Fed Brief

15 April 2020

Fed policy responses to COVID-19: Initial impacts

The Federal Reserve has announced several steps in response to the economic and financial impacts arising from the COVID-19 pandemic. It has lowered short-term interest rates essentially to zero; created a veritable "alphabet soup" of new programs to support financial markets, banks, and other financial intermediaries; undertaken ultra-large-scale asset purchases to provide liquidity and promote more orderly trading in markets for Treasury and mortgage-backed securities (MBS); made available short-term loans to the financial system through repurchase agreements (repos) at extraordinarily large offering sizes; committed to assisting the federal government in providing financing to small-and medium-sized businesses; and, in concert with other regulators, announced more lenient supervisory guidance to banks and relaxed certain capital and liquidity rules for banks. Some policies have been in force since March and others will launch over the next several days.

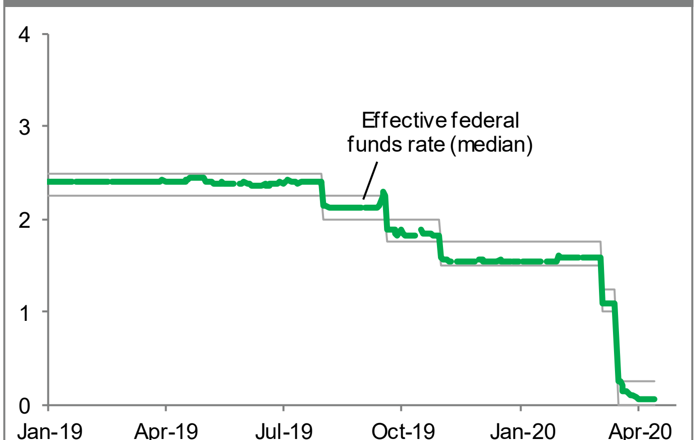
It is difficult to provide a thorough assessment of the financial and economic impacts of Fed policies in response to COVID-19. The programs are new, in several cases unprecedented in type or scale, and in some cases yet to reach operational status. Given the alarming speed of the curtailment in economic activity and the unprecedented scale of reductions in production and employment, in our view it is appropriate to think of the Fed's policies not so much as providing "stimulus" but as steps to promote credit flows to help businesses and households "weather the storm" and to support an economic recovery when conditions allow. Recent fiscal policy developments, including enactment of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) may already have contributed to improved financial conditions.

Nevertheless, there are signs that Fed policies are having positive impacts on market-functioning and reducing the risk of an even sharper financial contraction that would threaten to turn a temporary (albeit very large) reduction in economic activity into a much more costly and longer-term recession — or worse. In this report, we briefly note some of the early impacts of the Fed's responses to COVID-19, after first providing a brief summary of those policies.

Brief summary of the Fed's policy responses to COVID-19

The Fed's responses to the crisis are wide-ranging and have been undertaken with even greater speed than during the financial crisis of 2008. This section is intended to provide a brief outline of some key policy steps by the Federal Reserve since the early March. See our *Fed Brief* entitled "A summary of Fed policy responses to COVID-19" for a more detailed description of the Fed's recent policy steps.

Federal funds rate: target range and median
%



Notes: Data through 14 April 2020
Source: Federal Reserve, IHS Markit

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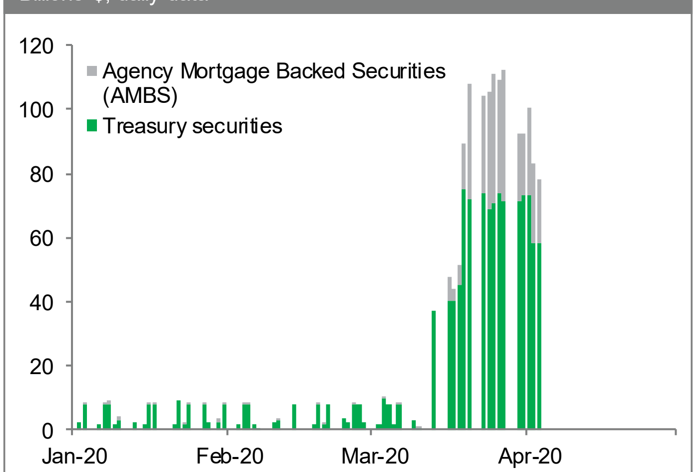
1. **Rate cuts:** On 3 March, the Federal Open Market Committee cut the target for the federal funds rate by 50 basis points to a range of 1% to 1¼%. This was followed by another cut of 100 basis points, to a range of 0% to ¼%, announced on 15 March.
2. **Enhance discount window lending:** On 15 March, the Federal Reserve enhanced lending available to banks through the discount window. It lowered the primary credit rate ("discount rate") to 0.25%, thereby lowering the spread relative to the target for the federal funds rate by 50 basis points. It announced that discount loans would be available for terms up to 90 days, instead of only overnight, and would be renewable by borrowers. It also encouraged banks to make use of the discount window to supplement liquidity without regard to potential stigma. On 8 April, "primary credit" loans at the discount window stood at $43.4 billion, up from essentially zero on 11 March.
3. **Large-scale asset purchases:** Reprising at a much more rapid pace the large-scale asset purchases during and after the last recession, last month the Federal Reserve announced it would substantially expand the scale of its purchases of Treasury and Agency Mortgage Backed Securities. On 8 April, the Fed's securities portfolio was nearly $5.1 trillion, up from $3.8 trillion at the end of February.
4. **Large-scale repurchase agreements:** On various dates from 9 March to 12 March 2020, the Fed announced that short-term financing through repurchase agreements ("repos") would be available for longer terms and with much larger offering limits than repo operations conducted since last September.

Federal Reserve asset purchases
Billions $, daily data



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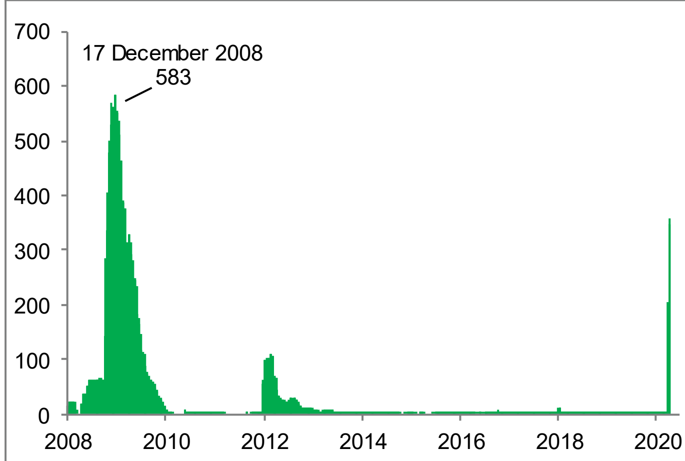
Federal Reserve central bank swap lines
Billions $, weekly data (Wednesday)



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5. **International swap lines:** On 15 and 19 March, the Federal Reserve announced, along with more than a dozen other foreign central banks, increased dollar funding capacity through foreign exchange swap lines. The second of these announcements extended secured dollar funding to 9 central banks in Europe, Asia/Oceania, and Latin America. On 8 April, the amount outstanding on central bank liquidity swaps on the Fed's balance sheet stood at $358.1 billion, up from less than $0.1 billion on 18 March.
6. **Primary Dealer Credit Facility (PDCF):** On 17 March, the Fed launched a facility to extend secured lending to certain securities dealers (two-dozen "primary dealers") on terms broadly comparable to those available to banks at the discount window. As of 8 April, the amount outstanding under the PDCF stood at $33.0 billion.
7. **Commercial Paper Funding Facility (CPFF):** Beginning on 14 April, the Fed will use a special purpose vehicle (SPV) to purchase short-term commercial paper, including securities issued by US corporations and municipal entities. With the CPFF and several other Fed lending programs, the

Treasury will make equity investments to protect the Federal Reserve against potential losses.[1]

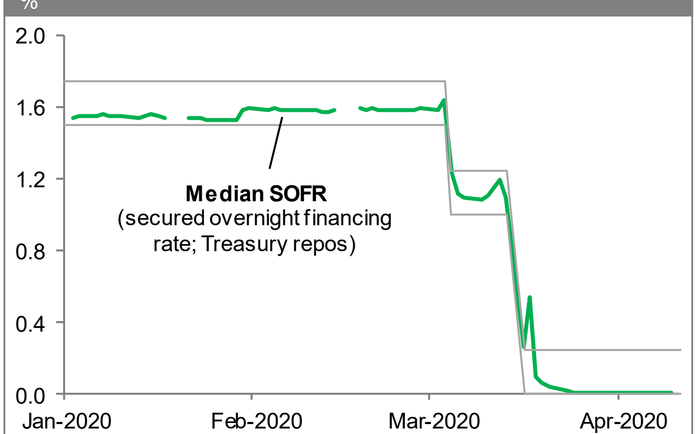
8. **Money Market Mutual Fund Loan Facility (MMLF):** The Boston Fed will extend secured loans to money market mutual funds. As of 1 April, the balance in the MMLF was $52.7 billion.
9. **Primary Market Corporate Credit Facility (PMCCF) and Secondary Market Corporate Credit Facility (SMCCF):** On 23 March, the Fed announced it will purchase, through an SPV, newly issued and "seasoned" corporate debt, including, under certain conditions, debt from issuers rated below investment grade.
10. **Term Asset-Backed Securities Loan Facility (TALF):** Reprising a step undertaken in 2008, the Fed announced it will purchase asset-backed securities used to provide financing for student loans, auto loans, credit card loans, loans guaranteed by the Small Business Administration (SBA), and other loans.
11. **Main Street Business Lending Program:** On 23 March, the Fed announced the intent to launch a lending program for small- and medium-sized businesses to complement efforts by the Small Business Administration. Further details were announced on 9 April.
12. **FIMA Repo Facility:** On 31 March, the Fed announced it would make available secured loans to foreign international and monetary authorities to promote dollar liquidity on a global basis.
13. **Term funding for Paycheck Protection Program (PPP) loans:** on 6 April, the Fed announced it intended to create a program to provide term financing to banks backed by loans for the Paycheck Protection Program (PPP) authorized by the CARES Act. Additional details were announced on 9 April.
14. **Municipal Liquidity Facility:** On 9 April, the Fed announced the creation of a facility to provide funding for the States (including the District of Columbia) and for larger cities and counties.
15. **Removal of reserve requirements:** on 15 March, the Fed eliminated bank reserve requirements.
16. **Supervisory and regulatory changes:** The Fed and other banking regulators have announced a series of steps intended to promote credit creation by banks on a "safe and sound" basis to assist businesses and households impacted by COVID-19. Certain balance-sheet guidelines have been relaxed on a temporary basis, such as minimum capital standards for community banks and the supplementary leverage ratio for large banks.

Financial impacts of Fed policies

The economic impacts of the Fed's policy moves — on spending, production, and employment — are yet to be evident given the recency of those moves and the scale of the disruptions to economic activity stemming from attempts to contain the impact of COVID-19. The Fed's policy moves have improved functioning in certain markets, including markets for Treasury securities and Agency MBS, short-term funding through repos, and other investment-grade sectors. They have also contributed to an expansion in credit provided by the banking system.

1. **A variety of short-term interest rates have been lowered to or near zero, reflecting Fed rate cuts**

Secured overnight financing rate (SOFR) and Federal funds rate target range



Notes: Data through 14 April 2020
Source: IHS Markit
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1. Section 13(3) of the Federal Reserve Act, which provides authority for the Fed to operate emergency lending programs under "unusual and exigent circumstances", requires approval from the Secretary of the Treasury and requires that "security for emergency loans is sufficient to protect taxpayers from losses". Treasury has committed to injecting funds in 13(3) programs, including the Commercial Paper Funding Facility, the Money Market Mutual Fund Liquidity Facility, the Main Street loan facilities, the Primary and Secondary Corporate Credit Facilities, the Term Asset-Backed Securities Loan Facility, and the Municipal Liquidity Facility.

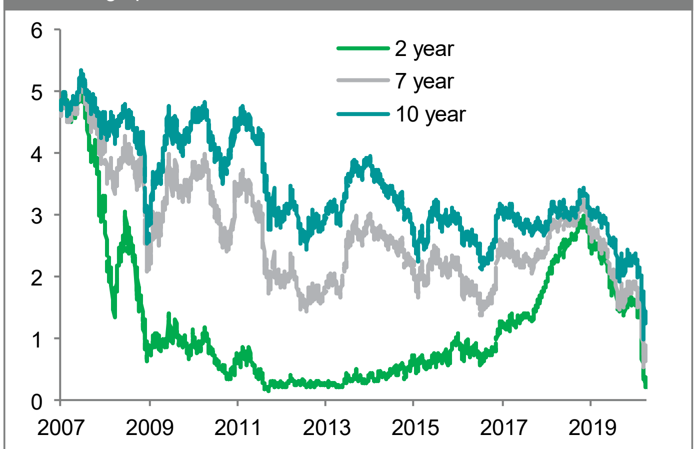
and an indication of ample liquidity provided by the Fed. The effective federal funds rate (the volume-weighted median of transactions in the market for overnight federal funds) has fallen to approximately 0.05% since 2 April, below the mid-point of the target range of 0% to ¼%. For the first three days following the announcement on 15 March that the target for the federal funds rate had been slashed to a range of 0% to ¼%, the median fed funds rate traded at the upper end of that range (0.25%), an indication of stresses in overnight funding markets, but the Fed's liquidity operations — including large-scale repo operations — stabilized funding markets, creating conditions for the funds rate to trade well within its target range since 20 March.[2]

Overnight repo rates have also declined to approximately zero. The Fed's SOFR index — the secured overnight financing rate, the volume-weighted median of a large set of rates on overnight repurchase agreements collateralized by Treasuries — was either 0.01% or 0.02% each day from 24 March to 13 April, with the middle 98% of transactions spanning approximately from 0.0% to 0.2%.[3] This is an improvement from 17 March, when the median rate was 0.54%, 29 basis points above the upper end of the target range for the federal funds rate, with the middle 98% of transactions spanning from 0.09% to 1.00%. Further evidence of the success of Fed liquidity operations is the sharp decline in demand for Fed repos, a source of short-term liquidity to banks and other financial institutions, over the past two weeks.[4]

2. **Trading in Treasury markets has reverted closer to normal following a period of unusual stress in March when portfolio managers were forced to sell highly liquid Treasury securities to meet clients' redemption requests.** As an example of unusual conditions in Treasury markets, from 9 March to 18 March, the benchmark 10-year Treasury Note yield jumped 64 basis points to 1.18% despite a one-percentage point cut in the target for the federal funds rate during that period. The 10-year yield has since moderated, and as of 13 April was 0.76%.[5]

3. **Long-term Treasury yields have been pushed down to historically low levels.** Several factors are at work in depressing long-term Treasury yields, including near-zero short-term interest rates, expectations that the target for the federal

Constant maturity Treasury yields
Percentage points



Notes: Data through 14 April 2020
Source: Federal Reserve Board
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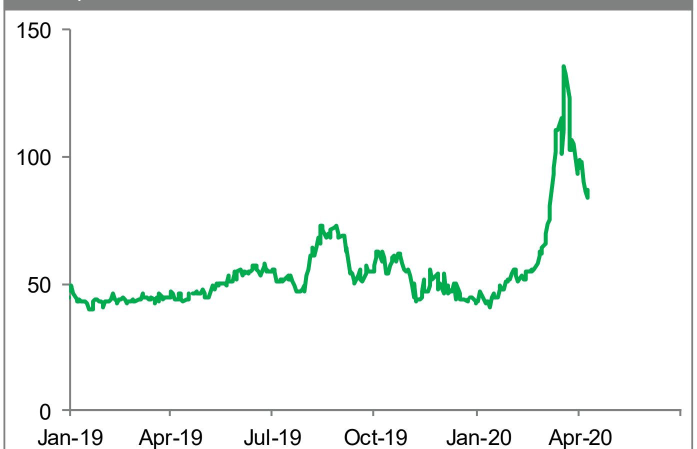
MBS spread, option-adjusted
Basis points



Notes: Data through 14 April 2020
Source: ICE Bank of America Merrill Lynch
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2. What is commonly referred to as "the" federal funds rate is the volume-weighted median of rates charged on transactions between banks and other financial institutions in the market for overnight federal funds. Actual rates on fed funds transaction span a range of rates. For example, on 17 March, the middle 98% of fed funds transactions were transacted at rates that ranged from 0.05% to 0.55% with a median of 0.25%. Comparable figures for 13 April were 0.03% to 0.17% with a median of 0.05%.

3. On 3 April, the median rate ("SOFR") was 0.01%, with the middle 98% of transactions from 0.00% to 0.16%. On 31 March, the middle 98% of transactions spanned -0.03% to 0.17%.

4. On 6 April, the Fed received $16.2 billion in bids for overnight repos and $6.3 billion in bids for 30-day repos. Indeed, as demand for Fed repos has fallen, interest in Fed *reverse* repos has increased. Reverse repos are liabilities on the Fed's balance sheet and count as assets for banks and other financial intermediaries. On 6 April, the Fed received bids on overnight reverse repos at of $144.3 billion.

5. Treasury yields are quoted on a "constant maturity" basis. See https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield for further information.

funds rate will remain close to its effective lower bound (near zero) for some period, unprecedentedly large purchases of Treasury securities by the Federal Reserve since 13 March, and investor interest in the relative safety of Treasury securities during periods of market turbulence and heightened economic uncertainty. The yield on the 10-year Treasury note was 0.76% as of 13 April; from 2008 to 2014 it never fell below 1.43%. The 30-year Treasury yield was 1.41% as of 13 April, approximately 1 percentage point below the lowest from 2008 to 2014.

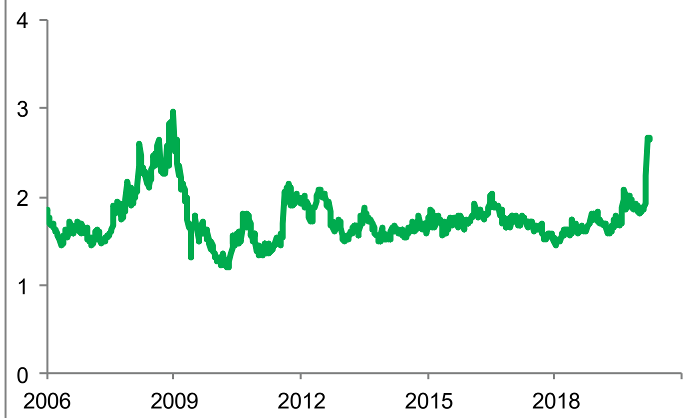
4. **Spreads on mortgage-backed securities (MBS) narrowed slightly after gapping sharply last month.** The option-adjusted spread on MBS rose from an average of 53 basis points during the first week of February to 136 basis points on 19 March. On 13 April it had eased to 91 basis points.[6] Nevertheless, mortgage spreads remain elevated: the spread between the rate on conventional 30-year mortgages and the 10-year Treasury note yield rose from 185 basis points on 7 February to 267 basis points on 20 March and remained close to that level through 3 April.[7]

5. **A variety of risk spreads in markets for corporate and municipal debt blew out last month but have moderated modestly over the past several days.** The spread on BAA corporate bonds relative to comparable Treasuries rose from 174 basis points on 14 February to 395 basis points on 23 March, then declined to 338 basis points on 9 April. Qualitatively similar reversals of risk spreads have also occurred in markets for municipal securities and commercial paper. Spreads for high-yield sectors remain elevated and have benefited less from Fed credit programs that, until 9 April, primarily targeted investment-grade sectors. To be clear, even with some narrowing over the last few days, in most cases risk spreads remain much higher than immediately before the onset of COVID-19 impacts and Fed policy responses. Furthermore, factors other than Fed policy steps may

6. Option-adjusted spreads are from ICE Bank of America Merrill Lynch Fixed Income, on US Mortgage-Backed Securities.

7. Mortgage spreads are based on Monday-to-Wednesday averages. As of 3 April, the mortgage spread was 266 basis points.

Conventional mortgage rate spread
30-year mortgage rate less 10-year Treasury note yield, Monday to Wednesday averages, percentage points



Notes: Weekly data through 10 April 2020
Source: IHS Markit
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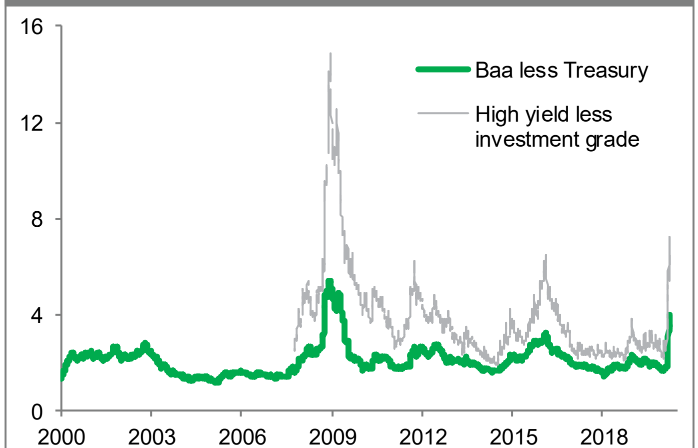
Corporate bond risk spreads
Percentage points of yield differential



Notes: Data through 9 April 2020
Sources: IHS Markit, Barclays, Federal Reserve
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AAA Muni yields relative to Treasury yields
Percentage points

Notes: Data through 9 April 2020
Source: IHS Markit
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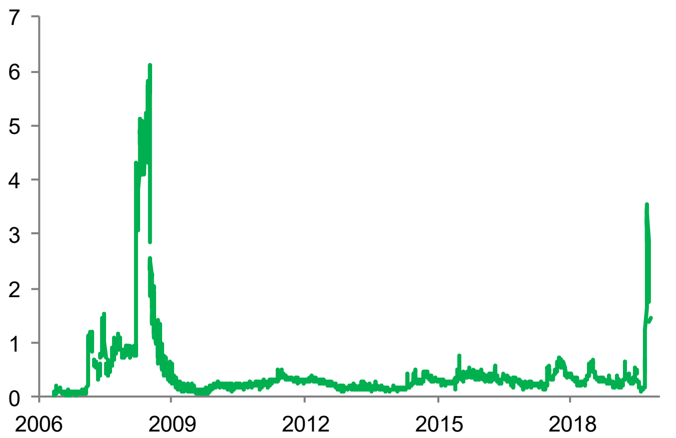
Commercial paper spread
30-day, A2/P2, nonfinancial, less OIS; in percentage points



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Source: Federal Reserve, IHS Markit
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have contributed to the narrowing. Investors have been influenced by updated projections suggesting that the impacts of the spread of COVID-19 in the United States might be less dire than previously anticipated. Furthermore, investor responses reflect expectations for substantial fiscal support, for example, contained in the CARES Act, including loans to businesses under the Paycheck Protection Program (PPP).

6. **Aided by ample liquidity and in part to meet demand from the federal government's Paycheck Protection Program, bank lending has surged since early March, with the large increases in loans to nonfinancial businesses other than for real estate and to nonbank financial institutions.** Between 4 March and 1 April, loans and leases extended by commercial banks in the United States rose \$641 billion to \$10,758 billion, an increase of 6.3%. Approximately three-fourths of that increase was accounted for by loans to commercial and industrial borrowers, which excludes loans for commercial real estate. Commercial and industrial loans jumped \$487 billion (21.0%) to \$2,845 billion. Real estate loans rose modestly, while consumer loans fell. The "other" category of loans and leases, which includes loans to nonbank financial institutions, rose \$147 billion (9.8%).

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