  - If liquid assets fall below 10% they are “required” to impose a fee of 1% unless they decide they want a higher fee or no fee.

- Redemption Gates
  - If liquid assets fall below 30%, MMF can prevent redemption for up to 10 days
Floating NAVs did not make prime MMFs less run-prone

“During times of stress, it [Floating NAV] will reduce much of the economic incentive for shareholders to redeem shares ahead of other investors at a stable net asset value when the market value of portfolio holdings fall and will reduce shareholder dilution. As such, the risk of heavy share redemptions should decrease, and shareholders will be treated more equitably as they absorb their proportionate share of gains, losses, and costs. “

-- There is still an incentive to get out early before MMFs are forced to sell their less liquid assets at market (fire-sale) prices

-- Institutional investors in MMFs were not risk-intolerant and ran

“An additional motivation of this reform is that the floating NAV may make it more transparent to certain of the impacted investors that they, not the fund sponsors or the federal government, bear the risk of loss.”

-- Investors do not bear a risk of loss. Indeed, money flowed back into the industry. Some funds now are larger than they were before the pandemic.
Fees and gates may have made prime MMFs more run-prone

“Fees and gates provide funds and their boards with additional tools to stem heavy redemptions and avoid the type of contagion that occurred during the financial crisis by allocating liquidity costs to those shareholders who impose such costs on funds and by stopping runs.”

-- Fear of gates and fees may have increased the incentive to run

SEC’s 2016 Regulation Reduced the Prime MMF Sector

Figure 3. U.S. Money Market Fund Assets

U.S. Money Market Fund Assets
(in trillions of US dollars)

Source: S.E.C., Haver.
Policy Options for MMFs

Fundamental Reform Options
• Require MMFs to issue a subordinated share class that takes first loss
  – Hanson, Scharfstein and Sunderam (2015) estimate that subordinated shares equal to 4% of MMF assets would be enough to reduce the risk of a loss on senior MMF share class to levels consistent with bank default probabilities (0.1%)
  – Given relatively low risk of MMF assets, the cost of the subordinated share class is only about 125 bps over risk-free rate
  – Thus, senior MMF shares only pay about 6bps for the capital buffer (4% x 125 bps)

• Require MMFs to purchase private backup liquidity facility from banks
  – Banks would have to hold capital and liquidity against these facilities

More Modest Reform Options
• Enhanced capital and liquidity rules for bank sponsors of prime institutional MMFs

• Adjust liquidity rules
  – Eliminate gates and fees
  – Allow (encourage) MMFs to go below the 30% threshold in stressed conditions
Policy Options for Bond Mutual Funds

- Enhanced liquidity regulation
  - Bond funds should be required to hold more liquidity

- Swing Pricing
  - In theory, investors should internalize the cost of redemption
  - In practice, Jin et. al. (2021), using data from UK FCA, document that swing pricing was effective in stemming redemption from open ended bond mutual funds in the UK during periods of stress (2006-2016)
    - Funds that switched to swing pricing experienced less redemption during periods of stress
    - The same investor redeems less from funds that use swing pricing