MOODY'S INVESTORS SERVICE

Credit Risks in Turbulent Times

SECTOR IN-DEPTH
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Cross-Sector – US

Fed opens multiple taps to keep liquidity flowing and dampen coronavirus disruption

Summary

Over the last several weeks the Board of Governors of the Federal Reserve (the Fed) has taken a series of actions and rolled out a wide range of tools to offset the funding difficulties and liquidity challenges of financial institutions, corporate borrowers and municipalities brought on by the coronavirus pandemic (see Appendix, page 9 for details on key measures). The Fed's swift and far-ranging actions surpass those it took during the global financial crisis of 2007-08 and signal its intent to take all available measures to maintain liquidity in the financial system, keep credit available and prevent funding dislocations from raising insolvency risk, further weakening the economy.

Monetary policy and quantitative easing (QE4) will help stem the drop in overall market liquidity. This will ease the pressure on companies, financial institutions and municipalities scrambling to raise cash to buffer financial stress and operational disruptions.

Resumption and expansion of Fed's 13(3) funding facilities will provide liquidity support for new lending and the secondary market for credit. If the Fed's actions succeed in expanding the availability or lowering the cost of consumer and corporate credit, either directly or indirectly, it will help some borrowers avoid defaulting on their outstanding debt. Nonetheless, the availability of credit will continue to be influenced by severe economic uncertainty, and implications for specific sectors will reflect both their underlying credit drivers and the specific funding facilities available to them.

- » ***Financial institutions*** (pages 5-6) — the Fed's supportive stance will broadly benefit all financial institutions, but banks and insurers start from a stronger position. Nondepository finance companies will face a more pronounced liquidity crunch, and some asset managers may have to retrench to preserve margins and manage cash flow.
- » ***Corporates*** (page 7) — issuers with investment-grade credit strength should be able to maintain good liquidity. Speculative-grade issuers with weak liquidity and refinancing profiles are less likely to benefit from government support.
- » ***Structured finance*** (pages 7-8) — The Fed's direct and indirect support of structured finance markets, banks and other financing sources will, in turn, support financial institutions' ability to lend and other credit availability, reducing the likelihood of defaults on securitized debt.
- » ***Public finance*** (page 8) — The expanded Money Market Mutual Fund Liquidity Facility mandate is positive for municipal issuers exposed to interest rate and liquidity risks.

We project that the curtailment of business activity worldwide will result in an unprecedented shock to the global economy. Facts change by the day, and we will accordingly update our economic forecasts and assessment of policy measures regularly. However, it looks increasingly likely that lock-downs in many countries will persist for an extended period, curtailing economic activity for many weeks and possibly months. Our latest forecast is that G-20 real GDP growth will contract 0.5% this year.

Monetary policy and QE4 will help stem the drop in market liquidity

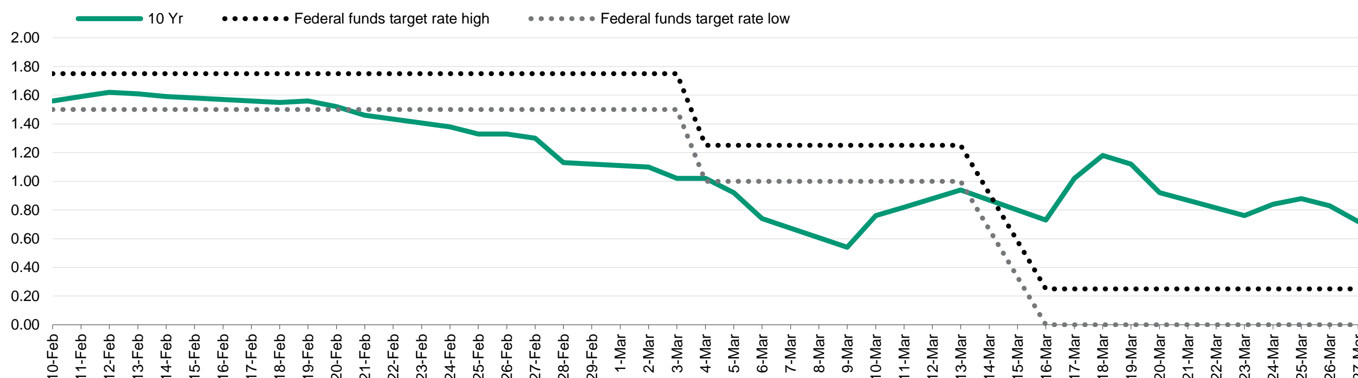
In response to the growing economic repercussions of coronavirus disruption, the Federal Open Market Committee (FOMC) took historically significant action and cut its Fed Funds target range by150 basis points (150 bps) over a two-week period in early March. The first cut of 50 bps to 1.00% - 1.25% from 1.50% - 1.75% occurred on 3 March and a second 100-bp cut to 0.00% - 0.25% on 15 March.

Companies, investment funds and financial institutions of all types have been rushing to raise cash, causing dislocation in even the highly liquid Treasury market, with yields for longer term Treasuries reversing declines in February and early March. For example, ten-year Treasury yields spiked to 1.18% on 18 March after falling as low as 0.54% on 9 March (Exhibit 1). Following the Fed's swift action, yields have again fallen and were around 0.70% as of 27 March.

Exhibit 1

Treasury market and Fed Funds target had disconnected

US Ten-year Treasury yields



Source: U.S. Department of the Treasury, Moody's Investors Service

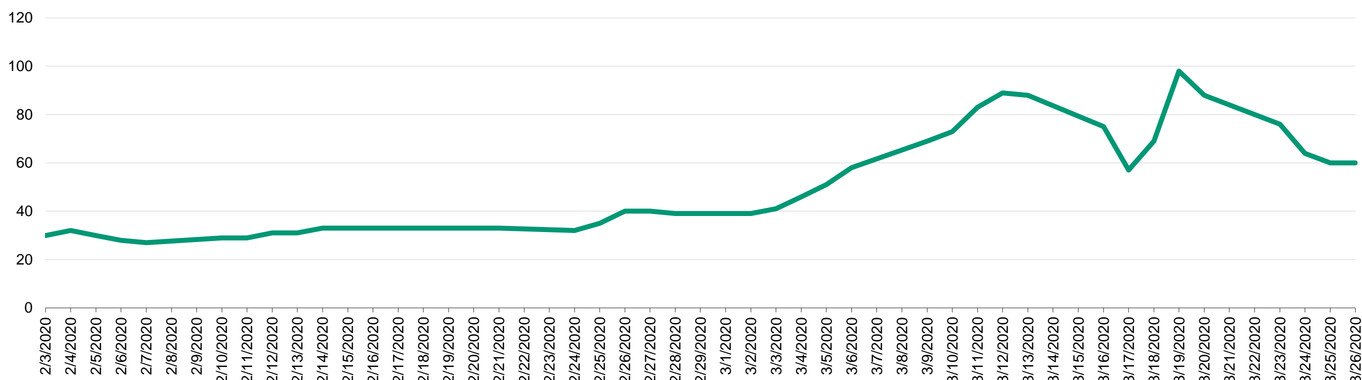
Agency mortgage-banks securities (MBS) spreads over Treasuries were also highly volatile, rising to almost 100 bps versus a typical average of around 30 - 40 bps.[1] Not since the financial crisis have spreads over Treasuries risen this high.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Exhibit 2

Agency MBS spreads widened to levels not reached since the financial crisis

ICE BofA US FNMA Current Coupon Mortgage Backed Securities (30-year) - Spread - Option Adj Spread



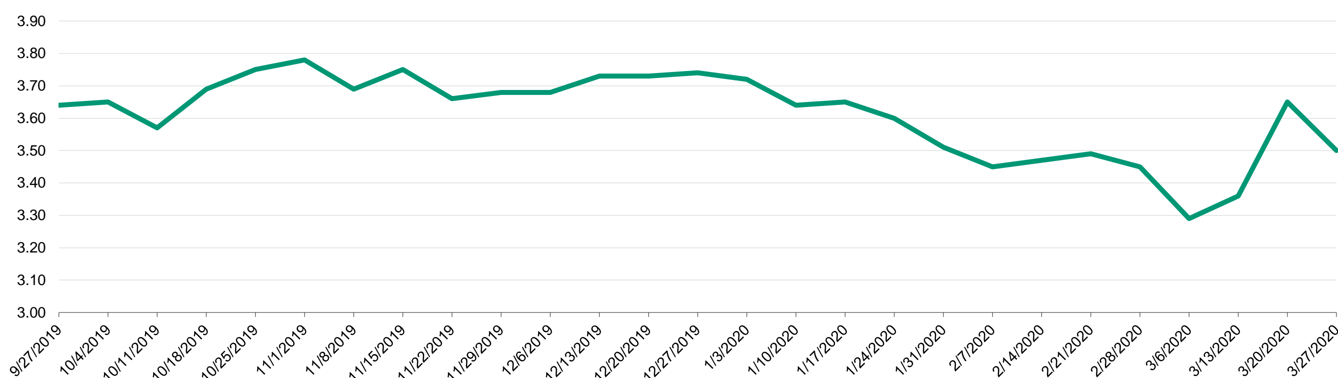
Source: Factset, Moody's Investors Service

As a result, residential mortgage rates also became highly volatile. The average 30-year fixed rate dropped to 3.29% following the Fed's 3 March cut to interest rates, but the increases in ten-year Treasury rates and agency MBS spreads drove mortgage rates up to 3.65% as of March 20 (Exhibit 3). Following the Fed's actions on 23 March, mortgage lenders have lowered the rates they are offering, with mortgage rates falling to 3.5% as of 27 March. But operational challenges in the current environment will likely slow refinance activity, possibly substantially. Mortgage originators face capacity issues that are exacerbated by the many employees they now have working from home: appraisers are unable to conduct interior inspections and most states still require key documents to be notarized with the signatory and the notary both physically present.

Exhibit 3

Residential mortgage rates have also been highly volatile, and refinance activity may be stunted

30-year average US mortgage rate



Source: Factset, Moody's Investors Service

The economic benefits of monetary policy are transmitted to the economy through the lower interest rates paid by institutions and consumers on their financial obligations. In response to the increase in longer term Treasury and agency MBS yields, on 23 March the FOMC expanded its program to purchase Treasuries and agency MBS, stating that it would continue to purchase such assets "as necessary". The Open Market Trading Desk indicated that it planned to conduct operations totaling about $75 billion of Treasuries and $50 billion of agency MBS each business day during the week of 23 March and that it would continue rolling over at auction all principal payments from the Fed's Treasury holdings and to reinvest all principal payments received from the Fed's agency debt and agency MBS holdings.[2]

If the Fed continues its daily purchases of $50 billion of agency MBS over the next month, it will end up buying nearly $1 trillion of agency MBS.[3] A trillion dollars of MBS purchases would increase the Fed's MBS holdings to around $2.3 trillion or about 35% of all agency MBS outstanding. This compares to the previous peak in MBS holdings of just under $1.8 trillion.

Resumption and expansion of 13(3) funding facilities will provide liquidity support for new lending

To address the severe dislocation in liquidity and funding in the financial system, the Fed has so far announced seven funding facilities:

» Commercial Paper Funding Facility (CPFF)

» Money Market Mutual Fund Liquidity Facility (MMLF)

» Primary Dealer Credit Facility (PDCF)

» Term Asset-Backed Loan Facility (TALF)

» Primary Market Corporate Credit Facility (PMCCF) for new bond and loan issuance

» Secondary Market Corporate Credit Facility (SMCCF)

» Main Street Business Lending Program is expected to soon be established to support lending to small and medium enterprises (SMEs), complementing efforts by the Small Business Administration

Four of these facilities – the PDCF, TALF, CPFF and MMLF – were also used during the 2007-08 global financial crisis, and all are established by the Fed under the authority of Section 13(3) of the Federal Reserve Act, with approval of the Treasury Secretary (see Appendix for additional detail).

The Federal Reserve has standing **foreign exchange swap lines** with five jurisdictions: the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan and the Swiss National Bank. On 19 March it announced an expansion to support $60 billion in US dollar liquidity each for the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Korea, the Banco de Mexico, the Monetary Authority of Singapore and the Sveriges Riksbank. These additions represent countries with which the Fed established lines during the financial crisis of 2008, but which were allowed to expire. In addition, $30 billion will be available to each of the Danmarks Nationalbank, the Norges Bank and the Reserve Bank of New Zealand. The swap lines serve as an important liquidity backstop to ease strains in global funding markets, helping to mitigate the effects of such strains on the supply of credit to households and businesses, both domestically and abroad.

On 15 March, among other actions, the Fed took the unusual step of encouraging banks to actively use its discount window "at this time." Ordinarily, banks that borrow directly from the Fed in its capacity as a lender of last resort are stigmatized because they are perceived as being in need of liquidity. However, not only did the Fed publicly suggest that banks borrow directly from the discount window, it also lowered its primary credit rate by 150 bps to 0.25%, effective 16 March, eliminating the 50-bp premium it had previously charged on discount window borrowing over the upper limit of its target range for fed funds.

Sector-level credit implications

Financial institutions – all subsectors will benefit from the Fed's supportive stance, but some start from stronger liquidity positions

Banks' liquidity positions are generally strong given their broad access to core deposit funding. In addition, many banks have seen deposit inflows in recent weeks as companies and consumers alike deposited much of the cash that they scrambled to raise to buffer the effects of economic stress and operational disruptions. Counterintuitively, some of that cash came from the banks themselves, because many corporations that drew on their committed bank liquidity facilities then simply deposited the cash, as they hunker down for a potentially extended period of uncertainty.

The surge in customer liquidity draws, combined with deterioration in debt capital markets, could have threatened US banks' liquidity were it not for the Fed's wide-ranging actions to counteract the crunch. By providing more options to secure term financing and convert high-quality securities and other collateral into lendable cash, the Fed has significantly supported banks' liquidity. Moreover, the sizable securities purchases under the Fed's quantitative easing expansion create a like amount of additional bank reserves; a significant portion of these will flow into banks in the form of deposits.

All of these actions to stabilize the funding markets have reduced the liquidity pressure on banks, and the restart of CPFF, MMLF and TALF, as well as the Fed's attempts to destigmatize the discount window, provide direct channels of support for bank lending. However, a credit negative consequence of the Fed's interest rate reduction will be downward pressure on US banks' lending margins. We expect immediate downward pressure on banks' net interest margins and overall profitability as their floating-rate asset yields reprice. In addition, proceeds from maturing or prepaid long-term assets tied to benchmark rates, such as residential mortgages and mortgage-backed securities, will now be reinvested at lower rates.

The PDCF is also credit positive for banks because it helps primary dealers (many of which are affiliated with banks) obtain loans for a term of up to 90 days. The PDCF increases primary dealers' ability to obtain lower cost term funding and makes it easier for them to support smooth market functioning. The PDCF also gives bank-affiliated broker-dealers direct access to term funding from the Fed, reducing their potential need for additional funding from bank affiliates or bank holding company parents.

Nondepository finance companies by nature face a more pronounced liquidity crunch. Finance companies do not collect deposits and, as a result, rely on confidence-sensitive wholesale funding. Therefore, such companies face a steeper challenge than banks in maintaining liquidity. The Fed's actions will cushion the blow for certain sectors, particularly residential and multifamily mortgages, auto loans, credit card loans, as well as small business loans.

The reversal in mortgage rates following the Fed's agency MBS purchases is particularly beneficial for mortgage lenders since it will eventually lead to an increase in refinance originations. The Fed's purchases are also beneficial for mortgage REITs, which had been deluged with margin calls when agency MBS spreads widened. Nonetheless, non-bank mortgage companies of all types will continue to face liquidity challenges, particularly if market volatility again increases sharply. Furthermore, mortgage companies with exposure to non-agency mortgages continue to have tight liquidity.

One particular challenge facing residential mortgage servicers is the expected extraordinary increase in servicer advances[4] because of the establishment of borrower forbearance arrangements. The U.S. Department of the Treasury, Fed, Fannie Mae, Freddie Mac, Ginnie Mae and other industry stakeholders are keenly focused on the issue, as is evident from Ginnie Mae's 27 March announcement that it is addressing servicer liquidity issues for Ginnie Mae-serviced loans.

Notwithstanding the difficulties ahead, at this time we believe that servicers' advance liquidity needs will be met, particularly for the largest servicers. Non-bank mortgage companies currently originate and service more than half of all residential mortgages in the US. The economic benefits of monetary policy are transmitted to the economy through the lower interest rates paid by institutions and consumers on their financial obligations, which for consumers are primarily residential mortgages. In addition, nonbanks on the whole have a good record of working with customers to navigate through adverse macro shocks like the present crisis.

Because many non-bank finance companies rely heavily on the securitization markets for funding, the 13(3) Fed funding facility they are likely to benefit most from is the resumed TALF program. TALF purchases securitizations backed by a variety of assets, including auto loans and leases, student loans, dealer floorplan loans as well as servicer advances.

In addition, the restart of the CPFF and MMLF is beneficial to sectors such as the captive auto finance companies, which regularly issue commercial paper to partially finance their operations. However, the CPFF and MMLF will have limited benefit to the finance industry more broadly because most companies are non-investment-grade and rely primarily on short- and long-term bank facilities, securitizations and term debt markets for funding.

Beyond the direct benefits of the Fed actions, there will be indirect benefits that support credit availability and liquidity (see Structured finance section on page 7 for further detail).

For asset managers, lower market values across asset classes will directly reduce fees based on assets under management. Fees will also be depressed by clients' reallocation of assets to lower risk products, which yield lower fees, or cash. The high proportion of variable compensation in asset managers' cost structures helps them adjust to revenue shocks. But if markets do not recover for some time, some managers will have to retrench to preserve margins and manage cash flow. Most managers with credit facilities have adequate margin in their covenanted leverage ratios to sustain some loss of earnings. However, the pressure will be greater on those asset managers that have engaged in large-scale mergers and acquisitions in the past two years, that already have comparatively high leverage, or that have below-investment-grade credit strength.

Funds may be affected by market stress in a number of ways. If the fund is open ended and a large proportion of its investors seek to redeem their shares, a liquidity mismatch may ensue, especially if the assets managed are relatively illiquid. In that case, the portfolio managers may be forced to engage in distressed sales to raise cash, causing the funds to realize losses, which are borne by all investors. Some funds maintain liquidity lines or cash buffers to address these circumstances. Funds that are closed end would not experience liquidity stress, but such funds are often leveraged. A decline in asset values may force them to sell assets to reduce leverage and stay within regulatory or committed leverage limits. Depending on the fund's asset class, it may have recourse to support from one or more of the section 13(3) facilities.

Most life insurers started 2020 with healthy capital levels and asset quality. The fallout from the coronavirus has led to a dramatic slowdown in the global economy, accompanied by ultralow interest rates, equity market declines, and a deterioration in corporate credit, which in combination weaken life insurers' asset quality and profitability. Supportive fiscal and monetary policy measures will likely aid overall economic recoveries with above-trend growth, supporting liquidity and helping mitigate credit deterioration in life insurers' investment portfolios.

A vast majority of the insurance industry's asset portfolio contains investment-grade corporate bonds. However, US life insurance companies have become more susceptible to negative ratings migration over the past few years, primarily because of a decline in the credit quality of the investment-grade portion of their fixed-income portfolios. The investment allocations to Baa-rated bonds have increased to over one third of total bond holdings.

The SMCCF would support corporate bond market prices and provide additional liquidity to those corporate bond holdings. Rating actions on corporate issuers will be more tempered for higher rated companies that are likely to benefit from policy intervention or extraordinary government support. Alleviating negative ratings migration for those corporate issuers that are currently rated at the low end of the investment-grade spectrum is especially meaningful for life insurers because falling below investment grade would lead to much higher risk-based capital charges for the insurance industry.

Corporate finance – issuers with investment-grade credit strength should be able to maintain good liquidity

The restart of CPFF, MMLF, and the establishment of the PMCCF and SMCCF will represent direct channels of support for borrowing by certain (mainly investment-grade) corporates. Government support programs will cushion the blow for some companies, but are unlikely to prevent distress at businesses with less certain long-term viability. Irreversible credit deterioration and, in many cases, outright default is more likely for smaller, weaker companies with speculative-grade ratings. We have already taken rating actions on some companies in the most affected sectors, generally placing ratings under review for downgrade, and we will continue to take more rating actions in the coming weeks. Our rating actions will be more tempered for higher rated companies that are likely to benefit from policy intervention or extraordinary government support. Such policy impetus may reduce the severity of rating actions for companies rated investment grade or near investment grade, particularly when policy transparency and predictability and government intentions are aligned to provide support. The Fed has expressly stated their support to companies rated investment grade with the PMCCF and SMCCF clearly demonstrating such a goal.

Speculative-grade companies with weak liquidity and refinancing profiles across the most-exposed sectors are less likely to benefit from government support and, therefore, will likely rapidly come under negative rating pressure.

In general, liquidity does not appear to be a major issue for many investment-grade companies. Even though the commercial paper market is choppy for P-2 and P-3 issuers, many of these companies have been able to tap the bond market or obtain short-term lines of credit to fund maturing CP. The government programs will further aid the liquidity for investment-grade companies. However, many non-investment-grade issuers are currently challenged. For those companies that are unlikely to benefit from such programs now or in the future, we will more likely tie our rating actions closely to the company's current credit profile and refinancing risks.

Structured finance – Fed's actions provide support for some borrowers with securitized debt

The Fed's direct and indirect support of structured finance markets, banks and other financing sources will, in turn, support financial institutions' ability to lend and other credit availability, reducing the likelihood of defaults on securitized debt. Asset classes that the Fed's actions will bolster potentially include: asset-backed securities (ABS) tied to small business loans, commercial mortgage-backed securities (CMBS), residential mortgage-backed securities (RMBS), various consumer ABS and asset-backed commercial paper (ABCP.)

The Fed's direct channels to support lending include TALF, its purchases of mortgage bonds and the Main Street Business Lending Program. If successful in improving credit availability, these programs would help borrowers with upcoming maturities or strained liquidity avoid defaults. TALF is intended to facilitate the issuance of ABS backed by assets including student loans, auto loans and leases, credit card receivables, dealer floorplan loans, equipment-financing contracts and small business loans guaranteed by the Small Business Administration (SBA). ABS tied to non-SBA small business loans are not eligible for TALF, but borrowers backing such deals will potentially benefit if SBA lending expands or rates on the loans drop. If these small businesses can access new loans, the benefits would include more options to refinance maturing debt and resources to cover lost revenue and avoid payment defaults. Although the details of the "main street" program remain undisclosed, its benefits would likely be similar.

Meanwhile, the Fed's agency RMBS purchases will help bolster refinancing options for borrowers whose mortgages back agency credit-risk transfer RMBS and private-label RMBS, especially if they can qualify for agency mortgages. Furthermore, to the extent the Fed programs lower borrowing costs and improve home affordability, they will be positive for home prices as well. However, an increase in prepayments as a result of refinancing activity would have a variety of credit effects on securitizations, depending on deal structures and other dynamics. Some notes would benefit from deleveraging that reduces their remaining balances and increases their credit enhancement. However, securitized pools would likely become weaker if stronger borrowers refinance and weaker borrowers cannot.

The expansion of the Fed's bond purchases to agency CMBS will aid multifamily borrowers with near-term financing needs, a positive for commercial real estate securitizations backed by their loans. Among other things, the Fed's buying will likely improve apartment owners' ability to refinance maturing loans. However, the lack of direct support for private-label CMBS, such as their exclusion so far from the TALF program, limit the benefits for other property types.

The Fed's efforts will also indirectly help bolster access to credit among borrowers whose debt backs securitizations. Such actions include support for secondary debt markets, such as via the PDCF, and expanded purchases of Treasuries and MBS that are suppressing yields on these assets with low credit risk, particularly if the actions lower spreads on other securities and enable new issuance. The

extent to which the Fed's programs help improve or maintain credit availability will depend in part on the risk appetite and stability of a variety of other parties, ranging from bond investors to loan originators.

US collateralized loan obligations (CLOs) are less likely to benefit from the current Fed programs because they are backed by leveraged loans issued by non-investment-grade companies.

Finally, the Fed's programs targeting money markets could extend note maturities and increase issuance in the US ABCP market. Recently, note terms have generally shrunk to overnight from the typical 30-60 days. Narrower spreads in the market could also benefit the underlying borrowers in the programs. That said, the credit quality of US ABCP notes largely depends on the strength of the banks that support the programs.

Public finance – expanded MMLF mandate is positive for municipal borrowers

The MMLF initially excluded loans secured by high-quality assets purchased from single-state and other tax-exempt municipal MMFs. However, on 20 March, the mandate was expanded to include these funds, adding municipal securities with a maturity of up to 12 months, including variable rate demand bonds (VRDBs), to the list of acceptable collateral. The expanded mandate is positive for municipal issuers exposed to interest rate and liquidity risks related to outstanding short-term and variable-rate debt. The disruption comes as many issuers may need to raise cash to address sharp revenue declines and wide budget imbalances. The Fed's actions have already provided some relief, with weekly reset rates declining about 50 bps from last week's high of 520 bps.

Appendix: background on several key Federal Reserve actions to date

Funding facilities establish under Section 13(3) of the Federal Reserve Act

The **Commercial Paper Funding Facility** (CPFF), structured as a secured credit facility to a special purpose vehicle (SPV), serves as a funding backstop to facilitate the issuance of term commercial paper with a term of up to 90 days issued by US corporations, financial institutions, asset-backed commercial paper (ABCP) vehicles active at the time of the CPFF's creation, and municipalities. The Department of the Treasury will make a $10 billion equity investment in the SPV but no explicit limit has been set on the size of the CPFF itself.

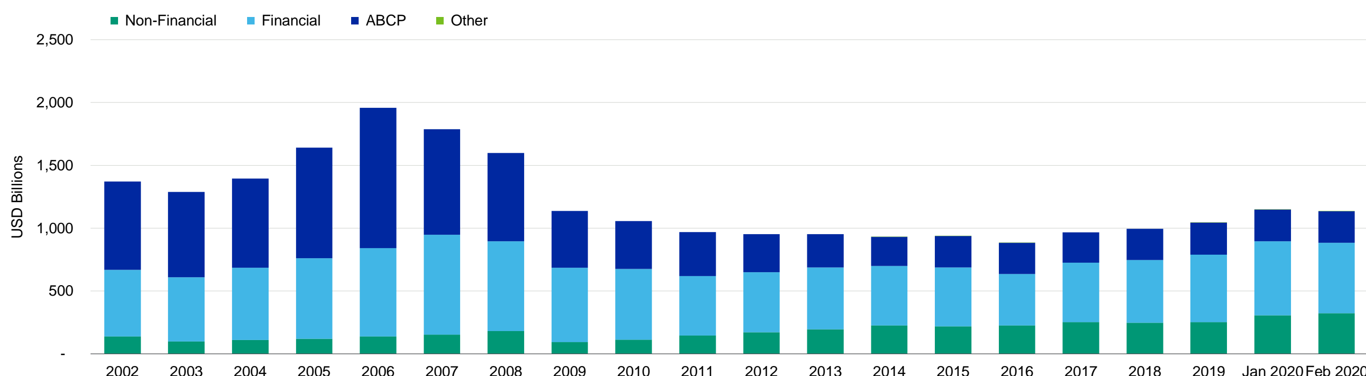
Originally announced on 17 March, the CPFF was expanded on March 23 to include municipal issuers, and pricing for P-1/A1/F1-rated issuers was lowered to three month OIS + 110 bps from the original pricing of OIS + 200 bps. However, the CPFF remains limited to issuers rated P-1/A1/F1 as of 17 March, 2020. Issuers rated P-2 are eligible on a one-time only basis but only if they were rated P-1 on 17 March and were subsequently downgraded.

As of the end of February, aggregate commercial paper outstanding was $1.1 trillion (Exhibit 4), of which $329 billion was issued by corporations, $538 billion was issued by financial institutions, $270 billion was issued by asset-backed commercial paper facilities and $1.2 billion was issued by other institutions, largely municipal issuers.

Exhibit 4

US Commercial Paper market reached $1.1 trillion in February 2020

US Commercial Paper Outstanding ($ billion)

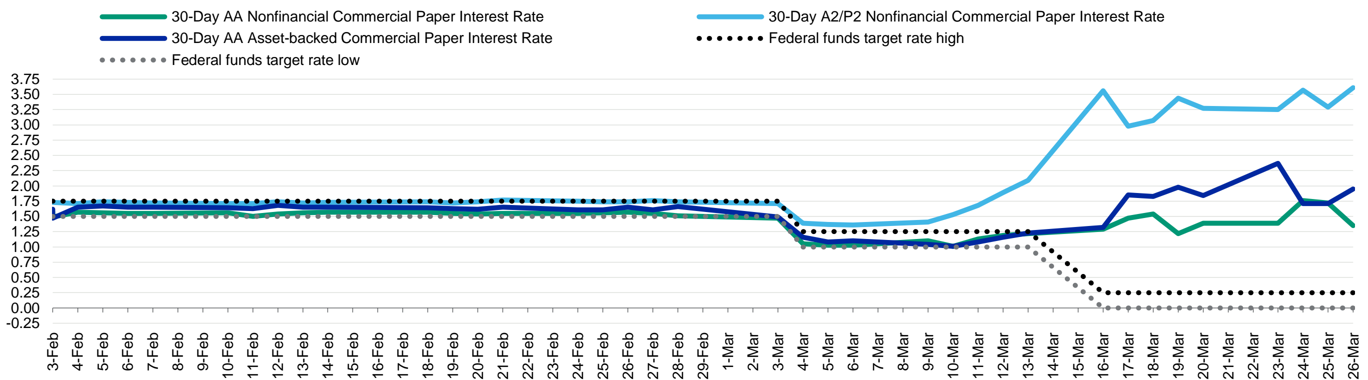


Source: SIFMA, Moody's Investors Service

As Exhibit 5 shows below, CP yields and Fed funds typically track very closely. As expected on 3 March, when the FOMC cut its Fed Funds target 50 bps, CP yields declined in lock step. However, within a couple of days of the initial rate cut, CP yields for the P-2/A2 issuers began rising, followed a couple of days after that for all CP issuers. When the FOMC further cut rates on 15 March, CP rates continued to climb. We expect that CP yields will decline with the Fed actions, as happened during the 2007-08 financial crisis.

Exhibit 5

Commercial paper yields typically track very closely with the Fed funds rate



Data for 3 February, 4 February and 2 March not available for 30-day AA Nonfinancial Commercial Paper Interest Rate

Source: Federal Reserve, Moody's Investors Service

The **Money Market Mutual Fund Liquidity Facility** (MMLF), with the Federal Reserve Bank of Boston acting as the lender, makes non-recourse loans available to eligible financial institutions[5] secured by high-quality assets purchased by the financial institution from a prime, single-state or other tax-exempt money market mutual fund. The goal of the MMLF is to assist money market funds in meeting demands for redemptions by households and other investors, enhancing overall market functioning and credit provision to the broader economy. The maturity date of a loan will be the maturity date of the eligible pledged collateral to secure the loan made under the MMLF with a maximum maturity date of one year.

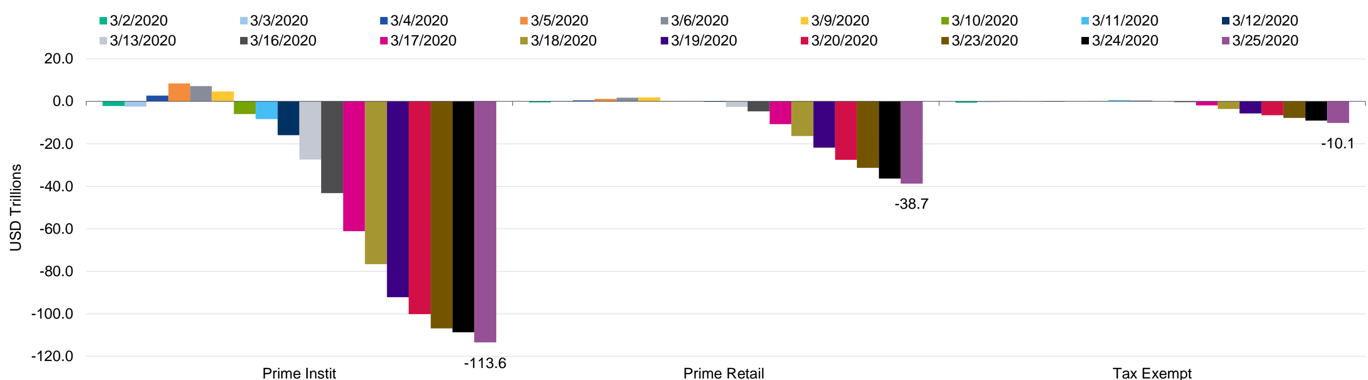
The assets of prime and tax-exempt MMFs are credit sensitive. Typical holdings of prime funds are certificates of deposit (CDs), unsecured CP and ABCP. Tax-exempt funds hold variable-rate demand obligations (VRDOs) and other municipal issuances. While all investors in credit-sensitive funds are liable to withdraw assets in the face of the credit shocks stemming from the coronavirus, institutional investors in prime (and tax-exempt) MMFs face a greater risk.

Under the rules that govern money market funds, institutional money market funds are required to value their portfolio securities using market-based factors and to sell and redeem shares based on a floating NAV. Thus, as the market values of these funds' underlying holdings decline, institutional investors are subject to realized losses on sale, giving them a strong incentive to withdraw their holdings. (Retail funds are not obliged to redeem shares at a variable NAV.)

These concerns have given rise to cumulative outflows of $162 billion from prime and tax-exempt MMFs in the month of March to date (Exhibit 6), with the predominant amount ($114 billion) coming from institutional prime funds. These large outflows have forced the funds to sell their underlying holdings, causing the Fed to intervene to provide liquidity to absorb these sales.

Exhibit 6

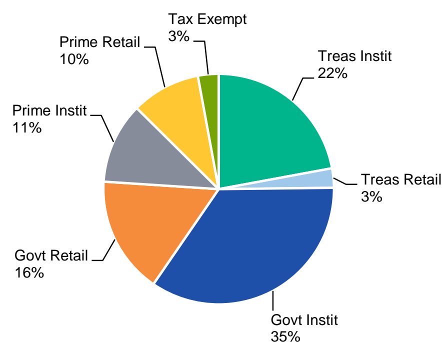
Cumulative outflows from prime and tax-exempt MMFs for the month to date as of 25 March



Source: Crane Data, Moody's Investors Service

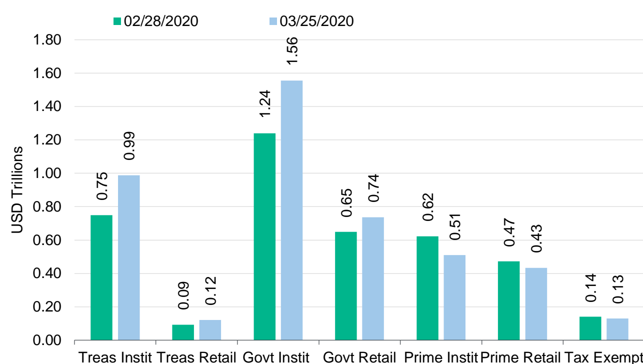
In addition, all investors have the alternative to hold treasury and government MMFs, which use valuation conventions to maintain a constant share price of $1.00. These funds compose over 75% of industry assets (Exhibit 7) and, given this alternative, $673 billion has flowed into government and Treasury funds in March to date (Exhibit 8). Some of these inflows would have been financed by outflows from prime and tax-exempt funds.

Exhibit 7
Distribution of MMF assets under management by type (total assets of $4.5 trillion as of 3/25/2020)



Source: Crane Data, Moody's Investors Service

Exhibit 8
Change in MMF assets under management by type ($ trillions, as of indicated dates)



Source: Crane Data, Moody's Investors Service

The creation of the MMLF is also a response to the risk that money market funds might impose liquidity fees or gates, which could amplify market panic. Under the rules, an MMF must maintain minimum weekly liquidity of 30% of fund AUM, and if it breaches this level, it may impose fees or gates on redeeming investors. In the face of heavy outflows, these funds are forced to sell their most liquid holdings and risk breaching these limits. Last week, Goldman Sachs is reported to have purchased $1.8 billion of securities from two institutional prime MMFs to support their liquidity positions, following heavy redemptions.

At the initial announcement of the MMLF on 18 March, the Fed included as eligible collateral asset-backed or unsecured commercial paper that is rated at the highest ratings of major rating agencies. In addition, the facility would accept receivables from certain repurchase agreements, as well as government securities.

The MMLF excluded loans secured by high-quality assets purchased from single-state and other tax-exempt municipal MMFs. However, on 20 March, the mandate was expanded to include these funds — a credit positive for municipal borrowers — adding municipal securities with a maturity of up to 12 months to the list of acceptable collateral. And on 23 March the program was expanded again to also accept variable-rate demand notes (VRDNs) and negotiable bank certificates of deposits (CDs) as eligible collateral.

On 25 March the MMLF had total loans outstanding of $30.6 billion.

The **Primary Dealer Credit Facility** (PDCF) offers secured funding on substantially similar terms to the Fed's discount window to the 21 broker-dealers and three foreign bank branches that serve as primary dealers authorized to trade with the Federal Reserve Bank of New York (Exhibit 9). The rate charged on PDCF loans is the same as the discount window rate, and the eligible collateral includes not only US Treasury and agency securities (i.e., Fed repo-eligible collateral) but also a broad range of US dollar-denominated investment-grade corporate debt securities, asset- and mortgage-backed securities, commercial paper, municipal securities and equity securities. The PDCF was also available between 2008 and 2010, but that facility only provided overnight funding; the new PDCF offers loans for a term of up to 90 days, expanding the ability of primary dealers to obtain lower cost term funding and making it easier for them to support smooth market functioning and thereby facilitate the availability of credit to businesses and households.

Exhibit 9

Authorized primary dealers

Primary Dealers
Amherst Pierpont Securities LLC
Bank of Nova Scotia, New York Agency
BMO Capital Markets Corp.
BNP Paribas Securities Corp.
Barclays Capital Inc.
BofA Securities, Inc.
Cantor Fitzgerald & Co.
Citigroup Global Markets Inc.
Credit Suisse AG, New York Branch
Daiwa Capital Markets America Inc.
Deutsche Bank Securities Inc.
Goldman Sachs & Co. LLC
HSBC Securities (USA) Inc.
Jefferies LLC
J.P. Morgan Securities LLC
Mizuho Securities USA LLC
Morgan Stanley & Co. LLC
NatWest Markets Securities Inc.
Nomura Securities International, Inc.
RBC Capital Markets, LLC
Societe Generale, New York Branch
TD Securities (USA) LLC
UBS Securities LLC.
Wells Fargo Securities, LLC

Source: Federal Reserve Bank of New York

While many primary dealers are affiliated with banks that have access to the discount window, there are regulatory restrictions on the ability of a US bank to lend to its broker-dealer affiliates. Primary dealer access to the PDCF gives such bank-affiliated broker-dealers direct access to term funding from the Fed, reducing their potential need for additional funding from their bank affiliates or bank holding company parents. The availability of lower cost term funding for primary dealers is credit positive not only for those firms but also for their bank affiliates, since those firms will be better able to husband their own liquid resources and funding to meet the credit needs of their clients.

On 25 March the PDCF had total loans outstanding of $27.7 billion.

The **Term Asset-Backed Loan Facility** (TALF) was established to enable the issuance of assets secured by student loans, auto loans, credit cards and other types of credit. Under the TALF, the Federal Reserve lends to an SPV that will lend on a non-recourse basis for a term of three years to holders of certain AAA-rated ABS backed by newly and recently originated consumer and small business loans, supporting the flow of credit to consumers and businesses. The loans will be for a term of three years and will be secured by the ABS with a haircut based on the type of collateral and the weighted average life and historical volatility of the ABS.

The **Primary Market Corporate Credit Facility** (PMCCF) offers secured lending on a recourse basis to a SPV that will purchase newly issued investment-grade US corporate debt and make loans to investment-grade US corporate issuers, in each case with a maturity of four years or less. As with the CPFF, the US Treasury will make an initial $10 billion equity investment in the SPV.

The **Secondary Market Corporate Credit Facility** (SMCCF) offers secured lending to a similarly structured SPV that will purchase investment-grade US corporate bonds and shares issued by investment-grade-focused, US-listed, exchange-traded funds (ETFs) in the secondary market. Both of these programs are intended to provide additional liquidity to large US corporates and to the corporate debt markets, as well as to alleviate some of the pressure on banks to provide backup financing to large corporates in order to free up bank liquidity to support small and middle-market businesses that do not issue debt securities. However, since neither program offers lending to non-investment-grade corporates, these programs are of little benefit to the large US speculative-grade corporate sector.

ETFs are large purchasers of corporate debt. The recent market volatility has resulted in the dislocation of some credit ETFs, particularly those tracking less liquid underlying assets. The NY Fed's program will help alleviate some of the pressure, taking hold of the $500 billion corporate debt ETF market. ETF price dislocation happens when the underlying asset's net asset value significantly deviates from

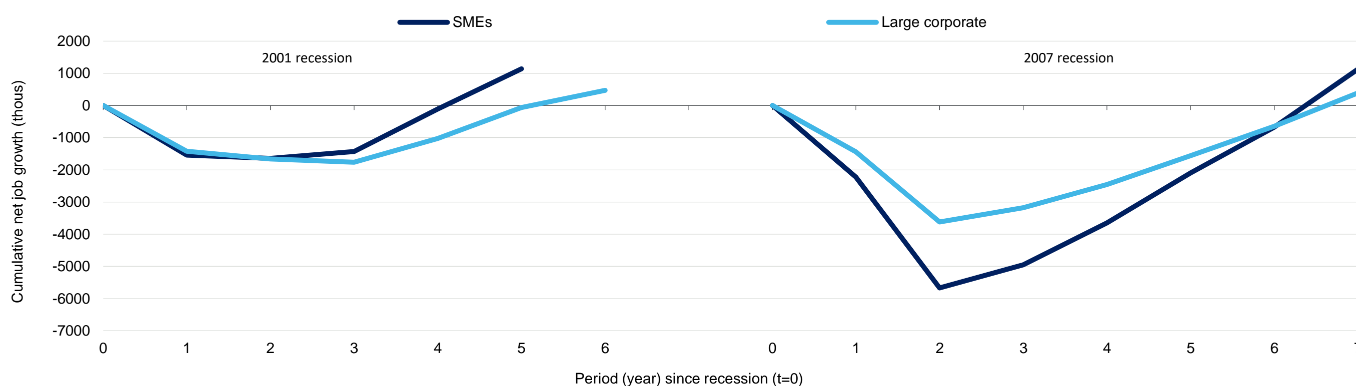
an ETF's value. Our estimates show that non-investment-grade corporate credit ETFs represent around 5% of overall credit ETFs, an ETF category most vulnerable to price dislocations.

The New York Fed's program will only address ETFs tracking investment-grade corporate bonds. We therefore expect the facility to improve liquidity among high-grade fixed income ETFs, but to also widen the liquidity gap with their non-investment-grade counterparts.

Main Street Business Lending Program. The Fed also announced that it expects to soon establish this program to support lending to small and medium-sized enterprises (SMEs), complementing efforts by the Small Business Administration.

SMEs are on the front line of exposure. They are more vulnerable to shock than larger companies because they have tighter cash flow positions and limited access to funding. Firms often react to shocks by laying off workers to cut costs. In the last recession, SMEs accounted for 60% of total jobs lost (Exhibit 10) and took much longer than large firms to fully recover. Within the most-affected sectors, such as arts, entertainment & recreation, accommodation and food services and wholesale trade, more than 50% of workers are employed by SMEs.

Exhibit 10
About 60% of job losses in last recession were at small and medium enterprises



Source: BLS – Business Employment Dynamics, Moody's Investors Service

Foreign exchange swap lines with other central banks

The Federal Reserve has standing foreign exchange swap lines with five jurisdictions: the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan and the Swiss National Bank. On 19 March, it announced an expansion to support $60 billion in US dollar liquidity each for the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Korea, the Banco de Mexico, the Monetary Authority of Singapore and the Sveriges Riksbank. These additions represent countries with which the Fed established lines during the financial crisis of 2008, but which were allowed to expire. In addition, $30 billion will be available to each of the Danmarks Nationalbank, the Norges Bank and the Reserve Bank of New Zealand. The swap lines serve as an important liquidity backstop to ease strains in global funding markets, helping to mitigate the effects of such strains on the supply of credit to households and businesses, both domestically and abroad.

Encouraging banks to borrow at the Fed discount window

On 15 March, among other actions, the Fed took the unusual step of encouraging banks to actively use its discount window "at this time." Ordinarily, banks that borrow directly from the Fed in its capacity as a lender of last resort are stigmatized because they are perceived as being in need of liquidity. However, not only did the Fed publicly suggest that banks borrow directly from the discount window, it also lowered its primary credit rate by 150 bps to 0.25%, effective 16 March, eliminating the 50 bp premium it had previously charged on discount window borrowing over the upper limit of its target range for Fed funds. It also announced that any borrowings would be for periods as long as 90 days, not just overnight.

The Fed discloses discount window borrowings every Thursday, with data as of the prior day. On 18 March, just a few days after its public encouragement, total primary credit outstanding had climbed just above $28 billion, up from $11 million on 11 March. Individual bank names are not disclosed. On 25 March total primary credit outstanding was $50.8 billion.

Before last week, the Fed disclosed both the total amount of loans across the entire system and the total amount of loans at each of the 12 regional Reserve Banks. Interestingly, last week's report was revised at the individual Reserve Bank level to combine into a single line the total loan amounts plus the amount of securities and repo outstanding, thus more easily masking the size of discount window borrowing at any individual Reserve Bank. We see this as an additional step to destigmatize the discount window.

We consider the Fed's efforts to destigmatize the discount window, as well as the extension of term funding of up to 90 days from the discount window as credit positive for US banks and for the US branches of foreign banks. Access by solvent banks to central bank financing secured by good collateral at a fair cost under periods of systemic stress is a key underpinning of modern finance, and is critical to restoring investor confidence and the smooth functioning of the financial system.

Moody's related publications

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» Banking – North America: Fed's moves to counter coronavirus effects will hurt bank profits, but support liquidity - 16 March

» Life Insurance – US: Rating migration: Key credit weakness for US life insurers amid higher investment risk - October 2019

Endnotes

1 For comparability with corporate bond yields, the spreads are shown as option-adjusted spreads (which essentially adjust for the prepayment option with no penalty that borrowers have).

2 In addition, the Open Mark Desk will conduct overnight reverse repurchase operations at an interest rate of 0% as well as engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Fed's agency MBS transactions.

3 For comparison, during QE1 monthly purchases never reached $130 billion and only exceeded $100 billion three months, while QE3 purchases exceeded $80 billion only two months and were typically between $65 billion and $80 billion per month.

4 In the event that a homeowner fails to pay, including if the homeowner is on a forbearance program, third-party residential mortgage servicers are generally on the hook each month for advancing mortgage payments as well as property taxes and homeowners insurance.

5 US depository institutions, US bank holding companies (BHCs), or US branches and agencies of foreign banks.

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