



December 2022

# FEDERAL RESERVE LENDING PROGRAMS

Risks Remain Low in  
Related Credit  
Markets, and Main  
Street Loans Have  
Generally Performed  
Well

Accessible Version

# GAO Highlights

Highlights of [GAO-23-105629](#), a report to congressional committees

On July 30, 2021, the last of the 13 Federal Reserve lending facilities stopped purchasing assets or extending credit. However, some of these facilities continue to hold large amounts of outstanding assets and loans. This includes facilities supported through Department of the Treasury funding appropriated under section 4003(b)(4) of the CARES Act. The Federal Reserve will continue to monitor and manage the facilities until these assets and loans are no longer outstanding.

The CARES Act included a provision for GAO to periodically report on section 4003 loans, loan guarantees, and investments. This report examines (1) the Federal Reserve's oversight and monitoring of the CARES Act facilities; (2) trends in credit markets that the facilities targeted; and (3) the status and performance of Main Street Lending Program loans.

GAO reviewed Federal Reserve Bank documentation; analyzed agency and other data on the facilities and credit markets, including data on short-term and long-term corporate credit market indicators; analyzed data on Main Street Lending Program loan performance; and interviewed Federal Reserve officials.

View [GAO-23-105629](#). For more information, contact Michael E. Clements at (202) 512-8678 or [clements@ga.gov](mailto:clements@ga.gov).

December 2022

## FEDERAL RESERVE LENDING PROGRAMS

### Risks Remain Low in Related Credit Markets, and Main Street Loans Have Generally Performed Well

#### What GAO Found

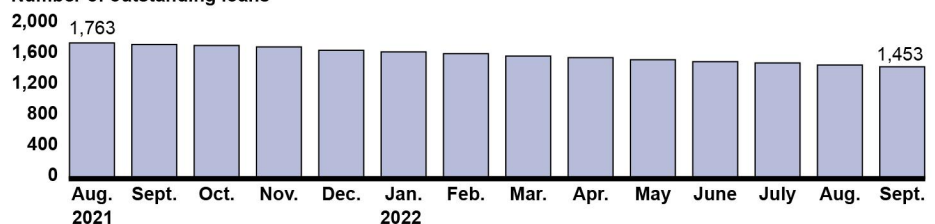
In response to the COVID-19 pandemic, the Board of Governors of the Federal Reserve System (Federal Reserve) authorized 13 emergency lending programs—known as facilities—to ensure the flow of credit to various parts of the economy. To improve its oversight of these facilities, the Federal Reserve issued three internal reports that identified opportunities from December 2020 through June 2022 to enhance internal processes and controls, including for collateral and asset management. GAO's review of Federal Reserve documentation found that Federal Reserve Banks, which manage the facilities, addressed most enhancement opportunities identified in prior Federal Reserve oversight reviews and are in the process of addressing remaining enhancement opportunities. GAO found that the Federal Reserve's plans for ongoing monitoring of the facilities continue to generally align with federal internal control standards for ongoing monitoring of an entity's internal control system.

Available indicators suggest that credit market risks in the sectors targeted by the facilities have remained low since the facilities ceased extending credit, although some vulnerabilities remain. For example, corporate bond issuances are higher than prepandemic levels, and credit spreads (which reflect borrowing costs) generally remain low, indicating corporations have relatively easy access to credit. However, prime money market funds that purchase mostly short-term corporate securities remain vulnerable, which could make it difficult for businesses to obtain credit or cause the funds to sell assets at lower prices. Small businesses' access to credit has generally remained favorable, and municipalities' borrowing costs have remained low since the facilities in these sectors stopped extending credit. While near-term risks in the credit markets supported by the facilities remain manageable, the effects of factors such as rising interest rates and high inflation levels could make these markets vulnerable in the near future.

As of September 30, 2022, the Main Street Lending Program facilities, which supported loans made to small and mid-sized businesses and nonprofits, held about \$11.2 billion in outstanding assets. Of the 1,830 loans made through the program, 1,453 loans remained outstanding as of the end of September 2022, the most recent data available (see figure). Since required interest payments began in August 2021, most borrowers have been making them on time. GAO's analysis of Federal Reserve Bank of Boston data found that 365 loans (about 20 percent) were fully repaid as of September 30, 2022, and less than 1 percent had resulted in losses.

**Main Street Lending Program Outstanding Loans, August 2021–September 2022**

Number of outstanding loans



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

**Accessible Data for Main Street Lending Program Outstanding Loans, August 2021–  
September 2022**

<b>Date</b>	<b>Outstanding loans</b>
Aug 2021	1763
Sep 2021	1742
Oct 2021	1730
Nov 2021	1711
Dec 2021	1667
Jan 2022	1646
Feb 2022	1624
Mar 2022	1593
Apr 2022	1571
May 2022	1545
June 2022	1520
July 2022	1504
Aug 2022	1477
Sept 2022	1453

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### **Abbreviations**

Federal Reserve	Board of Governors of the Federal Reserve System
FRA	forward rate agreement
FRBB	Federal Reserve Bank of Boston
OIS	overnight indexed swap
RBOPS	Division of Reserve Bank Operations and Payment Systems

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December 19, 2022

## Congressional Committees

In response to the economic effects of the COVID-19 pandemic, in 2020 the Board of Governors of the Federal Reserve System (Federal Reserve) authorized 13 emergency lending programs—known as facilities—to ensure the flow of credit to various parts of the economy.<sup>1</sup> Specifically, the Federal Reserve established nine facilities that received CARES Act-appropriated funds (which we refer to as CARES Act facilities) that were intended to support the flow of credit to employers, consumers, small and medium-sized businesses, state and local governments, and nonprofit organizations.<sup>2</sup> Additionally, the Federal Reserve established four emergency lending facilities that did not receive support through CARES Act-appropriated funds (which we refer to as non-CARES Act facilities), and these facilities were similarly intended to support the continued flow of credit to businesses and consumers.

The nine CARES Act facilities ceased purchasing assets or extending credit by January 8, 2021, but several continue to hold large amounts of outstanding assets and loans.<sup>3</sup> As of September 30, 2022, the CARES Act facilities had about \$15.2 billion in outstanding assets. Approximately \$11.2 billion of this amount was held by the Main Street Lending Program facilities, which targeted small and mid-sized businesses and nonprofits.

Section 4026(f) of the CARES Act contains a provision for us to review the loans, loan guarantees, and other investments provided under section

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<sup>1</sup>The facilities are authorized under section 13(3) of the Federal Reserve Act and approved by the Secretary of the Treasury. Section 13(3) of the Federal Reserve Act permits the Federal Reserve to provide emergency lending.

<sup>2</sup>To provide economic relief, section 4003(b)(4) of the CARES Act made available at least \$454 billion for the Department of the Treasury to support the Board of Governors of the Federal Reserve System in establishing facilities. Pub. L. No. 116-136, § 4003(b)(4), 134 Stat. 281, 470 (2020).

<sup>3</sup>On July 30, 2021, the last of the non-CARES Act facilities stopped purchasing assets or extending credit. As of September 30, 2022, the Paycheck Protection Program Liquidity Facility—established to encourage use of the Paycheck Protection Program—held about \$14 billion in outstanding loans. The other three non-CARES Act facilities had repaid all of their loans to the Federal Reserve Banks.

4003 of the CARES Act and report no later than 9 months after the date of enactment of the act, and annually thereafter through the year succeeding the last year for which loans, loan guarantees, or other investments made under section 4003 are outstanding.<sup>4</sup>

This report examines (1) the status of the Federal Reserve's ongoing oversight of the CARES Act facilities and the extent to which Federal Reserve Banks have implemented improvements to their monitoring of the facilities, (2) what available evidence suggests about trends in credit markets that the facilities targeted, and (3) the status of Main Street loans and their characteristics and trends in loan performance.

To address the first objective, we analyzed documentation from the Federal Reserve's Division of Reserve Bank Operations and Payment Systems (RBOPS). This included its procedures for CARES Act facilities, planning documents, and summaries of completed reviews. We compared RBOPS's monitoring plans against selected federal internal control standards.<sup>5</sup> Additionally, we interviewed Federal Reserve officials, and we reviewed the Federal Reserve's periodic reports and financial statements for updates on potential and actual losses incurred by the facilities.

To address the second objective, we analyzed indicators of credit markets affected by the facilities and the near-term vulnerabilities of these markets. We reviewed research from academics, the Federal Reserve, and industry experts, and we analyzed the most recently available data through August 2022 on indicators of credit markets affected by the facilities. To identify indicators, we reviewed prior GAO work and reports and data from Federal Reserve entities, Bloomberg, the Securities Industry and Financial Markets Association, and Dun & Bradstreet. We also reviewed research on economic conditions that could adversely affect the credit markets.

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<sup>4</sup>Our previous reports were GAO, *Federal Reserve Lending Programs: Credit Markets Served by the Programs Have Stabilized, but Vulnerabilities Remain*, [GAO-22-104640](#) (Washington, D.C.: Oct. 19, 2021) and *Federal Reserve Lending Programs: Use of CARES Act-Supported Programs Has Been Limited and Flow of Credit Has Generally Improved*, [GAO-21-180](#) (Washington, D.C.: Dec. 10, 2020). Additionally, we regularly issue government-wide reports on the federal response to COVID-19. Our next government-wide report will be issued in April 2023 and will be available on GAO's website at <https://www.gao.gov/coronavirus>.

<sup>5</sup>See GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014).

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To address the third objective, we obtained and analyzed selected aggregate Main Street Lending Program performance data as of the end of September 2022, the most recent data available from Federal Reserve Bank of Boston (FRBB).

To assess the reliability of data for the second objective, we reviewed documentation on the data collection methodologies and reviewed prior GAO work. We found that, collectively, the indicators were sufficiently reliable for the purpose of providing a general sense of how credit markets are performing. For the third objective, we gathered information from FRBB about how it aggregated and provided the Main Street loan data. We determined the data were sufficiently reliable for the purpose of describing the status and characteristics of Main Street loans and their performance. A more detailed description of our objectives, scope, and methodology can be found in appendix I.

We conducted this performance audit from December 2021 to December 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

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### Overview of the Federal Reserve System and Emergency Lending Authority

The Federal Reserve Act established the Federal Reserve System as the country's central bank.<sup>6</sup> The Federal Reserve System consists of three parts: the Federal Reserve Board, Reserve Banks, and the Federal Open Market Committee.<sup>7</sup> The Federal Reserve Board is a federal agency

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<sup>6</sup>Federal Reserve Act, Pub. L. No. 63-43, 38 Stat. 251 (1913).

<sup>7</sup>The Federal Open Market Committee consists of the seven members of the Board of Governors, the President of the Federal Reserve Bank of New York, and four other Reserve Bank presidents who serve on a rotating basis. The committee is responsible for directing open market operations to influence the total amount of money and credit available in the economy.

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located in Washington, D.C., that oversees the operations of the Reserve Banks and shares with them the responsibility for supervising and regulating certain financial institutions and activities. The United States is divided into 12 Federal Reserve Districts, and each district is served by a regional Reserve Bank.

The Federal Reserve Board has the authority to authorize the Reserve Banks to extend credit more broadly than usual during emergencies.<sup>8</sup> Specifically, under section 13(3) of the Federal Reserve Act, during unusual and exigent circumstances, the Federal Reserve can authorize Reserve Banks to extend credit to a broader range of borrowers.<sup>9</sup>

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## Emergency Lending Facilities in Response to COVID-19

In response to the economic disruptions caused by the COVID-19 pandemic, the CARES Act authorized at least \$454 billion for the Department of the Treasury to support the Federal Reserve in establishing facilities to provide liquidity to the financial system. With the Secretary of the Treasury's approval, the Federal Reserve used its authority under section 13(3) to authorize 13 emergency lending facilities, nine of which received support from CARES Act funds. The Federal Reserve cited a number of factors in determining that unusual and exigent circumstances existed, including disruption in the financial markets, reduced availability of credit, a heightened need for credit, and an increase in business expenditures. The Federal Reserve Banks administered the Federal Reserve's 13 facilities.

In general, the CARES Act-supported facilities were designed to address broad sectors of the economy, such as large corporations, small and mid-sized businesses, and state and local governments. The CARES Act required that the facilities make purchase obligations from and loans to only businesses that were created or organized in the United States and that had significant operations and a majority of employees in the United

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<sup>8</sup>Reserve Banks typically lend to banks through discount window programs based on established statutory criteria. 12 U.S.C. § 347b(a). The discount window is a Federal Reserve Board lending program that allows eligible institutions to borrow money, usually on a short-term basis, at an above-market rate to meet temporary liquidity shortages.

<sup>9</sup>12 U.S.C. § 343(3). During the 2007–2009 financial crisis, the Federal Reserve invoked its section 13(3) authority to create emergency programs to stabilize financial markets and avert the failures of a few individual institutions.

States.<sup>10</sup> Overall, the CARES Act facilities could support up to \$1.95 trillion in transaction volume, and Treasury disbursed \$102.5 billion in CARES Act funds to the support the facilities. Of this total, as of September 30, 2022, the Federal Reserve had returned about \$84.5 billion to Treasury, leaving about \$18 billion available to cover any potential losses the facilities may incur. In accordance with the Consolidated Appropriations Act, 2021, all nine facilities stopped purchasing assets or extending credit by January 2021. They conducted a total of about \$41 billion in transactions.

The CARES Act facilities are as follows:

- **Primary Market Corporate Credit Facility and Secondary Market Corporate Credit Facility.** These two facilities were designed to support large businesses by purchasing qualifying corporate bonds and other eligible assets.
- **Main Street Lending Program.** Under this program, a total of five facilities were designed to support small and mid-sized for-profit businesses and nonprofit organizations by purchasing participations in eligible loans.<sup>11</sup> Borrowers from the five Main Street facilities were required to comply with additional CARES Act requirements, including limitations on executive compensation, dividends, and equity buybacks.<sup>12</sup>
- **Municipal Liquidity Facility.** This facility was designed to support states, certain counties, municipalities, multistate entities, and revenue bond issuers by purchasing eligible notes that these entities issued.
- **Term Asset-Backed Securities Loan Facility.** This facility was designed to support the flow of credit to consumers and businesses by providing nonrecourse loans to U.S. companies secured by qualifying asset-backed securities generally backed by recently originated consumer and business loans.

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<sup>10</sup>Pub. L. No. 116-136, § 4003(c)(3)(C), 134 Stat. at 473 (2020).

<sup>11</sup>The Main Street Lending Program comprised five facilities: the Main Street New Loan Facility, Main Street Priority Loan Facility, Main Street Expanded Loan Facility, Nonprofit Organization New Loan Facility, and Nonprofit Organization Expanded Loan Facility. The Federal Reserve Bank of Boston administers the Main Street Lending Program.

<sup>12</sup>Pub. L. No. 116-136, §§ 4003, 4004, 134 Stat. 281, 472, 476 (2020).

The Federal Reserve also established four facilities, with the Treasury Secretary's approval, that did not receive CARES Act-appropriated funds.<sup>13</sup> These facilities were designed to provide liquidity to the financial sector and businesses. All four facilities stopped purchasing assets or extending credit by July 30, 2021.

For the facilities that received CARES Act funds, outstanding assets peaked between November 2020 and January 2021 (see fig. 1).<sup>14</sup> Outstanding assets refers to assets, such as corporate and municipal bonds, that the facilities purchased and had not disposed of through sale or other means. As of August 31, 2021, all of the Secondary Market Corporate Credit Facility's holdings in exchange-traded funds and corporate bond assets had either matured or been sold.<sup>15</sup> Additionally, one of the two entities that borrowed from (sold eligible notes to) the Municipal Liquidity Facility has repaid all of its borrowings.<sup>16</sup>

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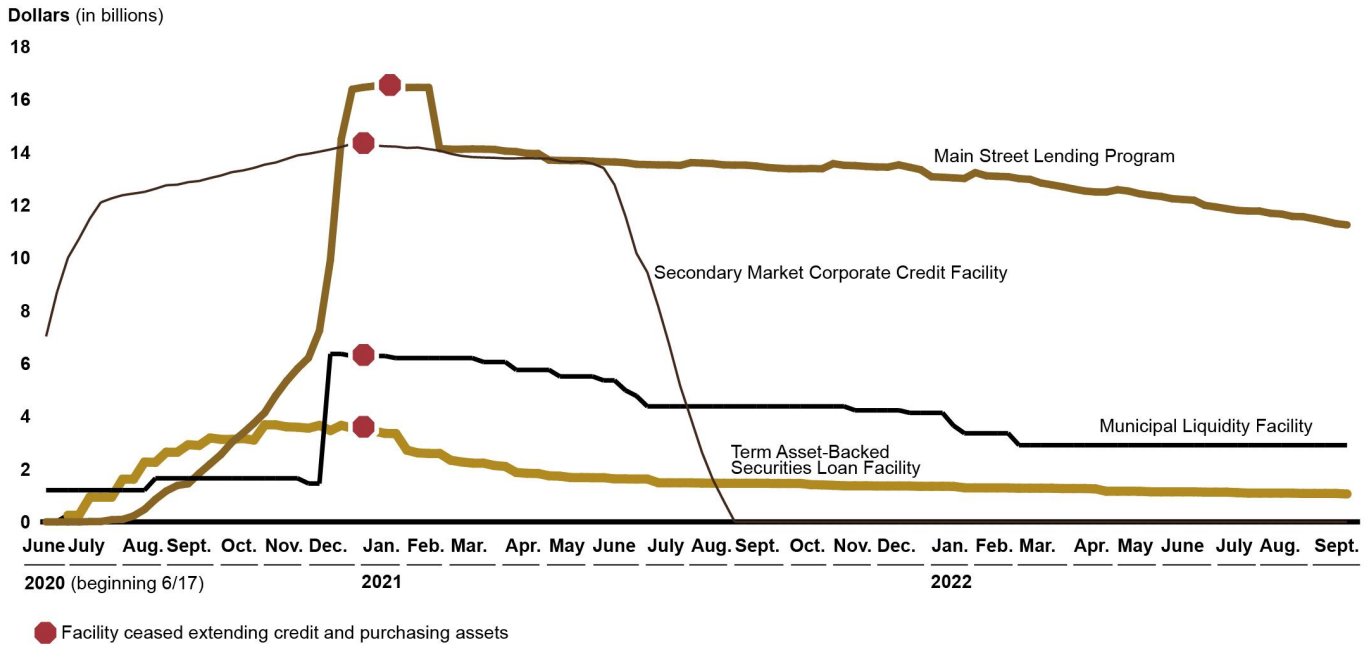
<sup>13</sup>These facilities were the Commercial Paper Funding Facility, the Money Market Mutual Fund Liquidity Facility, the Primary Dealer Credit Facility, and the Paycheck Protection Program Liquidity Facility. All but the last were facilities the Federal Reserve used previously during the 2007–2009 financial crisis.

<sup>14</sup>Rather than purchasing loans, the Term Asset-Backed Securities Loan Facility provided loans in exchange for eligible asset-backed securities.

<sup>15</sup>The Primary Market Corporate Credit Facility did not conduct any transactions.

<sup>16</sup>As of January 2022, the state of Illinois had repaid all of its borrowings from the Municipal Liquidity Facility.

**Figure 1: Outstanding Assets of Federal Reserve Lending Facilities Supported by CARES Act Funding, June 2020–September 2022**



Source: GAO analysis of Federal Reserve System documents and data. | GAO-23-105629

**Accessible Data for Figure 1: Outstanding Assets of Federal Reserve Lending Facilities Supported by CARES Act Funding, June 2020–September 2022**

Date	Municipal Liquidity Facility	Main Street Lending Program	Term Asset-Backed Securities Loan Facility	Secondary Market Corporate Credit Facility
6/17/2020	1.2	0	0	7.027
6/24/2020	1.2	0	0	8.71
7/1/2020	1.2	0	0.252	10.006
7/8/2020	1.2	0	0.252	10.716
7/15/2020	1.2	0.012	0.937	11.485
7/22/2020	1.2	0.014	0.937	12.1
7/29/2020	1.2	0.082	0.937	12.255
8/5/2020	1.2	0.095	1.619	12.374
8/12/2020	1.2	0.226	1.619	12.435
8/19/2020	1.2	0.472	2.266	12.498
8/26/2020	1.651	0.855	2.256	12.617
9/2/2020	1.651	1.172	2.639	12.75
9/9/2020	1.651	1.38	2.639	12.771
9/16/2020	1.651	1.445	2.922	12.867

Letter

Date	Municipal Liquidity Facility	Main Street Lending Program	Term Asset-Backed Securities Loan Facility	Secondary Market Corporate Credit Facility
9/23/2020	1.651	1.837	2.896	12.911
9/30/2020	1.651	2.195	3.18	13.022
10/7/2020	1.651	2.553	3.127	13.118
10/14/2020	1.651	3.018	3.127	13.247
10/21/2020	1.651	3.358	3.159	13.309
10/28/2020	1.651	3.732	3.099	13.405
11/4/2020	1.651	4.14	3.675	13.532
11/11/2020	1.651	4.785	3.675	13.61
11/18/2020	1.651	5.338	3.6	13.747
11/25/2020	1.651	5.808	3.587	13.882
12/2/2020	1.454	6.212	3.548	13.942
12/9/2020	1.454	7.237	3.655	14.021
12/16/2020	6.361	9.911	3.458	14.105
12/23/2020	6.361	14.501	3.656	14.202
12/30/2020	6.283	16.385	3.552	14.315
1/6/2021	6.283	16.456	3.552	14.248
1/13/2021	6.283	16.504	3.438	14.254
1/20/2021	6.283	16.494	3.352	14.227
1/27/2021	6.203	16.448	3.343	14.212
2/3/2021	6.203	16.45	2.717	14.163
2/10/2021	6.203	16.453	2.613	14.179
2/17/2021	6.203	16.453	2.593	14.115
2/24/2021	6.203	14.135	2.593	14.058
3/3/2021	6.203	14.116	2.336	13.943
3/10/2021	6.203	14.115	2.27	13.86
3/17/2021	6.203	14.123	2.227	13.817
3/24/2021	6.058	14.117	2.227	13.8
3/31/2021	6.058	14.107	2.135	13.788
4/7/2021	6.058	14.044	2.101	13.766
4/14/2021	5.758	14.023	1.872	13.768
4/21/2021	5.758	13.956	1.84	13.774
4/28/2021	5.758	13.952	1.833	13.765
5/5/2021	5.758	13.703	1.745	13.757
5/12/2021	5.508	13.687	1.733	13.661
5/19/2021	5.508	13.684	1.679	13.629
5/26/2021	5.508	13.678	1.676	13.658

Letter

Date	Municipal Liquidity Facility	Main Street Lending Program	Term Asset-Backed Securities Loan Facility	Secondary Market Corporate Credit Facility
6/2/2021	5.508	13.662	1.675	13.566
6/9/2021	5.358	13.639	1.675	13.405
6/16/2021	5.358	13.634	1.628	12.765
6/23/2021	4.982	13.605	1.628	11.573
6/30/2021	4.771	13.542	1.622	10.174
7/7/2021	4.373	13.533	1.622	9.451
7/14/2021	4.373	13.519	1.483	8.148
7/21/2021	4.373	13.517	1.481	6.713
7/28/2021	4.373	13.5	1.479	5.153
8/4/2021	4.373	13.607	1.479	3.894
8/11/2021	4.373	13.591	1.47	2.629
8/18/2021	4.373	13.57	1.469	1.595
8/25/2021	4.373	13.519	1.461	0.781
9/1/2021	4.373	13.514	1.461	0
9/8/2021	4.373	13.512	1.461	0
9/15/2021	4.373	13.478	1.46	0
9/22/2021	4.373	13.421	1.46	0
9/29/2021	4.373	13.394	1.456	0
10/6/2021	4.373	13.373	1.456	0
10/13/2021	4.373	13.373	1.456	0
10/20/2021	4.373	13.381	1.409	0
10/27/2021	4.373	13.375	1.403	0
11/3/2021	4.373	13.567	1.386	0
11/10/2021	4.373	13.505	1.368	0
11/17/2021	4.228	13.493	1.368	0
11/24/2021	4.228	13.463	1.368	0
12/1/2021	4.228	13.442	1.36	0
12/8/2021	4.228	13.437	1.36	0
12/15/2021	4.228	13.521	1.36	0
12/22/2021	4.131	13.43	1.359	0
12/29/2021	4.131	13.34	1.346	0
1/5/2022	4.131	13.072	1.346	0
1/12/2022	4.131	13.054	1.346	0
1/19/2022	3.649	13.03	1.345	0
1/26/2022	3.358	13.006	1.291	0
2/2/2022	3.358	13.227	1.291	0

Letter

Date	Municipal Liquidity Facility	Main Street Lending Program	Term Asset-Backed Securities Loan Facility	Secondary Market Corporate Credit Facility
2/9/2022	3.358	13.108	1.286	0
2/16/2022	3.358	13.087	1.286	0
2/3/2022	3.358	13.075	1.286	0
3/2/2022	2.907	13.001	1.275	0
3/9/2022	2.907	12.973	1.275	0
3/16/2022	2.907	12.836	1.275	0
3/23/2022	2.907	12.765	1.275	0
3/30/2022	2.907	12.692	1.264	0
4/6/2022	2.907	12.607	1.264	0
4/13/2022	2.907	12.532	1.264	0
4/20/2022	2.907	12.496	1.25	0
4/27/2022	2.907	12.492	1.16	0
5/4/2022	2.907	12.581	1.16	0
5/11/2022	2.907	12.531	1.16	0
5/18/2022	2.907	12.429	1.159	0
5/25/2022	2.907	12.367	1.141	0
6/1/2022	2.907	12.325	1.141	0
6/8/2022	2.907	12.24	1.141	0
6/15/2022	2.907	12.212	1.141	0
6/22/2022	2.907	12.184	1.139	0
6/29/2022	2.907	11.987	1.126	0
7/6/2022	2.907	11.929	1.126	0
7/13/2022	2.907	11.86	1.126	0
7/20/2022	2.907	11.796	1.107	0
7/27/2022	2.907	11.774	1.09	0
8/3/2022	2.907	11.771	1.09	0
8/10/2022	2.907	11.688	1.09	0
8/17/2022	2.907	11.661	1.09	0
8/24/2022	2.907	11.570	1.09	0
8/31/2022	2.907	11.558	1.076	0
9/7/2022	2.907	11.479	1.076	0
9/14/2022	2.907	11.393	1.076	0
9/21/2022	2.907	11.295	1.076	0
9/28/2022	2.907	11.248	1.058	0

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Note: Since February 24, 2021, the amount of the Main Street Lending Program's outstanding assets is reported net of an allowance for loan losses, which is updated quarterly. The Main Street lending facilities purchased a participation interest in newly issued eligible loans that eligible lenders made to eligible small and mid-sized for-profit borrowers and nonprofit organizations.

The Federal Reserve's Division of Reserve Bank Operations and Payment Systems (RBOPS), which oversees the policies and operations of the Reserve Banks, is primarily responsible for the oversight of the Federal Reserve's facilities. RBOPS's general framework for oversight of the facilities consists of three phases:

- **Phase one.** During its initial phase of oversight, RBOPS, through communication with Reserve Bank staff, focused on providing assistance in setting up the various facilities quickly.
- **Phase two.** As the facilities became operational, RBOPS reviewed the facilities' established governance structures, process workflows, and internal control design. RBOPS conducted these reviews to assist Reserve Banks in identifying any enhancements at an early point in the life of the facilities and to obtain reasonable assurance that the design of controls and processes was adequate to ensure the facilities' effective operation. RBOPS completed phase two reviews for all facilities by December 2020.
- **Phase three.** The third phase consists of ongoing monitoring activities. This includes continued communication with Reserve Bank management and periodic reviews of facility operations and controls to obtain reasonable assurance that controls are present and are functioning in a manner that addresses identified risks. According to RBOPS documentation, phase three oversight activities will continue throughout the life of the facilities, until they no longer hold outstanding assets or loans.

As part of phase three oversight activities, RBOPS prepares interim reports summarizing the scope of oversight activities and any enhancement opportunities related to facility processes and controls at 6-month intervals, unless a change in timing is approved by the credit facilities' oversight steering group and advisors.<sup>17</sup>

RBOPS officials told us that RBOPS has a process for determining if enhancement opportunities have been addressed. They said Reserve Bank staff notify RBOPS when they have completed steps to address the enhancement opportunity. RBOPS then analyzes the actions taken by

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<sup>17</sup>According to RBOPS documentation, RBOPS's organizational structure for phase three credit facility oversight consists of a steering group and an advisor group that oversee the teams responsible for phase three focus areas.

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Reserve Bank staff and determines whether the enhancement opportunity has been addressed. According to RBOPS officials, this analysis may include discussions with a Reserve Bank’s internal audit team and Reserve Bank management, walk-throughs with Reserve Bank staff to understand new or updated processes, and reviews of documentation such as process flows and procedures.

Two of the remaining facilities—the Term Asset-Backed Securities Loan Facility and the Municipal Liquidity Facility—are managing basic operations, such as winding down the facility. The Main Street Lending Program and the Paycheck Protection Program Liquidity Facility continue to have assets, and the Main Street Lending Program continues to have robust operations related to the management of these assets. According to RBOPS officials, the Paycheck Protection Program Liquidity Facility also continues to have ongoing activities related to the management of assets.

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## The Federal Reserve Identified Opportunities to Improve Controls, and Federal Reserve Banks Implemented Most Enhancements

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### The Federal Reserve’s Reviews of Facilities Identified Opportunities to Enhance Processes and Controls

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As of September 2022, RBOPS had issued three interim reports to Reserve Bank management communicating the results of phase three reviews. The reports, issued at 6-month intervals, cumulatively covered December 2020 through June 2022. Overall, RBOPS’s phase three reviews found that the design of controls and processes at the facilities was sufficient to address identified risks. However, the reports identified opportunities to (1) improve the validation of one facility’s credit evaluation model and (2) document the process for one facility’s comprehensive risk assessments. These opportunities were in addition to those identified in phase two reviews completed in December 2020. In addition, RBOPS noted three vendor-related risk events reported by a facility. Based on phase three review work, RBOPS concurred with the facility management’s assessment that these risk events were low-severity and concluded that they were adequately addressed by the facility via process improvements.

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In line with our previous reporting, we found that RBOPS's ongoing monitoring of the facilities generally aligns with federal internal control standards for monitoring of an entity's internal control system.<sup>18</sup> According to the standards, management should establish and operate monitoring activities to monitor the internal control system and evaluate the results. This includes ongoing monitoring of the design and operating effectiveness of the internal control system as part of the normal course of operations. Further, management should remediate identified internal control deficiencies on a timely basis.

RBOPS's activities were generally consistent with internal control standards. RBOPS's phase three reviews noted opportunities for enhancements in processes and controls for a facility. Additionally, RBOPS tracked the relevant facilities' progress in addressing identified enhancements from RBOPS's phase two reviews. RBOPS communicated these opportunities to facility management teams at relevant Reserve Banks and the Federal Reserve Board. RBOPS conducts ongoing follow-up and periodic reporting on facilities' progress in incorporating the enhancements as part of its phase three reviews.

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## RBOPS Consolidated Its Internal Control Focus Areas

While RBOPS's oversight approach is generally consistent with the phase three plans described in our October 2021 report, RBOPS consolidated some of its internal control focus areas for ongoing monitoring.<sup>19</sup> In its initial phase three plan, RBOPS identified the following nine oversight focus areas: (1) collateral and asset management; (2) certifications; (3) conflicts of interest; (4) risk management; (5) vendor management; (6) cybersecurity, resiliency, and data management; (7) information systems, process, and resources; (8) internal controls; and (9) accounting and reporting. RBOPS subsequently removed the accounting and reporting focus area because it is already considered under other established RBOPS and Reserve Bank accounting and reporting processes.

In 2022, RBOPS updated its approach to consolidate the certifications, conflicts of interest, risk management, internal controls, and vendor management focus areas into one common focus area identified as operations and controls. RBOPS also incorporated the information

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<sup>18</sup>See [GAO-14-704G](#) and [GAO-22-104640](#).

<sup>19</sup>[GAO-22-104640](#).

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systems, process, and resources focus area into cybersecurity, resiliency, and data management.

RBOPS used both top-down and bottom-up assessment approaches to identify focus areas during initial phase three planning. It continued to leverage conversations and interactions with stakeholders (top-down) and results of previous oversight activities (bottom-up). According to planning documents, RBOPS employs a risk-based approach in which phase three oversight is tailored to risks unique to each facility. The approach may include coordinating with Reserve Bank internal audit functions and external auditors, and possibly engaging third-party expertise. For example, RBOPS's oversight includes consideration of the work performed by the independent auditors of facilities' financial statements. According to RBOPS officials, RBOPS's risk assessment process considers the facilities' financial statement audit reports, and the reports are included as part of RBOPS's comprehensive review of internal and external audit work related to the program.

As part of its phase three monitoring, RBOPS plans to continue issuing an interim report every 6 months summarizing the scope of its oversight activities and findings. RBOPS's oversight planning memorandum states that RBOPS may periodically change the timing of the interim report, as approved by internal oversight groups and advisors. According to RBOPS documentation, any findings or issues identified in the interim report will be communicated to the relevant facility's management team in a timely manner.

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## Federal Reserve Banks Implemented Enhancements to Address Most Previously Identified Improvement Opportunities

The three Federal Reserve Banks primarily responsible for administering the emergency lending facilities have implemented enhancements to address all 18 opportunities RBOPS identified in its phase two reviews.<sup>20</sup> Phase two opportunities were related to facilities' collateral and asset management; governance; internal processes and controls; cyber security, resiliency, and data management; and risk management. During phase three reviews, RBOPS identified an additional two enhancement opportunities, as previously discussed. These enhancement opportunities

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<sup>20</sup>Reserve Banks responsible for administering the facilities are the Federal Reserve Bank of Boston, Federal Reserve Bank of New York, and Federal Reserve Bank of Minneapolis.

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are related to collateral and asset management, and remain outstanding as of September 2022. Bank officials said they have begun to address the phase three RBOPS opportunities for enhancement. RBOPS plans to follow up on the status of these enhancement opportunities as part of its continued phase three oversight reviews.

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### Actual and Expected Losses Are Limited to the Main Street Lending Program

As of September 30, 2022, the Main Street Lending Program facilities were the only facilities that had experienced losses. According to Federal Reserve officials, this is because a small number of Main Street borrowers experienced a credit event, such as a bankruptcy. These credit events have resulted in recognized losses of about \$45 million, net of recoveries, to the Main Street Lending Program facilities (discussed later in this report).

Regulations governing the Federal Reserve's emergency lending authority require that loans be secured to the satisfaction of the Federal Reserve Bank making the loan. Losses in the Main Street Lending Program are covered first by fees charged and interest earned in the facility, and then by about \$13.9 billion in funds that Treasury made available under the CARES Act to support the Main Street facilities. In its periodic reports to Congress, the Board of Governors continues to expect that Main Street Lending Program losses will not result in losses to the Federal Reserve.

**Specific loss allowance.** To generate the specific loan loss allowance for the Main Street Lending Program facilities, the Federal Reserve Bank of Boston evaluates loans with an outstanding balance of \$15 million or greater that fail to meet certain criteria related to loan performance or credit rating to determine if it is likely that the borrower will not repay all of the principal and interest. If it is determined that a loss is likely, the Main Street Lending Program facilities recognize a specific loan loss allowance for that loan. As of September 30, 2022, according to Federal Reserve officials, the total amount of the specific loan loss allowance for all such loans amounted to \$749 million.

**General loss allowance.** A loan may be subject to the general allowance either because the borrower is expected to repay all of the principal and interest, or because the balance of the loan is below the threshold for the specific loan loss allowance. The general loan loss allowance takes into account the probability that some portion of a pool of loans will default and the losses that would be incurred if loans were to default, applied to the outstanding principal of the pool of loans. As of September 30, 2022, according to Federal Reserve officials, the general loan loss allowance amounted to \$649 million.

Source: Board of Governors of the Federal Reserve System (Federal Reserve). | GAO-23-105629

Additionally, the Federal Reserve analyzes all of the CARES Act facilities on a quarterly basis to determine if it is necessary to set aside an allowance for potential loan losses in accordance with generally accepted accounting principles.<sup>21</sup> Of these facilities, only the Main Street Lending Program anticipates probable losses. As of September 30, 2022, the Federal Reserve had recorded a loss allowance of \$1.4 billion in anticipation of future losses, based on the most recent data available on loan loss allowances.<sup>22</sup>

For the Main Street Lending Program, allowances for loan losses consist of specific allowances for impaired loan participants and a general allowance for all other loan participations, collectively reflecting management's estimate of probable loan losses inherent in the program's portfolio at the reporting date (see sidebar).

The Federal Reserve uses information related to loan loss allowances and impaired loans to monitor the Main Street Lending Program portfolio, such as by using content contained within the Financial Accounting Manual for Federal Reserve Banks.

## Risks in the Credit Markets Targeted by the Lending Facilities Appear to Be Low, but Vulnerabilities Exist

The Federal Reserve implemented emergency lending facilities to mitigate disruptions in credit markets for large and small businesses, as well as state and local governments, as a result of the COVID-19

<sup>21</sup>Allowances for credit losses are estimated by the Federal Reserve in alignment with U.S. generally accepted accounting principles set by the Financial Accounting Standards Board. In June 2016, the board introduced a new methodology for estimating allowances for credit losses, known as the current expected credit loss methodology. RBOPS has elected to adopt this methodology starting in January 1, 2023, for the facilities. As described in the board's Accounting Standards Update (ASU) 2016-13, the new methodology for estimating allowances aims to provide for more timely recognition of credit losses. RBOPS has a group that is reviewing the standard and its potential impact on the facilities.

<sup>22</sup>The allowance for loan losses is an estimate of potential losses based on the Main Street Lending Program's holdings as of September 30, 2022, and does not indicate losses experienced by the program.

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pandemic.<sup>23</sup> We found that since the termination of the facilities, overall credit market risks and near-term default risks in the markets that the facilities operated in appear to be low, although vulnerabilities exist.<sup>24</sup>

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<sup>23</sup>In our October 2021 report, we discussed trends in these credit markets up to the second quarter of 2021; see [GAO-22-104640](#). Available indicators suggested at that time that the facilities had helped improve access to credit and liquidity in the corporate and municipal credit markets. Additionally, according to surveys of small and independent businesses and lenders, access to credit had improved, but recovery remained slow. Although it is difficult to completely isolate the impact of the credit facilities, they likely contributed to restoring confidence among market participants through the announcement of the intent to provide credit, purchases of securities, and provision of a funding backstop. The Federal Reserve also took a number of other actions in response to market disruptions resulting from the COVID-19 pandemic, including regulatory and monetary policy actions that supported the flow of credit to households, businesses, and the U.S. economy. For examples of studies that assess the impact of specific facilities on the credit markets, see Nina Boyarchenko, Anna Kovner, and Or Shachar, *It's What You Say and What You Buy: A Holistic Evaluation of the Corporate Credit Facilities*, Federal Reserve Bank of New York Staff Reports, no. 935 (July 2020); Simon Gilchrist et al., "The Fed Takes on Corporate Credit Risk: An Analysis of the Efficacy of the SMCCF" (working paper no. 27809, National Bureau of Economic Research, September 2020), accessed August 4, 2021, <http://www.nber.org/papers/w27809>; and Nicholas Fritsch, John Bagley, and Shawn Nee, "Municipal Markets and the Municipal Liquidity Facility" (Federal Reserve Bank of Cleveland, working paper no.21-07, March 2021), accessed August 4, 2021, <https://doi.org/10.26509/frbc-wp-202107>.

<sup>24</sup>Risks in credit markets involve risks to both the issuer and counterparty, such as default risk. Other risks include liquidity risk, which is the risk that a given security or asset cannot be traded promptly in the market (for example, to prevent a loss). The facilities that supported the corporate bond and municipal securities credit markets ceased extending credit in December 2020; the facilities that supported the short-term corporate credit markets ceased extending credit in March 2021; and the facilities that supported credit markets for small businesses stopped providing loans by July 2021.

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## Risks in Corporate Credit Markets Have Remained Low, but Vulnerabilities Exist in Certain Short-Term Funding Markets

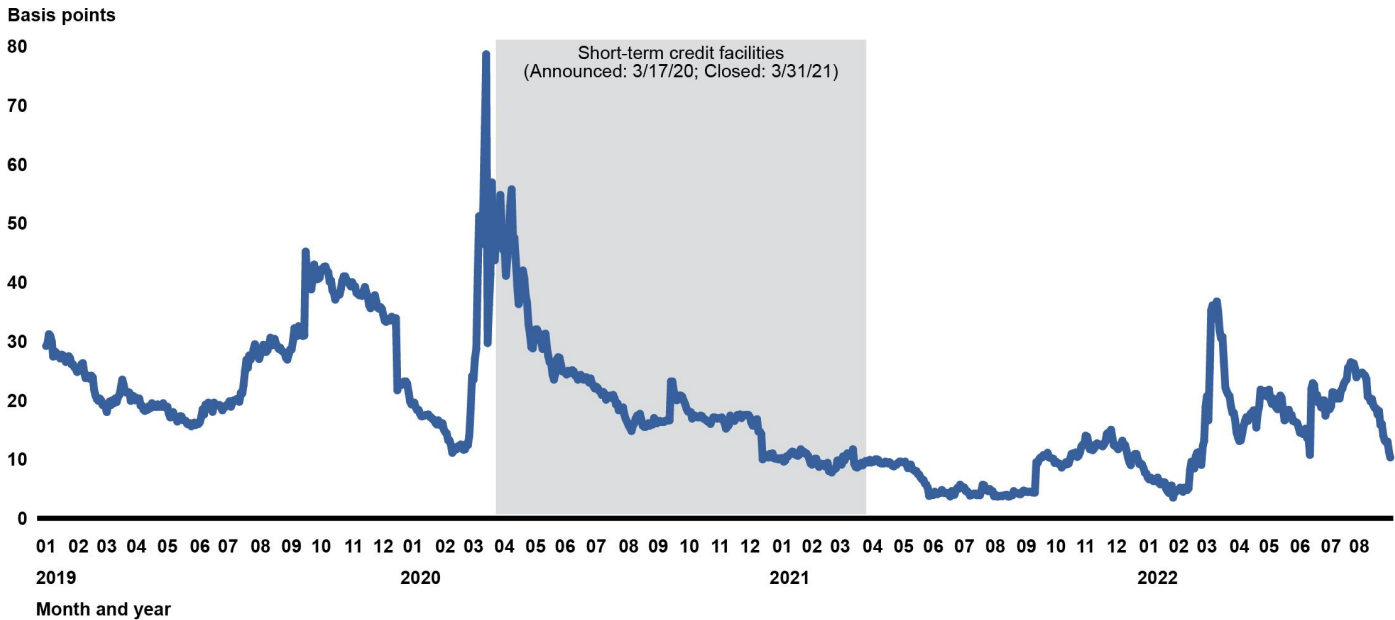
Since the termination of the facilities that supported short-term market functioning on March 31, 2021, risks in these markets have continued to remain low, close to prepandemic levels.<sup>25</sup>

Market metrics that measure the level of stress in the banking system suggest short-term risks have generally continued to remain at or below prepandemic levels since March 2021. One indicator is the forward rate agreement-overnight indexed swap (FRA-OIS) spread, which provides a snapshot of how the market views short-term credit conditions. Since May 2020, this indicator suggests credit risks have generally eased as spreads have narrowed, indicating lower stress in financial markets (see fig. 2).<sup>26</sup> The brief spike in the spread in March 2022 is likely due to the effects of high inflation and the Russia–Ukraine war.

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<sup>25</sup>The Federal Reserve established the following facilities in March and April 2020 to support the functioning of the short-term credit markets: the Primary Dealer Credit Facility, Money Market Mutual Fund Liquidity Facility, and Commercial Paper Funding Facility.

<sup>26</sup>Spreads are the difference in yields between a security (such as commercial paper) and a safer asset (such as a Treasury security) with similar timing of interest and principal payments. Spreads measure the premium investors require to hold assets that are relatively riskier than safe assets. The FRA-OIS spread is the difference between a 3-month forward rate agreement (FRA) and a 3-month overnight indexed swap (OIS).

**Figure 2: Spread Between 3-Month Forward Rate Agreement and Overnight Indexed Swap, January 2019–August 2022**

Source: GAO analysis of Bloomberg data. | GAO-23-105629

**Accessible Data for Figure 2: Spread Between 3-Month Forward Rate Agreement and Overnight Indexed Swap, January 2019–August 2022**

Date	Basis points
1/1/2019	29.2
1/2/2019	29.647
1/3/2019	31.2
1/4/2019	30.9
1/7/2019	29.93
1/8/2019	27.4
1/9/2019	28.3
1/10/2019	28.1
1/11/2019	27.5
1/14/2019	27.6
1/15/2019	27.081
1/16/2019	27.723
1/17/2019	27.6
1/18/2019	27.1
1/21/2019	26.5
1/22/2019	27.3

Date	Basis points
1/23/2019	27.473
1/24/2019	27.1
1/25/2019	26.1
1/28/2019	26.1
1/29/2019	25.6
1/30/2019	25.315
1/31/2019	24.8
2/1/2019	25.3
2/4/2019	25.4
2/5/2019	26.1
2/6/2019	26.3
2/7/2019	24.7
2/8/2019	23.746
2/11/2019	23.8
2/12/2019	24.173
2/13/2019	23.638
2/14/2019	24.174
2/15/2019	23.9
2/18/2019	21.8
2/19/2019	20.8
2/20/2019	20.2
2/21/2019	19.911
2/22/2019	20.3
2/25/2019	20
2/26/2019	19.2
2/27/2019	19.414
2/28/2019	18.9
3/1/2019	18.015
3/4/2019	19.3
3/5/2019	19.8
3/6/2019	19.2
3/7/2019	20
3/8/2019	19.5
3/11/2019	20.3
3/12/2019	19.7
3/13/2019	20.6
3/14/2019	20.9

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Letter

Date	Basis points
3/15/2019	22.2
3/18/2019	23.5
3/19/2019	22.6
3/20/2019	21.4
3/21/2019	21.3
3/22/2019	21.4
3/25/2019	21.3
3/26/2019	19.9
3/27/2019	20.679
3/28/2019	20.7
3/29/2019	20
4/1/2019	20.4
4/2/2019	20
4/3/2019	20.3
4/4/2019	19.1
4/5/2019	19.1
4/8/2019	18.412
4/9/2019	18.2
4/10/2019	18.4
4/11/2019	18.4
4/12/2019	18.998
4/15/2019	18.681
4/16/2019	19.5
4/17/2019	19.1
4/18/2019	18.9
4/19/2019	18.9
4/22/2019	19.3
4/23/2019	18.9
4/24/2019	19.1
4/25/2019	18.9
4/26/2019	19.5
4/29/2019	19
4/30/2019	18.724
5/1/2019	18.9
5/2/2019	17.7
5/3/2019	17.1
5/6/2019	17.2

Date	Basis points
5/7/2019	18
5/8/2019	17.3
5/9/2019	17.1
5/10/2019	16.4
5/13/2019	16.88
5/14/2019	17.3
5/15/2019	17.25
5/16/2019	16.622
5/17/2019	16.6
5/20/2019	16.5
5/21/2019	16
5/22/2019	15.9
5/23/2019	16.1
5/24/2019	15.6
5/27/2019	15.9
5/28/2019	16.2
5/29/2019	15.8
5/30/2019	16.1
5/31/2019	16
6/3/2019	16.3
6/4/2019	17.25
6/5/2019	18.5
6/6/2019	17.6
6/7/2019	19.267
6/10/2019	18.6
6/11/2019	19.6
6/12/2019	18.7
6/13/2019	18.6
6/14/2019	18.05
6/17/2019	19.6
6/18/2019	19.25
6/19/2019	19.2
6/20/2019	19.144
6/21/2019	19.2
6/24/2019	18.75
6/25/2019	18.3
6/26/2019	18.7

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Letter

Date	Basis points
6/27/2019	18.9
6/28/2019	19.2
7/1/2019	19.3
7/2/2019	19.835
7/3/2019	18.917
7/4/2019	19.5
7/5/2019	20
7/8/2019	19.9
7/9/2019	20.2
7/10/2019	20.2
7/11/2019	19.75
7/12/2019	21.25
7/15/2019	21.15
7/16/2019	22.6
7/17/2019	25
7/18/2019	26.85
7/19/2019	25.5
7/22/2019	27.594
7/23/2019	26.9
7/24/2019	27.481
7/25/2019	28.6
7/26/2019	29.5
7/29/2019	28.9
7/30/2019	27.5
7/31/2019	27
8/1/2019	27.8
8/2/2019	28.1
8/5/2019	29.4
8/6/2019	28.519
8/7/2019	28.2
8/8/2019	28.5
8/9/2019	29.4
8/12/2019	30.6
8/13/2019	29.3
8/14/2019	30.1
8/15/2019	30.4
8/16/2019	29.55

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Letter

Date	Basis points
8/19/2019	29.1
8/20/2019	28.7
8/21/2019	28.9
8/22/2019	28.4
8/23/2019	28.2
8/26/2019	28.0989
8/27/2019	27.223
8/28/2019	26.9
8/29/2019	27.8
8/30/2019	28.6
9/2/2019	28.6
9/3/2019	30
9/4/2019	32.2
9/5/2019	31
9/6/2019	30.9
9/9/2019	32.545
9/10/2019	31.9
9/11/2019	31.9
9/12/2019	30.9
9/13/2019	30.991
9/16/2019	45.2
9/17/2019	41.5
9/18/2019	42
9/19/2019	42.3
9/20/2019	38.8
9/23/2019	40.572
9/24/2019	43
9/25/2019	42
9/26/2019	40.497
9/27/2019	40.582
9/30/2019	40.8
10/1/2019	42.2
10/2/2019	42.051
10/3/2019	42.617
10/4/2019	42.68
10/7/2019	42
10/8/2019	41.7

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Letter

Date	Basis points
10/9/2019	40.1
10/10/2019	40.3
10/11/2019	38.6
10/14/2019	38.2
10/15/2019	37.064
10/16/2019	37.7
10/17/2019	38.057
10/18/2019	37.9
10/21/2019	38.9
10/22/2019	40.3
10/23/2019	41
10/24/2019	41
10/25/2019	40.4
10/28/2019	40.139
10/29/2019	39.7
10/30/2019	39.3
10/31/2019	40
11/1/2019	39.3
11/4/2019	39.3
11/5/2019	38.2
11/6/2019	38
11/7/2019	37.8
11/8/2019	37.9
11/11/2019	37.7
11/12/2019	38.509
11/13/2019	39.2
11/14/2019	38.269
11/15/2019	37.5
11/18/2019	36.1
11/19/2019	35.6
11/20/2019	36.408
11/21/2019	36.9
11/22/2019	37.803
11/25/2019	36.8
11/26/2019	35.7
11/27/2019	35.513
11/28/2019	35.797

Letter

Date	Basis points
11/29/2019	35.5
12/2/2019	34.5
12/3/2019	33.5
12/4/2019	33.3
12/5/2019	33.65
12/6/2019	33.821
12/9/2019	33.5
12/10/2019	34.156
12/11/2019	33.9
12/12/2019	33.8
12/13/2019	33.9
12/16/2019	21.7
12/17/2019	22.536
12/18/2019	22.6
12/19/2019	22.615
12/20/2019	23.05
12/23/2019	23.2
12/24/2019	23.2
12/26/2019	22.8
12/27/2019	21.3
12/30/2019	19.8
12/31/2019	19.3
1/1/2020	19.6
1/2/2020	19.6
1/3/2020	18.8
1/6/2020	18.35
1/7/2020	18.4
1/8/2020	17.75
1/9/2020	17.3
1/10/2020	17.3
1/13/2020	17.4
1/14/2020	17.5
1/15/2020	17.532
1/16/2020	17.6
1/17/2020	17.2
1/20/2020	17.1
1/21/2020	16.8

Date	Basis points
1/22/2020	16.7
1/23/2020	16.166
1/24/2020	15.9
1/27/2020	16.6
1/28/2020	16.2
1/29/2020	15.7
1/30/2020	16.1
1/31/2020	15
2/3/2020	14.6
2/4/2020	14.39
2/5/2020	13.223
2/6/2020	13.2
2/7/2020	12.4
2/10/2020	11.1
2/11/2020	11.786
2/12/2020	11.6
2/13/2020	11.7
2/14/2020	12.2
2/17/2020	12.3
2/18/2020	12.5
2/19/2020	12.3
2/20/2020	11.6
2/21/2020	11.7
2/24/2020	12.6
2/25/2020	12.4
2/26/2020	14
2/27/2020	18.6
2/28/2020	24.1
3/2/2020	23.5
3/3/2020	27.1
3/4/2020	28.8
3/5/2020	41.8
3/6/2020	51.2
3/9/2020	51.2
3/10/2020	46.482
3/11/2020	53.7
3/12/2020	66.1

Letter

Date	Basis points
3/13/2020	78.63
3/16/2020	29.7
3/17/2020	36.2
3/18/2020	41.4
3/19/2020	56.927
3/20/2020	45.558
3/23/2020	43.718
3/24/2020	47.103
3/25/2020	51.927
3/26/2020	51.2
3/27/2020	54.8
3/30/2020	49.5
3/31/2020	45.5
4/1/2020	45.6
4/2/2020	41.1
4/3/2020	44.3
4/6/2020	47.55
4/7/2020	52.964
4/8/2020	55.75
4/9/2020	47.7
4/10/2020	47.5
4/13/2020	43.837
4/14/2020	39.3
4/15/2020	36.3
4/16/2020	39.2
4/17/2020	37.7
4/20/2020	42.004
4/21/2020	40.636
4/22/2020	37.7
4/23/2020	36.5
4/24/2020	32.768
4/27/2020	31.2
4/28/2020	29
4/29/2020	28.8
4/30/2020	30.8
5/1/2020	32
5/4/2020	32.012

Date	Basis points
5/5/2020	31.5
5/6/2020	30.9
5/7/2020	29.9
5/8/2020	28.7
5/11/2020	29.46
5/12/2020	31.3
5/13/2020	29.066
5/14/2020	27.462
5/15/2020	26.453
5/18/2020	26.326
5/19/2020	24.4
5/20/2020	23.502
5/21/2020	24.5
5/22/2020	26.9
5/25/2020	27.304
5/26/2020	27.2
5/27/2020	26
5/28/2020	24.9
5/29/2020	24.8
6/1/2020	24.7
6/2/2020	24.375
6/3/2020	25
6/4/2020	24.6
6/5/2020	24.7
6/8/2020	25.1
6/9/2020	24.9
6/10/2020	24.2
6/11/2020	24.262
6/12/2020	23.5
6/15/2020	23.6
6/16/2020	24.3
6/17/2020	24
6/18/2020	23.5
6/19/2020	23.565
6/22/2020	23.9
6/23/2020	23.5
6/24/2020	23

Date	Basis points
6/25/2020	23.7
6/26/2020	22.9
6/29/2020	22.4
6/30/2020	22
7/1/2020	22.3
7/2/2020	22.1
7/3/2020	21.6
7/6/2020	21.5
7/7/2020	20.9
7/8/2020	21.4
7/9/2020	21.1
7/10/2020	20.1
7/13/2020	20.7
7/14/2020	20.7
7/15/2020	20.8
7/16/2020	20.4
7/17/2020	20.9
7/20/2020	20.3
7/21/2020	19.3
7/22/2020	19.5
7/23/2020	18.3
7/24/2020	18.4
7/27/2020	18.6
7/28/2020	18.8
7/29/2020	17.5
7/30/2020	16.78
7/31/2020	16.3
8/3/2020	15.711
8/4/2020	15.3
8/5/2020	14.8
8/6/2020	15.7
8/7/2020	16.1
8/10/2020	16.9
8/11/2020	17.4
8/12/2020	17.5
8/13/2020	17.708
8/14/2020	16.7

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Letter

Date	Basis points
8/17/2020	15.7
8/18/2020	15.5
8/19/2020	15.5
8/20/2020	15.887
8/21/2020	16.1
8/24/2020	15.7
8/25/2020	15.854
8/26/2020	15.9
8/27/2020	17
8/28/2020	16.3
8/31/2020	16.1
9/1/2020	16.5
9/2/2020	16.5
9/3/2020	16.3
9/4/2020	16.4
9/7/2020	16.3305
9/8/2020	16.5
9/9/2020	16.6
9/10/2020	16.573
9/11/2020	16.6
9/14/2020	23.2
9/15/2020	23.2
9/16/2020	21.5
9/17/2020	20.648
9/18/2020	20
9/21/2020	20.7
9/22/2020	20.8
9/23/2020	20.8
9/24/2020	20.6
9/25/2020	19.9
9/28/2020	19.4
9/29/2020	18.6
9/30/2020	18.1
10/1/2020	18
10/2/2020	18
10/5/2020	16.9
10/6/2020	17.2

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Letter

Date	Basis points
10/7/2020	17.4
10/8/2020	17.2
10/9/2020	17.1
10/12/2020	17.13
10/13/2020	17.4
10/14/2020	17.3
10/15/2020	16.9
10/16/2020	16.8
10/19/2020	16.6
10/20/2020	16.4
10/21/2020	16.3
10/22/2020	16
10/23/2020	16.6
10/26/2020	17.1
10/27/2020	17.1
10/28/2020	16.99
10/29/2020	16.9
10/30/2020	17
11/2/2020	16.9
11/3/2020	17.1
11/4/2020	16.8
11/5/2020	16.1
11/6/2020	15.2
11/9/2020	15.5
11/10/2020	15.796
11/11/2020	17.4
11/12/2020	16.7
11/13/2020	16.7
11/16/2020	16.5
11/17/2020	17.1
11/18/2020	17.5
11/19/2020	17.1
11/20/2020	17.6
11/23/2020	17
11/24/2020	17.4
11/25/2020	17.5
11/26/2020	17.5

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Letter

Date	Basis points
11/27/2020	17.5
11/30/2020	17.5
12/1/2020	17.1
12/2/2020	16.2
12/3/2020	15.7
12/4/2020	16.5
12/7/2020	16.4
12/8/2020	16.8
12/9/2020	14.7
12/10/2020	14.7
12/11/2020	14.3
12/14/2020	10
12/15/2020	10.7
12/16/2020	10.6
12/17/2020	10.7
12/18/2020	10.3
12/21/2020	10.9
12/22/2020	10.4
12/23/2020	11
12/24/2020	10.188
12/25/2020	10.1
12/28/2020	10.2
12/29/2020	10
12/30/2020	10
12/31/2020	10.2
1/1/2021	10.2
1/4/2021	9.6
1/5/2021	9.8
1/6/2021	10.5
1/7/2021	10.5
1/8/2021	10.8
1/11/2021	11.1
1/12/2021	11.3
1/13/2021	11.2
1/14/2021	10.8
1/15/2021	10.7
1/18/2021	10.6

Letter

Date	Basis points
1/19/2021	10.8
1/20/2021	11.7
1/21/2021	11.2
1/22/2021	11.3
1/25/2021	11
1/26/2021	11
1/27/2021	10.65
1/28/2021	10.1
1/29/2021	9.3
2/1/2021	9.1
2/2/2021	9.63
2/3/2021	10.1
2/4/2021	10.1
2/5/2021	9.3
2/8/2021	8.7
2/9/2021	8.9
2/10/2021	9.25
2/11/2021	9.2
2/12/2021	8.9
2/15/2021	8.7
2/16/2021	9.4
2/17/2021	8
2/18/2021	8.25
2/19/2021	7.7625
2/22/2021	8.3
2/23/2021	8.3
2/24/2021	8.5
2/25/2021	9.8
2/26/2021	9.8
3/1/2021	9.15
3/2/2021	9.1
3/3/2021	10.5
3/4/2021	9.8
3/5/2021	10.4
3/8/2021	11
3/9/2021	10.6
3/10/2021	10.8

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Letter

Date	Basis points
3/11/2021	11
3/12/2021	11.7
3/15/2021	9.2
3/16/2021	8.7
3/17/2021	8.6
3/18/2021	9.2
3/19/2021	8.9
3/22/2021	9.4
3/23/2021	9
3/24/2021	9.3
3/25/2021	9.7
3/26/2021	9.5
3/29/2021	9.45
3/30/2021	9.9
3/31/2021	9.45
4/1/2021	9.7
4/2/2021	9.6
4/5/2021	10
4/6/2021	10
4/7/2021	9.88
4/8/2021	9.4
4/9/2021	9.3
4/12/2021	9.3
4/13/2021	9.3
4/14/2021	9.6
4/15/2021	9.5
4/16/2021	9.3
4/19/2021	9.5
4/20/2021	9.2
4/21/2021	8.9
4/22/2021	8.8
4/23/2021	9.1
4/26/2021	9.1
4/27/2021	9.4
4/28/2021	9.6
4/29/2021	9.6
4/30/2021	9.5

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Letter

Date	Basis points
5/3/2021	9.5
5/4/2021	9.6
5/5/2021	9.088
5/6/2021	8.5
5/7/2021	8.6
5/10/2021	9.1
5/11/2021	8.35
5/12/2021	8.2045
5/13/2021	8
5/14/2021	8
5/17/2021	7.5045
5/18/2021	7.4
5/19/2021	6.9
5/20/2021	6.6
5/21/2021	6.5
5/24/2021	5.9
5/25/2021	5.7
5/26/2021	5.2
5/27/2021	3.8
5/28/2021	3.8635
5/31/2021	4
6/1/2021	3.95
6/2/2021	4.5
6/3/2021	4.2
6/4/2021	4.1
6/7/2021	4.275
6/8/2021	4.3
6/9/2021	4.8
6/10/2021	4.55
6/11/2021	4.25
6/14/2021	4.3
6/15/2021	4.3
6/16/2021	4
6/17/2021	3.7
6/18/2021	4.6
6/21/2021	4.15
6/22/2021	4

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Letter

Date	Basis points
6/23/2021	4.8
6/24/2021	5.15
6/25/2021	5
6/28/2021	5.7
6/29/2021	5.4
6/30/2021	5.3
7/1/2021	5.2
7/2/2021	4.6
7/5/2021	4.6
7/6/2021	4.3
7/7/2021	3.85
7/8/2021	4
7/9/2021	4
7/12/2021	4.2
7/13/2021	4.2
7/14/2021	3.9
7/15/2021	4.1
7/16/2021	3.9
7/19/2021	4.6
7/20/2021	5.7
7/21/2021	5.6
7/22/2021	4.9
7/23/2021	4.7
7/26/2021	4.6
7/27/2021	4.95
7/28/2021	4.6
7/29/2021	4.6
7/30/2021	3.75
8/2/2021	4
8/3/2021	3.7
8/4/2021	3.7
8/5/2021	3.8
8/6/2021	3.8
8/9/2021	3.75
8/10/2021	3.9
8/11/2021	3.9
8/12/2021	4

Letter

Date	Basis points
8/13/2021	3.7
8/16/2021	3.7
8/17/2021	3.9
8/18/2021	3.9
8/19/2021	4.6
8/20/2021	4.4
8/23/2021	4.3
8/24/2021	4.2
8/25/2021	4.1
8/26/2021	4.1
8/27/2021	4.5
8/30/2021	4.7
8/31/2021	4.5
9/1/2021	4.55
9/2/2021	4.446
9/3/2021	4.5
9/7/2021	4.5
9/8/2021	4.4
9/9/2021	4.35
9/10/2021	4.35
9/13/2021	9.5
9/14/2021	9.4
9/15/2021	10
9/16/2021	10.3
9/17/2021	10.3
9/20/2021	10.7
9/21/2021	10.6
9/22/2021	10.6
9/23/2021	11.1
9/24/2021	10.3
9/27/2021	10.25
9/28/2021	10.15
9/29/2021	10.1
9/30/2021	9.4
10/1/2021	9.6
10/4/2021	9.3
10/5/2021	9.3

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Letter

Date	Basis points
10/6/2021	9.164
10/7/2021	8.6
10/8/2021	9.1
10/11/2021	9.05
10/12/2021	9.5
10/13/2021	9.15
10/14/2021	9.3
10/15/2021	10.1
10/18/2021	10.9
10/19/2021	11
10/20/2021	10.739
10/21/2021	11.16
10/22/2021	10.4
10/25/2021	10.6
10/26/2021	11.2
10/27/2021	12.2
10/28/2021	12.5
10/29/2021	12.4
11/1/2021	14
11/2/2021	13.847
11/3/2021	12.8
11/4/2021	11.7
11/5/2021	11.7
11/8/2021	11.552
11/9/2021	11.837
11/10/2021	12.5
11/11/2021	12.7
11/12/2021	12.594
11/15/2021	12.4
11/16/2021	12.5
11/17/2021	12.2
11/18/2021	12.5
11/19/2021	13
11/22/2021	14.3
11/23/2021	14.513
11/24/2021	14.5
11/25/2021	15

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Letter

Date	Basis points
11/26/2021	13.551
11/29/2021	12.4
11/30/2021	12.2
12/1/2021	12.05
12/2/2021	11.7
12/3/2021	12.05
12/6/2021	12.6
12/7/2021	13.15
12/8/2021	12.3
12/9/2021	12.3945
12/10/2021	11.4
12/13/2021	10.3
12/14/2021	9.5
12/15/2021	9.015
12/16/2021	10.4
12/17/2021	10.65
12/20/2021	10.9
12/21/2021	10.9
12/22/2021	10
12/23/2021	9.2
12/24/2021	9.3
12/27/2021	9.1
12/28/2021	8.5
12/29/2021	7.725
12/30/2021	7.6
12/31/2021	6.9
1/3/2022	6.6
1/4/2022	6.9
1/5/2022	6.75
1/6/2022	6.3
1/7/2022	6.3
1/10/2022	6.35
1/11/2022	6.9
1/12/2022	6
1/13/2022	5.75
1/14/2022	6.15
1/17/2022	5.85

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Letter

Date	Basis points
1/18/2022	6.1
1/19/2022	5
1/20/2022	4.6
1/21/2022	4.299
1/24/2022	5.5
1/25/2022	5.546
1/26/2022	3.5
1/27/2022	4.7
1/28/2022	4.5
1/31/2022	4.75
2/1/2022	4.9
2/2/2022	5.2
2/3/2022	4.8
2/4/2022	4.5
2/7/2022	5.2
2/8/2022	4.8
2/9/2022	4.8
2/10/2022	5.1
2/11/2022	8.3
2/14/2022	9.6
2/15/2022	8.6
2/16/2022	8.45
2/17/2022	10.45
2/18/2022	11.1
2/21/2022	11.2
2/22/2022	11
2/23/2022	9.05
2/24/2022	12.2
2/25/2022	13.1
2/28/2022	18.9
3/1/2022	20.7
3/2/2022	16.6
3/3/2022	25.5
3/4/2022	35.25
3/7/2022	36.1
3/8/2022	35.418
3/9/2022	33.88

Date	Basis points
3/10/2022	36.75
3/11/2022	35
3/14/2022	31.7
3/15/2022	30.5
3/16/2022	30.75
3/17/2022	26.5
3/18/2022	22.208
3/21/2022	21.5
3/22/2022	21
3/23/2022	20.7
3/24/2022	19
3/25/2022	17.88
3/28/2022	17.88
3/29/2022	16.6
3/30/2022	14.5
3/31/2022	13.7
4/1/2022	13.1
4/4/2022	13.2
4/5/2022	14.4
4/6/2022	15.7
4/7/2022	16.482
4/8/2022	17.143
4/11/2022	16.505
4/12/2022	17.1
4/13/2022	17.75
4/14/2022	17.9
4/15/2022	18.3
4/18/2022	18.1
4/19/2022	15.38
4/20/2022	17.8
4/21/2022	19
4/22/2022	21.8
4/25/2022	21.25
4/26/2022	20.8
4/27/2022	21.6
4/28/2022	21
4/29/2022	20.63

Date	Basis points
5/2/2022	21.8
5/3/2022	20.13
5/4/2022	19.4
5/5/2022	20.3
5/6/2022	19.2
5/9/2022	18.8
5/10/2022	18.5
5/11/2022	19.1
5/12/2022	20.8
5/13/2022	20.4
5/16/2022	18.2
5/17/2022	16.6
5/18/2022	16.8
5/19/2022	18.2
5/20/2022	18.4
5/23/2022	17.2
5/24/2022	17.5
5/25/2022	16.5
5/26/2022	16.4
5/27/2022	16.3
5/30/2022	16.13
5/31/2022	15.38
6/1/2022	14.5
6/2/2022	14.63
6/3/2022	14.3
6/6/2022	14.6
6/7/2022	15.2
6/8/2022	13.6
6/9/2022	13.7
6/10/2022	10.75
6/13/2022	21.9
6/14/2022	22.9
6/15/2022	22.6
6/16/2022	20
6/17/2022	20.9
6/20/2022	19.6
6/21/2022	20

Date	Basis points
6/22/2022	18.8
6/23/2022	20
6/24/2022	20
6/27/2022	17.4
6/28/2022	18.4
6/29/2022	18.9
6/30/2022	18.5
7/1/2022	19
7/5/2022	21.38
7/6/2022	21.3
7/7/2022	20.8
7/8/2022	20.3
7/11/2022	21
7/12/2022	20.3
7/13/2022	21.6
7/14/2022	22
7/15/2022	22.8
7/18/2022	23.25
7/19/2022	23.5
7/20/2022	25.5
7/21/2022	25.8
7/22/2022	26.45
7/25/2022	25.7
7/26/2022	26.25
7/27/2022	25.4
7/28/2022	23.9
7/29/2022	24.5
8/1/2022	24.6
8/2/2022	24.6
8/3/2022	24.7
8/4/2022	24.4
8/5/2022	24.2
8/8/2022	23.6
8/9/2022	20.6
8/10/2022	20.5
8/11/2022	19.8
8/12/2022	20.2

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Letter

Date	Basis points
8/15/2022	19.1
8/16/2022	18.7
8/17/2022	18.6
8/18/2022	17.6
8/19/2022	18.2
8/22/2022	15.8
8/23/2022	16
8/24/2022	14
8/25/2022	13.2
8/26/2022	12.9
8/29/2022	13
8/30/2022	11.3
8/31/2022	10.3

Note: The FRA-OIS spread is the difference between a 3-month forward rate agreement (FRA) and a 3-month overnight indexed swap (OIS). A basis point is 1/100th of a percentage point.

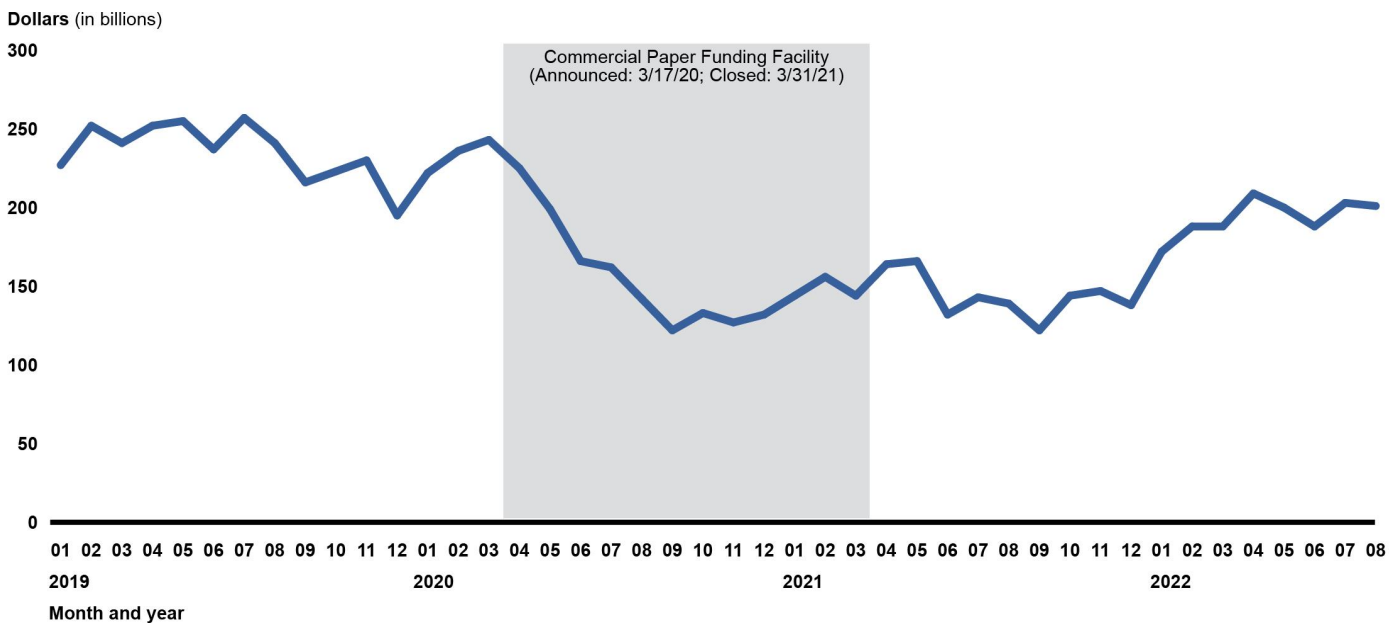
### Commercial Paper

Commercial paper is short-term debt issued primarily by corporations. The commercial paper market is an important source of short-term credit for a range of financial and nonfinancial businesses that may rely on it to make payroll or for other short-term funding needs. Municipalities can also issue commercial paper for short-term funding needs, and asset-backed commercial paper finances certain consumer loans, such as auto loans. Because commercial paper involves short maturities, many businesses must frequently issue new commercial paper to pay off expiring commercial paper.

Source: GAO. | GAO-23-105629

Similarly, spreads on 90-day commercial paper (a source of short-term credit) for large nonfinancial businesses have remained low and have generally been below prepandemic levels since March 2021 (see sidebar for an explanation of commercial paper). As shown in figure 3, the outstanding balances of commercial paper have increased significantly since September 2021 and are generally higher than in September 2020, indicating improved investor confidence.

**Figure 3: Commercial Paper Outstanding for Large Nonfinancial Businesses, January 2019–August 2022**



Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-23-105629

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**Accessible Data for Figure 3: Commercial Paper Outstanding for Large Nonfinancial Businesses, January 2019–August 2022**


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<b>Month and year</b>	<b>Dollars (in billions)</b>
Jan-19	227
Feb-19	252
Mar-19	241
Apr-19	252
May-19	255
Jun-19	237
Jul-19	257
Aug-19	241
Sep-19	216
Oct-19	223
Nov-19	230
Dec-19	195
Jan-20	222
Feb-20	236
Mar-20	243
Apr-20	225
May-20	199
Jun-20	166
Jul-20	162
Aug-20	142
Sep-20	122
Oct-20	133
Nov-20	127
Dec-20	132
Jan-21	144
Feb-21	156
Mar-21	144
Apr-21	164
May-21	166
Jun-21	132
Jul-21	143
Aug-21	139
Sep-21	122
Oct-21	144
Nov-21	147

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Letter

Month and year	Dollars (in billions)
Dec-21	138
Jan-22	172
Feb-22	188
Mar-22	188
Apr-22	209
May-22	200
Jun-22	188
Jul-22	203
Aug-22	201

Note: The data in this figure are for domestic nonfinancial commercial paper.

**Prime Money Market Funds**

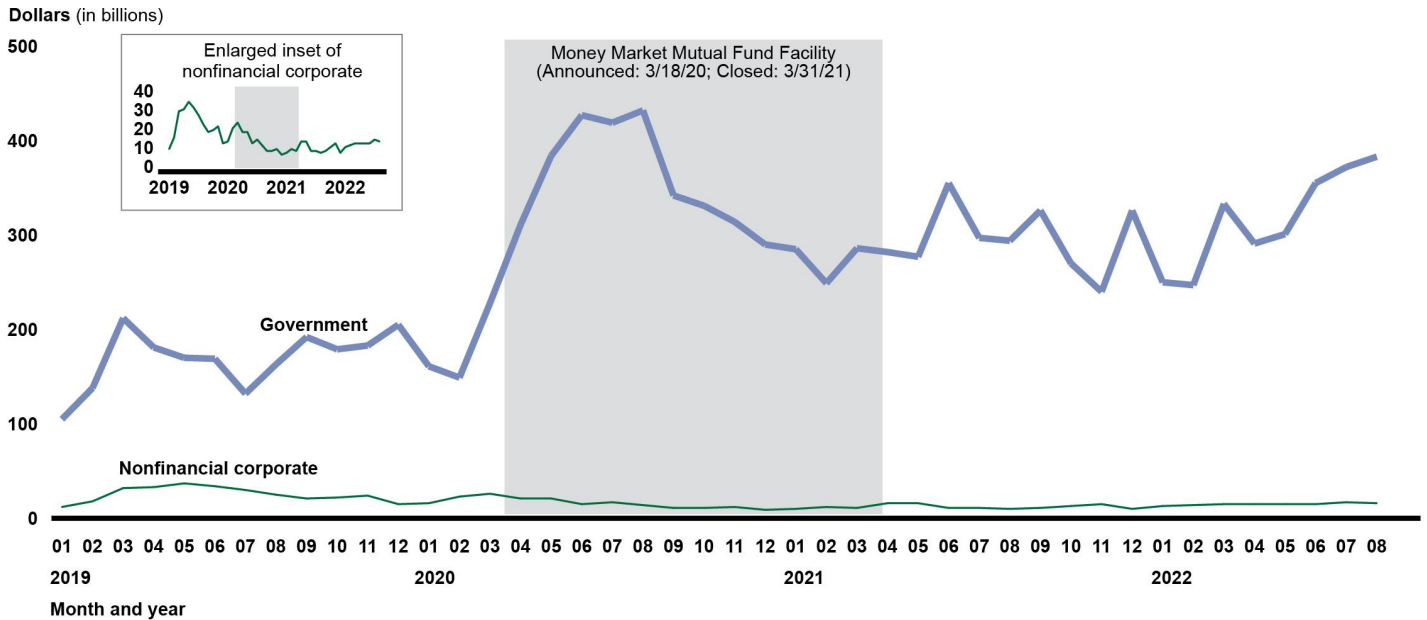
A money market fund is a type of mutual fund that is required by law to invest in low-risk securities. Money market funds act as intermediaries between investors seeking highly liquid, safe investments and corporate and government entities that issue short-term debt to fund operations. Prime money market funds, one category of money market funds, primarily invest in short-term corporate and bank debt such as commercial paper, though they may also hold U.S. government-backed securities such as U.S. Treasury securities.

Source: GAO. | GAO 23-105629

The Primary Dealer Credit Facility was established by the Federal Reserve to provide support to primary dealers to facilitate the availability of credit to businesses and households using the triparty repurchase agreement market.<sup>27</sup> While a broad array of assets may be financed in the repurchase agreement market, the most commonly used instruments include U.S. Treasuries, federal agency securities, high-quality mortgage-backed securities, corporate bonds, and money market instruments. Triparty repurchase agreements financing corporate bond collateral have continued to increase in volume since the facility was terminated on March 31, 2021.

However, the volume of nonfinancial corporate prime money market funds—used mostly by large businesses to raise funds—began decreasing in June 2019 and has been generally lower than levels at the onset of the pandemic (see fig. 4 and see sidebar for an explanation of prime money market funds). As nonfinancial corporate prime money market funds declined, investments in government funds, which are perceived to be less risky, increased. This trend suggests that prime money market funds used largely by nonfinancial corporations remain vulnerable and could make it difficult for businesses to obtain credit.

<sup>27</sup>Primary dealers are a group of banks and broker-dealers designated by the Federal Reserve Bank of New York to serve as trading counterparts in the implementation of monetary policy. A repurchase agreement is a financial transaction in which one party sells an asset to another party with a promise to repurchase the asset at a prespecified later date. A reverse repurchase agreement is the same transaction, but from the perspective of the security buyer. In a triparty repurchase agreement, market clearing banks facilitate the settlement, unlike bilateral repurchase agreement markets, where the parties directly exchange money and securities.

**Figure 4: Prime Money Market Fund Investments in the United States, January 2019–August 2022**

Source: GAO analysis of Office of Financial Research data. | GAO-23-105629

**Accessible Data for Figure 4: Prime Money Market Fund Investments in the United States, January 2019–August 2022**

Date	Non-financial corporate (dollars, in billions)	Government (right axis) (dollars, in billions)
1/31/2019	12	105
2/28/2019	18	138
3/31/2019	32	212
4/30/2019	33	181
5/31/2019	37	170
6/30/2019	34	169
7/31/2019	30	132
8/31/2019	25	163
9/30/2019	21	192
10/31/2019	22	179
11/30/2019	24	183
12/31/2019	15	205
1/31/2020	16	161
2/29/2020	23	149
3/31/2020	26	228
4/30/2020	21	311

Date	Non-financial corporate (dollars, in billions)	Government (right axis) (dollars, in billions)
5/31/2020	21	384
6/30/2020	15	427
7/31/2020	17	419
8/31/2020	14	432
9/30/2020	11	342
10/31/2020	11	331
11/30/2020	12	314
12/31/2020	9	290
1/31/2021	10	285
2/28/2021	12	249
3/31/2021	11	286
4/30/2021	16	282
5/31/2021	16	277
6/30/2021	11	355
7/31/2021	11	297
8/31/2021	10	294
9/30/2021	11	326
10/31/2021	13	270
11/30/2021	15	240
12/31/2021	10	326
1/31/2022	13	250
2/28/2022	14	247
3/31/2022	15	333
4/30/2022	15	291
5/31/2022	15	301
6/30/2022	15	355
7/31/2022	17	372
8/31/2022	16	383

Note: The prime money market fund investments include investments in government, financial institution, nonfinancial corporate, and municipal entities and other entities in the United States.

The Federal Reserve also established facilities to primarily support longer-term credit markets for large businesses.<sup>28</sup> Since these facilities

<sup>28</sup>These were the Secondary Market Corporate Credit Facility, Term Asset-Backed Securities Loan Facility, and Primary Market Corporate Credit Facility.

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terminated on December 31, 2020, risks in these markets have continued to remain low relative to pandemic levels in 2020.

**Corporate Bonds**

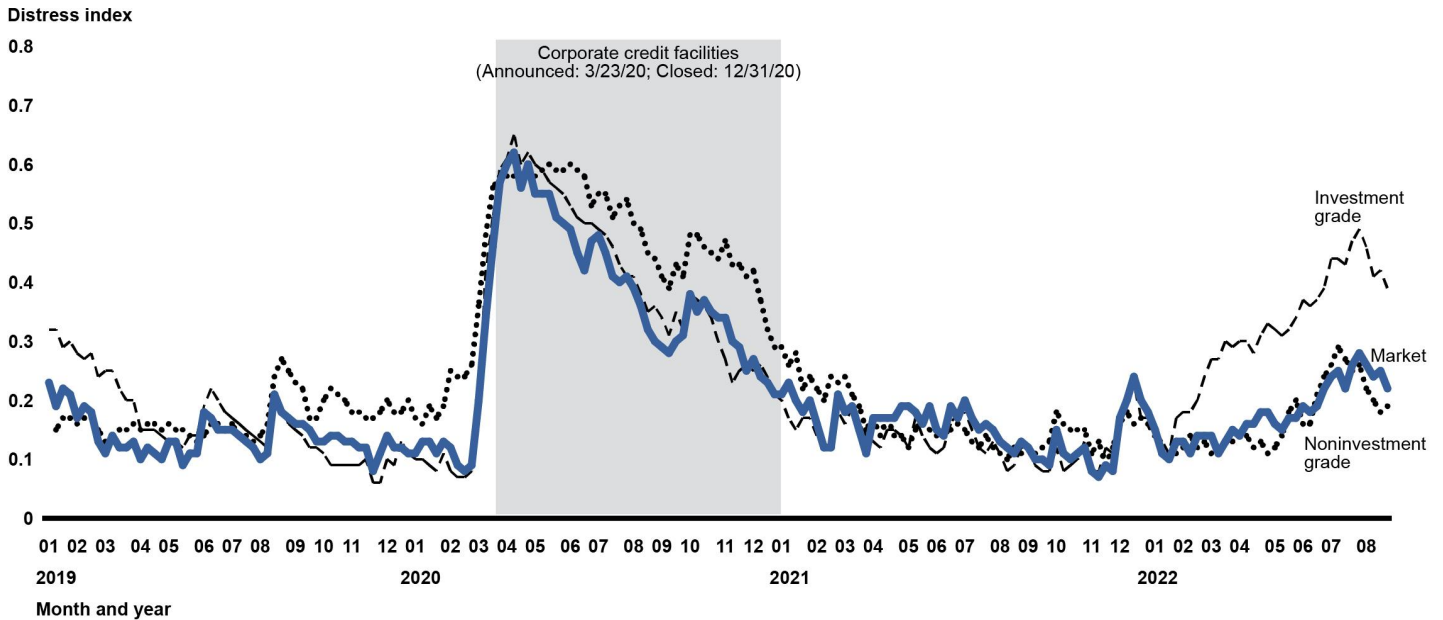
In the corporate bond market, large companies issue and sell bonds to investors in exchange for cash. Bond investors function as lenders that generally receive payments of principal plus interest over a period of time. The borrowing cost and liquidity for companies that issue corporate bonds are largely determined by credit ratings, which are assigned by credit rating agencies and are intended to indicate the companies' investment risks and payment capabilities. Bonds rated above a certain threshold are called investment-grade bonds.

Source: GAO. | GAO-23-105629

The corporate bond market distress index suggests market functioning risks have generally continued to remain below pandemic levels since December 2021 (see sidebar for an explanation of corporate bonds).<sup>29</sup> As shown in figure 5, the overall market index and the indexes for investment-grade and non-investment-grade bonds have generally remained low, although investment-grade bonds have been somewhat strained since February 2022. While the reason is unclear, according to Federal Reserve officials, there have been prior episodes where the index for investment-grade bonds increased more than the index for non-investment-grade bonds, such as in early 2016 and in December 2016 when financial conditions tightened.<sup>30</sup>

<sup>29</sup>The corporate bond market distress index incorporates a wide range of indicators, including measures of primary market issuance and pricing, secondary market pricing and liquidity conditions, and the relative pricing between traded and nontraded bonds. The index identifies distress as periods during which a large number of individual measures of market functioning indicate deteriorating conditions in both the primary and the secondary markets for corporate bonds.

<sup>30</sup>According to Federal Reserve officials, in general, there have been larger increases in many of the subcomponents for investment-grade bonds compared with non-investment-grade bonds in recent months. Because the corporate bond market distress index is composed of a number of subcomponents, when many of these subcomponents increase, the index increases. For investment-grade bonds, the secondary market subcomponents that broadly cover prices, volume, and liquidity have tended to move up. Metrics of secondary market volume, in particular, seem to be contributing to the differential movements in investment-grade versus non-investment-grade bonds. While there have been similar increases in the non-investment-grade subcomponents, the magnitude of the increase has been smaller. Primary market metrics for investment-grade bonds have been relatively stable in recent months.

**Figure 5: Corporate Bond Market Distress Index, January 2019–August 2022**

Source: GAO analysis of Federal Reserve Bank of New York data. | GAO-23-105629

**Accessible Data for Figure 5: Corporate Bond Market Distress Index, January 2019–August 2022**

eow_friday	Market CMDI (distress index)	IG CMDI (distress index)	HY CMDI (distress index)
1/4/2019	0.23	0.32	0.16
1/11/2019	0.19	0.32	0.15
1/18/2019	0.22	0.29	0.17
1/25/2019	0.21	0.30	0.17
2/1/2019	0.17	0.28	0.16
2/8/2019	0.19	0.27	0.17
2/15/2019	0.18	0.28	0.17
2/22/2019	0.13	0.24	0.15
3/1/2019	0.11	0.25	0.13
3/8/2019	0.14	0.25	0.14
3/15/2019	0.12	0.22	0.15
3/22/2019	0.12	0.20	0.15
3/29/2019	0.13	0.20	0.16
4/5/2019	0.10	0.15	0.15
4/12/2019	0.12	0.15	0.16
4/19/2019	0.11	0.15	0.16
4/26/2019	0.10	0.14	0.15

eow_friday	Market CMDI (distress index)	IG CMDI (distress index)	HY CMDI (distress index)
5/3/2019	0.13	0.13	0.16
5/10/2019	0.13	0.13	0.15
5/17/2019	0.09	0.12	0.15
5/24/2019	0.11	0.14	0.14
5/31/2019	0.11	0.14	0.13
6/7/2019	0.18	0.19	0.14
6/14/2019	0.17	0.22	0.16
6/21/2019	0.15	0.20	0.16
6/28/2019	0.15	0.18	0.15
7/5/2019	0.15	0.17	0.16
7/12/2019	0.14	0.16	0.14
7/19/2019	0.13	0.15	0.14
7/26/2019	0.12	0.14	0.13
8/2/2019	0.10	0.13	0.14
8/9/2019	0.11	0.12	0.16
8/16/2019	0.21	0.19	0.24
8/23/2019	0.18	0.19	0.27
8/30/2019	0.17	0.16	0.25
9/6/2019	0.16	0.15	0.23
9/13/2019	0.16	0.14	0.22
9/20/2019	0.15	0.12	0.17
9/27/2019	0.13	0.12	0.17
10/4/2019	0.13	0.11	0.20
10/11/2019	0.14	0.09	0.22
10/18/2019	0.14	0.09	0.21
10/25/2019	0.13	0.09	0.20
11/1/2019	0.13	0.09	0.18
11/8/2019	0.12	0.09	0.18
11/15/2019	0.12	0.10	0.17
11/22/2019	0.08	0.06	0.17
11/29/2019	0.11	0.06	0.18
12/6/2019	0.14	0.10	0.20
12/13/2019	0.12	0.09	0.18
12/20/2019	0.12	0.13	0.18
12/27/2019	0.11	0.11	0.20
1/3/2020	0.11	0.10	0.17
1/10/2020	0.13	0.10	0.16

eow_friday	Market CMDI (distress index)	IG CMDI (distress index)	HY CMDI (distress index)
1/17/2020	0.13	0.09	0.19
1/24/2020	0.11	0.08	0.17
1/31/2020	0.13	0.11	0.19
2/7/2020	0.12	0.08	0.25
2/14/2020	0.09	0.07	0.24
2/21/2020	0.08	0.07	0.24
2/28/2020	0.09	0.08	0.26
3/6/2020	0.20	0.20	0.36
3/13/2020	0.34	0.42	0.48
3/20/2020	0.46	0.51	0.56
3/27/2020	0.57	0.59	0.58
4/3/2020	0.60	0.61	0.58
4/10/2020	0.62	0.65	0.58
4/17/2020	0.56	0.60	0.57
4/24/2020	0.60	0.62	0.58
5/1/2020	0.55	0.60	0.58
5/8/2020	0.55	0.59	0.59
5/15/2020	0.55	0.57	0.60
5/22/2020	0.51	0.56	0.59
5/29/2020	0.50	0.55	0.59
6/5/2020	0.49	0.53	0.60
6/12/2020	0.45	0.51	0.59
6/19/2020	0.42	0.50	0.58
6/26/2020	0.47	0.50	0.53
7/3/2020	0.48	0.49	0.55
7/10/2020	0.45	0.48	0.55
7/17/2020	0.41	0.46	0.51
7/24/2020	0.40	0.43	0.53
7/31/2020	0.41	0.41	0.54
8/7/2020	0.39	0.41	0.50
8/14/2020	0.36	0.38	0.49
8/21/2020	0.32	0.35	0.45
8/28/2020	0.30	0.36	0.44
9/4/2020	0.29	0.34	0.41
9/11/2020	0.28	0.31	0.39
9/18/2020	0.30	0.35	0.43
9/25/2020	0.31	0.32	0.41

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eow_friday	Market CMDI (distress index)	IG CMDI (distress index)	HY CMDI (distress index)
10/2/2020	0.38	0.38	0.48
10/9/2020	0.35	0.37	0.48
10/16/2020	0.37	0.36	0.46
10/23/2020	0.35	0.34	0.45
10/30/2020	0.34	0.30	0.44
11/6/2020	0.34	0.27	0.47
11/13/2020	0.30	0.23	0.43
11/20/2020	0.29	0.25	0.43
11/27/2020	0.25	0.26	0.41
12/4/2020	0.27	0.25	0.42
12/11/2020	0.24	0.26	0.37
12/18/2020	0.23	0.24	0.32
12/25/2020	0.21	0.21	0.29
1/1/2021	0.21	0.20	0.29
1/8/2021	0.23	0.17	0.26
1/15/2021	0.20	0.15	0.28
1/22/2021	0.18	0.17	0.22
1/29/2021	0.20	0.17	0.24
2/5/2021	0.16	0.14	0.22
2/12/2021	0.12	0.12	0.20
2/19/2021	0.12	0.12	0.24
2/26/2021	0.21	0.18	0.23
3/5/2021	0.18	0.16	0.24
3/12/2021	0.19	0.19	0.21
3/19/2021	0.15	0.16	0.19
3/26/2021	0.11	0.14	0.15
4/2/2021	0.17	0.13	0.17
4/9/2021	0.17	0.12	0.14
4/16/2021	0.17	0.15	0.17
4/23/2021	0.17	0.15	0.14
4/30/2021	0.19	0.14	0.14
5/7/2021	0.19	0.12	0.12
5/14/2021	0.18	0.17	0.15
5/21/2021	0.16	0.14	0.17
5/28/2021	0.19	0.12	0.15
6/4/2021	0.15	0.11	0.14
6/11/2021	0.14	0.12	0.14

Letter

eow_friday	Market CMDI (distress index)	IG CMDI (distress index)	HY CMDI (distress index)
6/18/2021	0.19	0.16	0.15
6/25/2021	0.17	0.18	0.16
7/2/2021	0.20	0.18	0.15
7/9/2021	0.17	0.15	0.13
7/16/2021	0.15	0.12	0.12
7/23/2021	0.16	0.11	0.14
7/30/2021	0.15	0.13	0.12
8/6/2021	0.13	0.11	0.11
8/13/2021	0.12	0.08	0.10
8/20/2021	0.11	0.09	0.12
8/27/2021	0.13	0.12	0.11
9/3/2021	0.12	0.12	0.12
9/10/2021	0.10	0.09	0.11
9/17/2021	0.10	0.08	0.12
9/24/2021	0.09	0.08	0.13
10/1/2021	0.15	0.12	0.18
10/8/2021	0.11	0.08	0.16
10/15/2021	0.10	0.09	0.15
10/22/2021	0.11	0.10	0.15
10/29/2021	0.12	0.13	0.15
11/5/2021	0.08	0.08	0.11
11/12/2021	0.07	0.08	0.13
11/19/2021	0.09	0.12	0.09
11/26/2021	0.08	0.11	0.12
12/3/2021	0.17	0.17	0.16
12/10/2021	0.20	0.20	0.18
12/17/2021	0.24	0.23	0.16
12/24/2021	0.20	0.17	0.17
12/31/2021	0.18	0.17	0.16
1/7/2022	0.15	0.15	0.14
1/14/2022	0.11	0.13	0.12
1/21/2022	0.10	0.11	0.11
1/28/2022	0.13	0.17	0.11
2/4/2022	0.13	0.18	0.12
2/11/2022	0.11	0.18	0.14
2/18/2022	0.14	0.20	0.12
2/25/2022	0.14	0.24	0.13

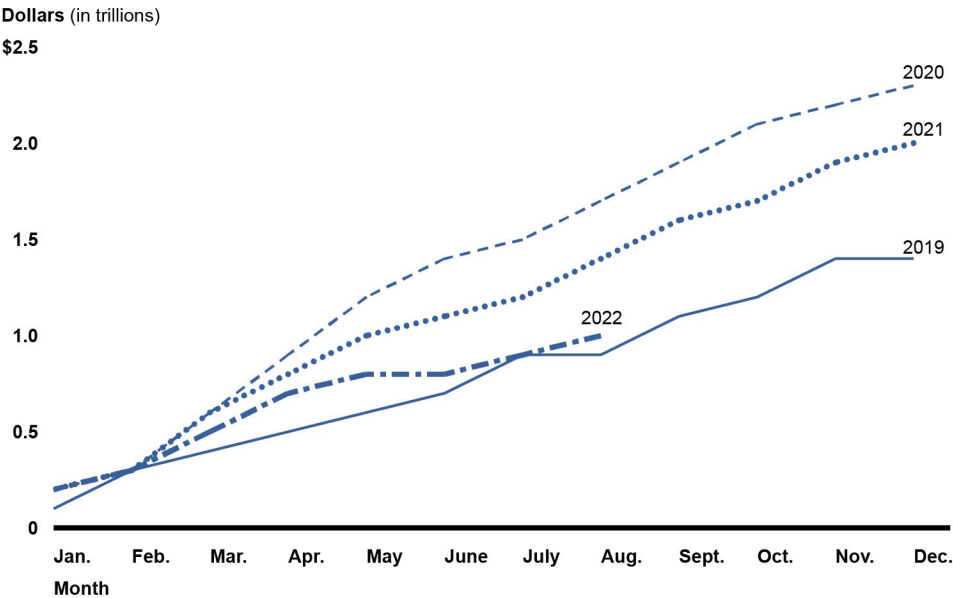
eow_friday	Market CMDI (distress index)	IG CMDI (distress index)	HY CMDI (distress index)
3/4/2022	0.14	0.27	0.11
3/11/2022	0.11	0.27	0.12
3/18/2022	0.13	0.30	0.13
3/25/2022	0.15	0.29	0.13
4/1/2022	0.14	0.30	0.14
4/8/2022	0.16	0.30	0.14
4/15/2022	0.16	0.28	0.12
4/22/2022	0.18	0.31	0.13
4/29/2022	0.18	0.33	0.11
5/6/2022	0.16	0.32	0.12
5/13/2022	0.15	0.31	0.14
5/20/2022	0.17	0.32	0.18
5/27/2022	0.17	0.34	0.20
6/3/2022	0.19	0.37	0.16
6/10/2022	0.18	0.36	0.16
6/17/2022	0.19	0.37	0.21
6/24/2022	0.22	0.39	0.24
7/1/2022	0.24	0.44	0.26
7/8/2022	0.25	0.44	0.29
7/15/2022	0.22	0.43	0.27
7/22/2022	0.26	0.47	0.25
7/29/2022	0.28	0.49	0.26
8/5/2022	0.26	0.46	0.22
8/12/2022	0.24	0.41	0.20
8/19/2022	0.25	0.42	0.18
8/26/2022	0.22	0.39	0.19

Note: The sources of the index are FINRA Trade Reporting and Compliance Engine (TRACE), Mergent Fixed Income Securities Database, Bank of America ICE, and calculations by N. Boyarchenko, R. K. Crump, A. Kovner, and O. Shachar, "Measuring Corporate Bond Market Dislocations," Federal Reserve Bank of New York Staff Reports, no. 957 (January 2021, revised June 2022). The index incorporates a wide range of indicators, including measures of primary market issuance and pricing, secondary market pricing and liquidity conditions, and the relative pricing between traded and nontraded bonds. The index identifies distress as periods during which a large number of individual measures of market functioning indicate deteriorating conditions in both the primary and the secondary markets for corporate bonds.

Although corporate bond issuances decreased in 2021 relative to 2020 levels, they remain higher than the prepandemic levels in 2019 (see fig. 6), indicating that corporations have relatively easy access to credit. Since December 2020, credit spreads (which reflect borrowing costs) on

both investment-grade and non-investment-grade corporate bonds have generally remained low compared to the early pandemic levels, also indicating relatively easy access to credit. The increase in the issuance of corporate bonds since 2019 has occurred as companies built large cash positions to take advantage of low interest rates that prevailed in 2020 and 2021 and locked in longer duration positions, a situation that was especially advantageous for companies with lower-quality ratings.

**Figure 6: Annual Cumulative Issuances of Corporate Bonds, January 2019–August 2022**



Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-23-105629

**Accessible Data for Figure 6: Annual Cumulative Issuances of Corporate Bonds, January 2019–August 2022**

Month	2019 (dollars in trillions)	2020 (dollars in trillions)	2021 (dollars in trillions)	2022 (dollars in trillions)
Jan	0.1	0.2	0.2	0.2
Feb	0.3	0.3	0.3	0.3
Mar	0.4	0.6	0.6	0.5
Apr	0.5	0.9	0.8	0.7
May	0.6	1.2	1.0	0.8
Jun	0.7	1.4	1.1	0.8
Jul	0.9	1.5	1.2	0.9
Aug	0.9	1.7	1.4	1.0
Sep	1.1	1.9	1.6	

Month	2019 (dollars in trillions)	2020 (dollars in trillions)	2021 (dollars in trillions)	2022 (dollars in trillions)
Oct	1.2	2.1	1.7	
Nov	1.4	2.2	1.9	
Dec	1.4	2.3	2.0	

Note: The issuances in this figure are for investment-grade and non-investment-grade bonds. The figure excludes all issuances with maturities of 1 year or less and certificates of deposit.

Asset-backed securities—long-term debt instruments intended to support provision of credit to businesses and consumers—are backed by pools of assets, such as auto loans, credit card loans, student loans, and loans guaranteed by the Small Business Administration. Well-functioning markets for asset-backed securities benefit borrowers, who may gain access to funds with more favorable terms, and lenders, who may better manage their capital and diversify their income streams. Issuances of asset-backed securities increased after December 2020 when the Term Asset-Backed Securities Loan Facility was terminated. However, they have decreased in 2022 and were similar to 2020 levels as of August 2022. This is partly due to uncertainty in overall economic activity, which could hamper consumers’ ability to repay their loans.

### Small Businesses’ Access to Credit Has Generally Been Favorable since the Facilities Stopped Providing Loans

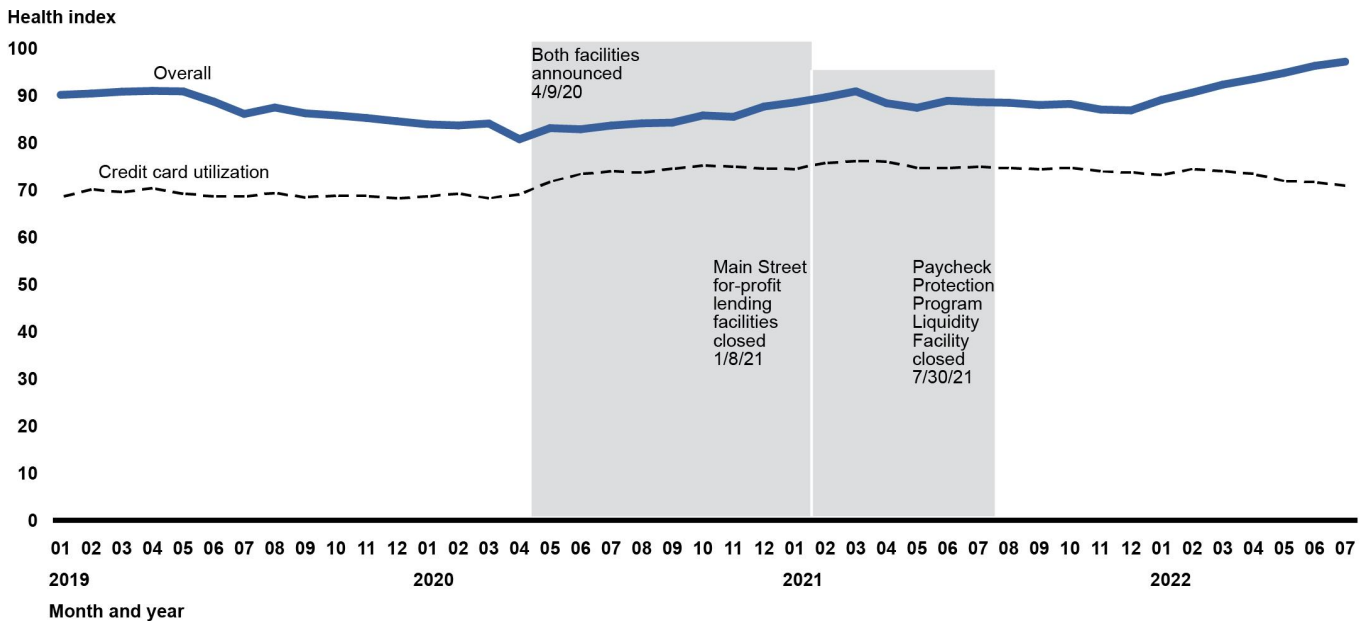
The Federal Reserve announced measures in April and July 2020 to support the flow of credit to small and medium-sized businesses that were vulnerable to the large and sustained loss of revenue due to the COVID-19 pandemic.<sup>31</sup> Based on available data and survey results, small businesses’ access to credit has generally been favorable since the facilities stopped providing loans in January 2021.

For example, the Dun and Bradstreet Small Business Health Index indicates favorable access to credit since January 8, 2021, when the Main Street for-profit lending facilities ceased providing loans to small

<sup>31</sup>The Federal Reserve established the Paycheck Protection Program Liquidity Facility and the Main Street lending facilities to support small and medium-sized businesses. The Main Street lending facilities comprised the Main Street for-profit lending facilities (the Main Street New Loan Facility, Main Street Priority Loan Facility, and the Main Street Expanded Loan Facility) and the Main Street nonprofit lending facilities (Main Street Nonprofit Organization New Loan Facility and the Main Street Nonprofit Organization Expanded Loan Facility).

businesses (see fig. 7).<sup>32</sup> Specifically, credit utilization, an indicator of the ease of credit availability, has remained stable.

**Figure 7: Small Business Health Index, January 2019–July 2022**



Source: GAO analysis of Dun & Bradstreet data. | GAO-23-105629

**Accessible Data for Figure 7: Small Business Health Index, January 2019–July 2022)**

Month AN: Data format changed to month since Jan2012	Card utilization Index	Small Business Health Index
Jan 2019	68.40	90.12
Feb 2019	70.12	90.40
Mar 2019	69.55	90.79
Apr 2019	70.34	90.96
May 2019	69.21	90.86
Jun 2019	68.62	88.70
Jul 2019	68.62	86.08
Aug 2019	69.34	87.44

<sup>32</sup>The Paycheck Protection Program Liquidity Facility also stopped providing loans on July 30, 2021. The Small Business Health index incorporates Dun & Bradstreet data on employer and nonemployer businesses with fewer than 100 employees. The overall index combines four data elements into a composite number that tracks the health of small businesses. An increase or decrease in the index means an improvement or deterioration, respectively, in small business performance.

Month AN: Data format changed to month since Jan2012	Card utilization Index	Small Buiness Health Index
Sep 2019	68.41	86.21
Oct 2019	68.81	85.78
Nov 2019	68.71	85.22
Dec 2019	68.24	84.53
Jan 2020	68.59	83.87
Feb 2020	69.22	83.65
Mar 2020	68.22	84.05
Apr 2020	69.05	80.73
May 2020	71.71	83.07
Jun 2020	73.35	82.84
Jul 2020	73.96	83.62
Aug 2020	73.63	84.09
Sep 2020	74.48	84.24
Oct 2020	75.16	85.76
Nov 2020	74.88	85.47
Dec 2020	74.48	87.65
Jan 2021	74.41	88.51
Feb 2021	75.71	89.59
Mar 2021	76.12	90.87
Apr 2021	76.02	88.35
May 2021	74.65	87.39
Jun 2021	74.65	88.87
Jul 2021	74.87	88.57
Aug 2021	74.58	88.45
Sep 2021	74.39	87.97
Oct 2021	74.66	88.20
Nov 2021	73.91	87.01
Dec 2021	73.67	86.84
Jan 2022	73.14	89.07
Feb 2022	74.42	90.6
Mar 2022	73.97	92.29
Apr 2022	73.36	93.46
May 2022	71.89	94.75
Jun 2022	71.65	96.26
Jul 2022	70.95	97.15

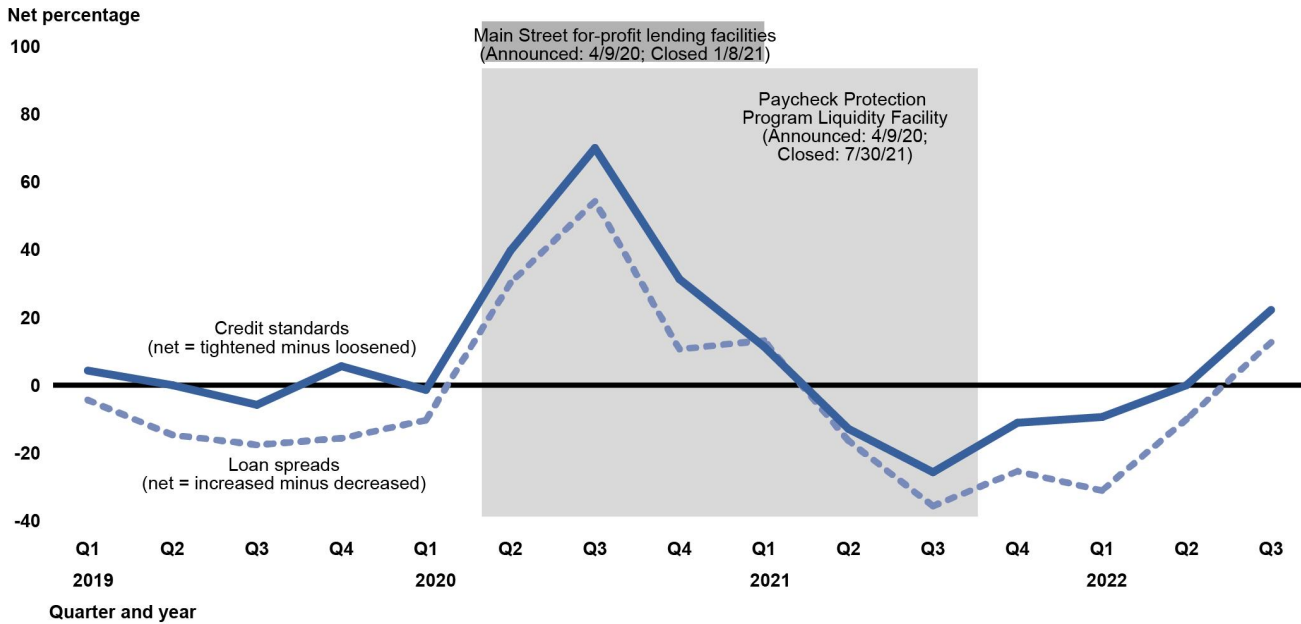
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Note: The overall Small Business Health Index combines four data elements into a composite number that tracks the health of small businesses—these elements are the credit card utilization index, business failure index, credit card delinquency (at 61+ days past due) index, and trade credit dollar delinquency (the percentage of delinquent dollars—those at 91 days or more past due—out of all outstanding balances) index. The Small Business Health Index uses a sample of small active businesses in the Dun & Bradstreet U.S. database, which includes both employer and nonemployer businesses. It is based on a sample of 10 million businesses with fewer than 100 employees out of a population of approximately 30 million. The indexes are relative to December 2004, which is the base period. An increase or decrease in the indexes reflects an improvement or deterioration, respectively, in small business performance.

Additionally, according to a Federal Reserve survey of senior loan officers conducted in July 2022 on banks' lending conditions for small businesses (those with annual sales of less than \$50 million), access to credit has generally been favorable since the second quarter of 2021. However, banks appear to have tightened their credit standards recently and increased their loan spreads (see fig. 8).<sup>33</sup> Banks cited a less favorable or more uncertain economic outlook, the worsening of industry-specific problems, and reduced tolerance for risk as important reasons for the recently tightened lending standards or terms.

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<sup>33</sup>Underwriting standards tighten as perceived economic risk increases—that is, lenders focus on high-quality borrowers as the economy weakens and loosen as perceived economic risk falls. Increased loan spreads indicate that banks are instituting a greater difference between the interest rates they charge on loans and the interest rate paid to depositors on financial products, such as savings accounts. This generally indicates perceived higher risk, which in turn may make credit more difficult to access for small businesses.

**Figure 8: Banks' Lending Conditions for Small Business Loans, First Quarter 2019–Third Quarter 2022**

Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-23-105629

**Accessible Data for Figure 8: Banks' Lending Conditions for Small Business Loans, First Quarter 2019–Third Quarter 2022**

Quarter	Credit standards (net percentage)	Loan spreads (net percentage)
2019:Q1	4.3	-4.4
2019:Q2	0.0	-14.7
2019:Q3	-5.8	-17.6
2019:Q4	5.6	-15.7
2020:Q1	-1.4	-10.3
2020:Q2	39.7	30.2
2020:Q3	70.0	54.3
2020:Q4	31.3	10.6
2021:Q1	11.4	13.2
2021:Q2	-12.9	-16.4
2021:Q3	-25.7	-35.7
2021:Q4	-11.1	-25.4
2022:Q1	-9.4	-31.1
2022:Q2	0.0	-10.0
2022:Q3	22.2	12.7

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Note: We report results from the Board of Governors of the Federal Reserve System's Senior Loan Officer Opinion Survey on credit standards and loan spreads on commercial and industrial loans. A positive number for credit standards indicates that more banks are tightening rather than loosening standards. Similarly, a positive number for loan spreads indicates that more banks are increasing rather than decreasing loan spreads. Based on the timing of survey completion, each quarter of the survey generally corresponds to the previous quarter. For more information, see <https://www.federalreserve.gov/data/sloos/sloos-202207.htm>, accessed September 24, 2022.

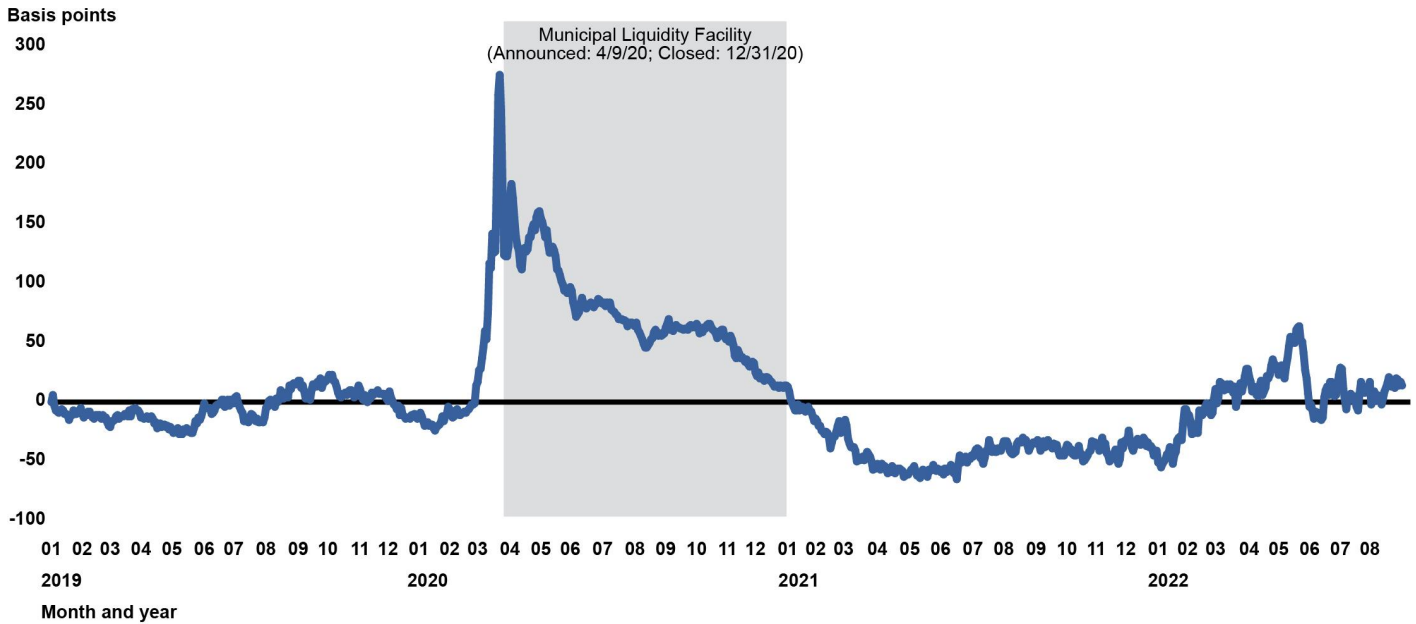
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## Borrowing Costs in Municipal Credit Markets Have Generally Remained Low since the Municipal Liquidity Facility Ceased Activity

Since the Municipal Liquidity Facility—which was established to enhance the liquidity of the short-term municipal securities market and restore confidence in the overall municipal securities market—stopped extending credit on December 31, 2020, spreads on municipal bonds have generally remained at or below prepandemic levels (see fig. 9).<sup>34</sup> This trend suggests that investor confidence remains stable in the municipal credit markets, and access to credit for state and local governments has not been adversely affected since the termination of the credit facility.

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<sup>34</sup>The Federal Reserve established the Municipal Liquidity Facility in May 2020 to primarily support states and certain counties, cities, multistate entities, and revenue bond issuers. Municipal bonds can be classified as either general obligation bonds or revenue bonds. General obligation bonds are backed by general revenues of the issuing municipality, while revenue bonds are repaid from the revenue generated by the specific project the bonds paid for, such as income from a toll road.

**Figure 9: Spreads on Municipal Bonds, January 2019–August 2022**

Source: GAO analysis of Bloomberg data. | GAO-23-105629

**Accessible Data for Figure 9: Spreads on Municipal Bonds, January 2019–August 2022**

Date	Basis points
1/2/2019	0
1/3/2019	6
1/4/2019	-3
1/7/2019	-7
1/8/2019	-8
1/9/2019	-9
1/10/2019	-8
1/11/2019	-6
1/14/2019	-7
1/15/2019	-10
1/16/2019	-10
1/17/2019	-11
1/18/2019	-15
1/22/2019	-11
1/23/2019	-11
1/24/2019	-7
1/25/2019	-10

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Letter

Date	Basis points
1/28/2019	-10
1/29/2019	-8
1/30/2019	-7
1/31/2019	-5
2/1/2019	-10
2/4/2019	-13
2/5/2019	-11
2/6/2019	-11
2/7/2019	-8
2/8/2019	-8
2/11/2019	-11
2/12/2019	-13
2/13/2019	-14
2/14/2019	-11
2/15/2019	-11
2/19/2019	-11
2/20/2019	-11
2/21/2019	-14
2/22/2019	-11
2/25/2019	-14
2/26/2019	-13
2/27/2019	-17
2/28/2019	-20
3/1/2019	-21
3/4/2019	-16
3/5/2019	-16
3/6/2019	-15
3/7/2019	-12
3/8/2019	-11
3/11/2019	-14
3/12/2019	-12
3/13/2019	-12
3/14/2019	-12
3/15/2019	-10
3/18/2019	-11
3/19/2019	-12
3/20/2019	-7

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Letter

Date	Basis points
3/21/2019	-12
3/22/2019	-6
3/25/2019	-7
3/26/2019	-5
3/27/2019	-7
3/28/2019	-7
3/29/2019	-9
4/1/2019	-13
4/2/2019	-13
4/3/2019	-14
4/4/2019	-13
4/5/2019	-12
4/8/2019	-14
4/9/2019	-13
4/10/2019	-12
4/11/2019	-14
4/12/2019	-18
4/15/2019	-17
4/16/2019	-22
4/17/2019	-19
4/18/2019	-18
4/22/2019	-21
4/23/2019	-20
4/24/2019	-19
4/25/2019	-21
4/26/2019	-20
4/29/2019	-23
4/30/2019	-21
5/1/2019	-23
5/2/2019	-26
5/3/2019	-25
5/6/2019	-25
5/7/2019	-22
5/8/2019	-27
5/9/2019	-24
5/10/2019	-27
5/13/2019	-23

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Letter

Date	Basis points
5/14/2019	-25
5/15/2019	-22
5/16/2019	-25
5/17/2019	-24
5/20/2019	-26
5/21/2019	-26
5/22/2019	-22
5/23/2019	-16
5/24/2019	-18
5/28/2019	-13
5/29/2019	-15
5/30/2019	-12
5/31/2019	-7
6/3/2019	-1
6/4/2019	-5
6/5/2019	-5
6/6/2019	-5
6/7/2019	-5
6/10/2019	-10
6/11/2019	-9
6/12/2019	-7
6/13/2019	-3
6/14/2019	-2
6/17/2019	-2
6/18/2019	-1
6/19/2019	2
6/20/2019	2
6/21/2019	-4
6/24/2019	0
6/25/2019	2
6/26/2019	-3
6/27/2019	2
6/28/2019	2
7/1/2019	-1
7/2/2019	4
7/3/2019	5
7/5/2019	-1

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Letter

Date	Basis points
7/8/2019	-4
7/9/2019	-7
7/10/2019	-9
7/11/2019	-16
7/12/2019	-16
7/15/2019	-14
7/16/2019	-17
7/17/2019	-12
7/18/2019	-10
7/19/2019	-11
7/22/2019	-13
7/23/2019	-16
7/24/2019	-14
7/25/2019	-17
7/26/2019	-17
7/29/2019	-16
7/30/2019	-17
7/31/2019	-13
8/1/2019	-5
8/2/2019	-4
8/5/2019	1
8/6/2019	2
8/7/2019	-2
8/8/2019	-1
8/9/2019	-4
8/12/2019	3
8/13/2019	0
8/14/2019	2
8/15/2019	10
8/16/2019	7
8/19/2019	3
8/20/2019	8
8/21/2019	5
8/22/2019	4
8/23/2019	14
8/26/2019	11
8/27/2019	15

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Letter

Date	Basis points
8/28/2019	16
8/29/2019	15
8/30/2019	15
9/3/2019	18
9/4/2019	18
9/5/2019	12
9/6/2019	14
9/9/2019	9
9/10/2019	3
9/11/2019	5
9/12/2019	4
9/13/2019	2
9/16/2019	10
9/17/2019	15
9/18/2019	13
9/19/2019	13
9/20/2019	17
9/23/2019	14
9/24/2019	20
9/25/2019	12
9/26/2019	16
9/27/2019	17
9/30/2019	18
10/1/2019	20
10/2/2019	23
10/3/2019	22
10/4/2019	23
10/7/2019	18
10/8/2019	17
10/9/2019	13
10/10/2019	8
10/11/2019	5
10/15/2019	4
10/16/2019	6
10/17/2019	7
10/18/2019	8
10/21/2019	6

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Letter

Date	Basis points
10/22/2019	9
10/23/2019	10
10/24/2019	10
10/25/2019	8
10/28/2019	4
10/29/2019	5
10/30/2019	10
10/31/2019	14
11/1/2019	11
11/4/2019	6
11/5/2019	2
11/6/2019	6
11/7/2019	1
11/8/2019	0
11/12/2019	2
11/13/2019	3
11/14/2019	8
11/15/2019	6
11/18/2019	8
11/19/2019	8
11/20/2019	10
11/21/2019	7
11/22/2019	7
11/25/2019	7
11/26/2019	7
11/27/2019	5
11/29/2019	3
12/2/2019	1
12/3/2019	9
12/4/2019	4
12/5/2019	1
12/6/2019	-2
12/9/2019	-3
12/10/2019	-6
12/11/2019	-3
12/12/2019	-11
12/13/2019	-5

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Letter

Date	Basis points
12/16/2019	-11
12/17/2019	-12
12/18/2019	-14
12/19/2019	-13
12/20/2019	-13
12/23/2019	-14
12/24/2019	-11
12/26/2019	-11
12/27/2019	-10
12/30/2019	-12
12/31/2019	-14
1/2/2020	-11
1/3/2020	-9
1/6/2020	-12
1/7/2020	-16
1/8/2020	-20
1/9/2020	-18
1/10/2020	-17
1/13/2020	-20
1/14/2020	-19
1/15/2020	-19
1/16/2020	-22
1/17/2020	-24
1/21/2020	-21
1/22/2020	-20
1/23/2020	-19
1/24/2020	-17
1/27/2020	-12
1/28/2020	-16
1/29/2020	-12
1/30/2020	-10
1/31/2020	-4
2/3/2020	-6
2/4/2020	-11
2/5/2020	-13
2/6/2020	-12
2/7/2020	-8

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Letter

Date	Basis points
2/10/2020	-6
2/11/2020	-9
2/12/2020	-11
2/13/2020	-10
2/14/2020	-9
2/18/2020	-8
2/19/2020	-9
2/20/2020	-7
2/21/2020	-6
2/24/2020	-4
2/25/2020	-2
2/26/2020	-2
2/27/2020	-1
2/28/2020	14
3/2/2020	17
3/3/2020	27
3/4/2020	28
3/5/2020	37
3/6/2020	47
3/9/2020	60
3/10/2020	53
3/11/2020	75
3/12/2020	117
3/13/2020	113
3/16/2020	142
3/17/2020	126
3/18/2020	127
3/19/2020	189
3/20/2020	259
3/23/2020	276
3/24/2020	246
3/25/2020	178
3/26/2020	124
3/27/2020	123
3/30/2020	123
3/31/2020	131
4/1/2020	173

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Letter

Date	Basis points
4/2/2020	184
4/3/2020	172
4/6/2020	155
4/7/2020	140
4/8/2020	132
4/9/2020	128
4/13/2020	115
4/14/2020	112
4/15/2020	126
4/16/2020	130
4/17/2020	127
4/20/2020	129
4/21/2020	139
4/22/2020	139
4/23/2020	146
4/24/2020	150
4/27/2020	145
4/28/2020	156
4/29/2020	160
4/30/2020	161
5/1/2020	155
5/4/2020	152
5/5/2020	146
5/6/2020	139
5/7/2020	145
5/8/2020	133
5/11/2020	126
5/12/2020	129
5/13/2020	131
5/14/2020	128
5/15/2020	123
5/18/2020	112
5/19/2020	111
5/20/2020	107
5/21/2020	102
5/22/2020	99
5/26/2020	94

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Letter

Date	Basis points
5/27/2020	94
5/28/2020	92
5/29/2020	96
6/1/2020	97
6/2/2020	94
6/3/2020	84
6/4/2020	79
6/5/2020	72
6/8/2020	74
6/9/2020	76
6/10/2020	83
6/11/2020	88
6/12/2020	83
6/15/2020	82
6/16/2020	79
6/17/2020	81
6/18/2020	83
6/19/2020	84
6/22/2020	82
6/23/2020	80
6/24/2020	83
6/25/2020	83
6/26/2020	87
6/29/2020	86
6/30/2020	84
7/1/2020	83
7/2/2020	84
7/6/2020	81
7/7/2020	84
7/8/2020	81
7/9/2020	84
7/10/2020	78
7/13/2020	77
7/14/2020	76
7/15/2020	74
7/16/2020	73
7/17/2020	70

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Letter

Date	Basis points
7/20/2020	70
7/21/2020	70
7/22/2020	69
7/23/2020	69
7/24/2020	68
7/27/2020	64
7/28/2020	66
7/29/2020	67
7/30/2020	67
7/31/2020	65
8/3/2020	64
8/4/2020	67
8/5/2020	61
8/6/2020	59
8/7/2020	56
8/10/2020	53
8/11/2020	49
8/12/2020	46
8/13/2020	46
8/14/2020	48
8/17/2020	50
8/18/2020	53
8/19/2020	54
8/20/2020	59
8/21/2020	61
8/24/2020	59
8/25/2020	56
8/26/2020	58
8/27/2020	56
8/28/2020	57
8/31/2020	58
9/1/2020	63
9/2/2020	66
9/3/2020	70
9/4/2020	61
9/8/2020	62
9/9/2020	60

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Letter

Date	Basis points
9/10/2020	64
9/11/2020	65
9/14/2020	63
9/15/2020	63
9/16/2020	62
9/17/2020	62
9/18/2020	61
9/21/2020	62
9/22/2020	62
9/23/2020	61
9/24/2020	64
9/25/2020	65
9/28/2020	63
9/29/2020	64
9/30/2020	63
10/1/2020	66
10/2/2020	64
10/5/2020	58
10/6/2020	61
10/7/2020	59
10/8/2020	63
10/9/2020	62
10/13/2020	65
10/14/2020	66
10/15/2020	66
10/16/2020	63
10/19/2020	61
10/20/2020	60
10/21/2020	58
10/22/2020	54
10/23/2020	56
10/26/2020	60
10/27/2020	61
10/28/2020	61
10/29/2020	55
10/30/2020	53
11/2/2020	54

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Letter

Date	Basis points
11/3/2020	51
11/4/2020	56
11/5/2020	53
11/6/2020	48
11/9/2020	39
11/10/2020	37
11/12/2020	44
11/13/2020	41
11/16/2020	37
11/17/2020	38
11/18/2020	36
11/19/2020	34
11/20/2020	36
11/23/2020	32
11/24/2020	30
11/25/2020	31
11/27/2020	34
11/30/2020	33
12/1/2020	25
12/2/2020	22
12/3/2020	25
12/4/2020	20
12/7/2020	21
12/8/2020	21
12/9/2020	18
12/10/2020	21
12/11/2020	21
12/14/2020	20
12/15/2020	18
12/16/2020	17
12/17/2020	15
12/18/2020	13
12/21/2020	13
12/22/2020	14
12/23/2020	12
12/24/2020	14
12/28/2020	13

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Letter

Date	Basis points
12/29/2020	12
12/30/2020	14
12/31/2020	14
1/4/2021	13
1/5/2021	9
1/6/2021	2
1/7/2021	-1
1/8/2021	-4
1/11/2021	-7
1/12/2021	-7
1/13/2021	-2
1/14/2021	-7
1/15/2021	-4
1/19/2021	-4
1/20/2021	-5
1/21/2021	-8
1/22/2021	-7
1/25/2021	-4
1/26/2021	-7
1/27/2021	-8
1/28/2021	-12
1/29/2021	-16
2/1/2021	-14
2/2/2021	-16
2/3/2021	-20
2/4/2021	-20
2/5/2021	-24
2/8/2021	-25
2/9/2021	-27
2/10/2021	-25
2/11/2021	-26
2/12/2021	-30
2/16/2021	-39
2/17/2021	-34
2/18/2021	-29
2/19/2021	-29
2/22/2021	-25

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Letter

Date	Basis points
2/23/2021	-20
2/24/2021	-16
2/25/2021	-26
2/26/2021	-17
3/1/2021	-18
3/2/2021	-15
3/3/2021	-20
3/4/2021	-31
3/5/2021	-35
3/8/2021	-38
3/9/2021	-38
3/10/2021	-38
3/11/2021	-41
3/12/2021	-50
3/15/2021	-48
3/16/2021	-49
3/17/2021	-47
3/18/2021	-46
3/19/2021	-49
3/22/2021	-45
3/23/2021	-42
3/24/2021	-44
3/25/2021	-46
3/26/2021	-50
3/29/2021	-57
3/30/2021	-56
3/31/2021	-56
4/1/2021	-52
4/2/2021	
4/5/2021	-57
4/6/2021	-52
4/7/2021	-55
4/8/2021	-54
4/9/2021	-57
4/12/2021	-60
4/13/2021	-57
4/14/2021	-59

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Letter

Date	Basis points
4/15/2021	-54
4/16/2021	-57
4/19/2021	-60
4/20/2021	-57
4/21/2021	-56
4/22/2021	-56
4/23/2021	-57
4/26/2021	-58
4/27/2021	-63
4/28/2021	-62
4/29/2021	-61
4/30/2021	-61
5/3/2021	-59
5/4/2021	-57
5/5/2021	-56
5/6/2021	-54
5/7/2021	-58
5/10/2021	-62
5/11/2021	-61
5/12/2021	-64
5/13/2021	-60
5/14/2021	-57
5/17/2021	-59
5/18/2021	-59
5/19/2021	-63
5/20/2021	-57
5/21/2021	-58
5/24/2021	-57
5/25/2021	-53
5/26/2021	-56
5/27/2021	-58
5/28/2021	-56
5/31/2021	
6/1/2021	-59
6/2/2021	-57
6/3/2021	-61
6/4/2021	-56

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Letter

Date	Basis points
6/7/2021	-59
6/8/2021	-57
6/9/2021	-58
6/10/2021	-53
6/11/2021	-55
6/14/2021	-60
6/15/2021	-60
6/16/2021	-65
6/17/2021	-53
6/18/2021	-45
6/21/2021	-51
6/22/2021	-48
6/23/2021	-48
6/24/2021	-46
6/25/2021	-51
6/28/2021	-47
6/29/2021	-48
6/30/2021	-45
7/1/2021	-46
7/2/2021	-43
7/6/2021	-40
7/7/2021	-39
7/8/2021	-40
7/9/2021	-47
7/12/2021	-48
7/13/2021	-52
7/14/2021	-47
7/15/2021	-41
7/16/2021	-41
7/19/2021	-32
7/20/2021	-37
7/21/2021	-42
7/22/2021	-39
7/23/2021	-42
7/26/2021	-42
7/27/2021	-39
7/28/2021	-40

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Letter

Date	Basis points
7/29/2021	-41
7/30/2021	-37
8/2/2021	-33
8/3/2021	-33
8/4/2021	-33
8/5/2021	-36
8/6/2021	-41
8/9/2021	-43
8/10/2021	-44
8/11/2021	-43
8/12/2021	-42
8/13/2021	-35
8/16/2021	-33
8/17/2021	-33
8/18/2021	-34
8/19/2021	-30
8/20/2021	-32
8/23/2021	-32
8/24/2021	-36
8/25/2021	-41
8/26/2021	-38
8/27/2021	-35
8/30/2021	-34
8/31/2021	-35
9/1/2021	-35
9/2/2021	-32
9/3/2021	-35
9/7/2021	-41
9/8/2021	-38
9/9/2021	-33
9/10/2021	-38
9/13/2021	-37
9/14/2021	-32
9/15/2021	-35
9/16/2021	-37
9/17/2021	-39
9/20/2021	-35

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Letter

Date	Basis points
9/21/2021	-37
9/22/2021	-36
9/23/2021	-41
9/24/2021	-45
9/27/2021	-44
9/28/2021	-45
9/29/2021	-45
9/30/2021	-40
10/1/2021	-36
10/4/2021	-37
10/5/2021	-42
10/6/2021	-40
10/7/2021	-44
10/8/2021	-45
10/12/2021	-45
10/13/2021	-42
10/14/2021	-37
10/15/2021	-44
10/18/2021	-44
10/19/2021	-50
10/20/2021	-49
10/21/2021	-47
10/22/2021	-45
10/25/2021	-42
10/26/2021	-41
10/27/2021	-33
10/28/2021	-36
10/29/2021	-34
11/1/2021	-37
11/2/2021	-36
11/3/2021	-41
11/4/2021	-35
11/5/2021	-30
11/8/2021	-37
11/9/2021	-35
11/10/2021	-43
11/12/2021	-45

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Letter

Date	Basis points
11/15/2021	-50
11/16/2021	-48
11/17/2021	-45
11/18/2021	-43
11/19/2021	-40
11/22/2021	-49
11/23/2021	-52
11/24/2021	-48
11/26/2021	-34
11/29/2021	-39
11/30/2021	-33
12/1/2021	-32
12/2/2021	-33
12/3/2021	-24
12/6/2021	-33
12/7/2021	-38
12/8/2021	-41
12/9/2021	-37
12/10/2021	-36
12/13/2021	-31
12/14/2021	-33
12/15/2021	-36
12/16/2021	-32
12/17/2021	-30
12/20/2021	-32
12/21/2021	-37
12/22/2021	-34
12/23/2021	-38
12/27/2021	-37
12/28/2021	-39
12/29/2021	-45
12/30/2021	-42
12/31/2021	-41
1/3/2022	-51
1/4/2022	-51
1/5/2022	-55
1/6/2022	-52

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Letter

Date	Basis points
1/7/2022	-50
1/10/2022	-48
1/11/2022	-44
1/12/2022	-43
1/13/2022	-38
1/14/2022	-45
1/18/2022	-52
1/19/2022	-45
1/20/2022	-42
1/21/2022	-32
1/24/2022	-30
1/25/2022	-29
1/26/2022	-32
1/27/2022	-18
1/28/2022	-6
1/31/2022	-6
2/1/2022	-10
2/2/2022	-11
2/3/2022	-16
2/4/2022	-27
2/7/2022	-25
2/8/2022	-26
2/9/2022	-23
2/10/2022	-26
2/11/2022	-7
2/14/2022	-10
2/15/2022	-11
2/16/2022	-9
2/17/2022	-4
2/18/2022	-1
2/22/2022	-4
2/23/2022	-9
2/24/2022	-11
2/25/2022	-9
2/28/2022	3
3/1/2022	11
3/2/2022	-1

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Letter

Date	Basis points
3/3/2022	4
3/4/2022	17
3/7/2022	16
3/8/2022	13
3/9/2022	10
3/10/2022	13
3/11/2022	15
3/14/2022	11
3/15/2022	15
3/16/2022	13
3/17/2022	8
3/18/2022	13
3/21/2022	-4
3/22/2022	2
3/23/2022	10
3/24/2022	16
3/25/2022	9
3/28/2022	15
3/29/2022	22
3/30/2022	28
3/31/2022	28
4/1/2022	21
4/4/2022	17
4/5/2022	9
4/6/2022	13
4/7/2022	9
4/8/2022	6
4/11/2022	5
4/12/2022	14
4/13/2022	18
4/14/2022	6
4/18/2022	9
4/19/2022	12
4/20/2022	22
4/21/2022	20
4/22/2022	23
4/25/2022	31

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Letter

Date	Basis points
4/26/2022	36
4/27/2022	32
4/28/2022	31
4/29/2022	29
5/2/2022	23
5/3/2022	26
5/4/2022	31
5/5/2022	23
5/6/2022	20
5/9/2022	30
5/10/2022	37
5/11/2022	47
5/12/2022	55
5/13/2022	50
5/16/2022	55
5/17/2022	50
5/18/2022	61
5/19/2022	63
5/20/2022	64
5/23/2022	52
5/24/2022	51
5/25/2022	41
5/26/2022	27
5/27/2022	20
5/31/2022	7
6/1/2022	-4
6/2/2022	-2
6/3/2022	-7
6/6/2022	-14
6/7/2022	-8
6/8/2022	-11
6/9/2022	-9
6/10/2022	-14
6/13/2022	-15
6/14/2022	-13
6/15/2022	4
6/16/2022	10

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Letter

Date	Basis points
6/17/2022	13
6/21/2022	6
6/22/2022	17
6/23/2022	17
6/24/2022	12
6/27/2022	5
6/28/2022	6
6/29/2022	15
6/30/2022	23
7/1/2022	29
7/5/2022	28
7/6/2022	11
7/7/2022	2
7/8/2022	-6
7/11/2022	3
7/12/2022	2
7/13/2022	7
7/14/2022	2
7/15/2022	5
7/18/2022	1
7/19/2022	-4
7/20/2022	-7
7/21/2022	7
7/22/2022	17
7/25/2022	13
7/26/2022	8
7/27/2022	8
7/28/2022	13
7/29/2022	12
8/1/2022	17
8/2/2022	-2
8/3/2022	3
8/4/2022	9
8/5/2022	1
8/8/2022	6
8/9/2022	4
8/10/2022	5

Date	Basis points
8/11/2022	-2
8/12/2022	3
8/15/2022	9
8/16/2022	12
8/17/2022	16
8/18/2022	21
8/19/2022	16
8/22/2022	13
8/23/2022	13
8/24/2022	12
8/25/2022	20
8/26/2022	19
8/29/2022	14
8/30/2022	17
8/31/2022	14

Note: Spreads on municipal bonds are calculated relative to interest rates on Treasury 10-year yield based on the Bloomberg Municipal Bond Index and are measured in basis points, or 1/100th of a percentage point.

Additionally, municipal bond issuance has remained high since January 2021 and continues to be slightly higher than prepandemic levels. This trend, combined with the low borrowing costs, suggests that investor confidence in the financial performance of state and local governments remains favorable.

The rates on variable rate demand notes, the most commonly held type of asset in municipal money market funds, have generally been lower than or close to prepandemic levels since facility was terminated in December 2020, but has increased since January 2022.<sup>35</sup> The outstanding balances of variable rate demand notes have continued to decline compared to prepandemic levels. This decline is partly due to the uncertainty in the money markets funds, which are vulnerable to runs in times of market stress.

<sup>35</sup>Variable rate demand notes are long-term municipal securities that are payable on demand and accrue interest based on the prevailing money market rate. They are the most commonly held type of asset in municipal money market funds.

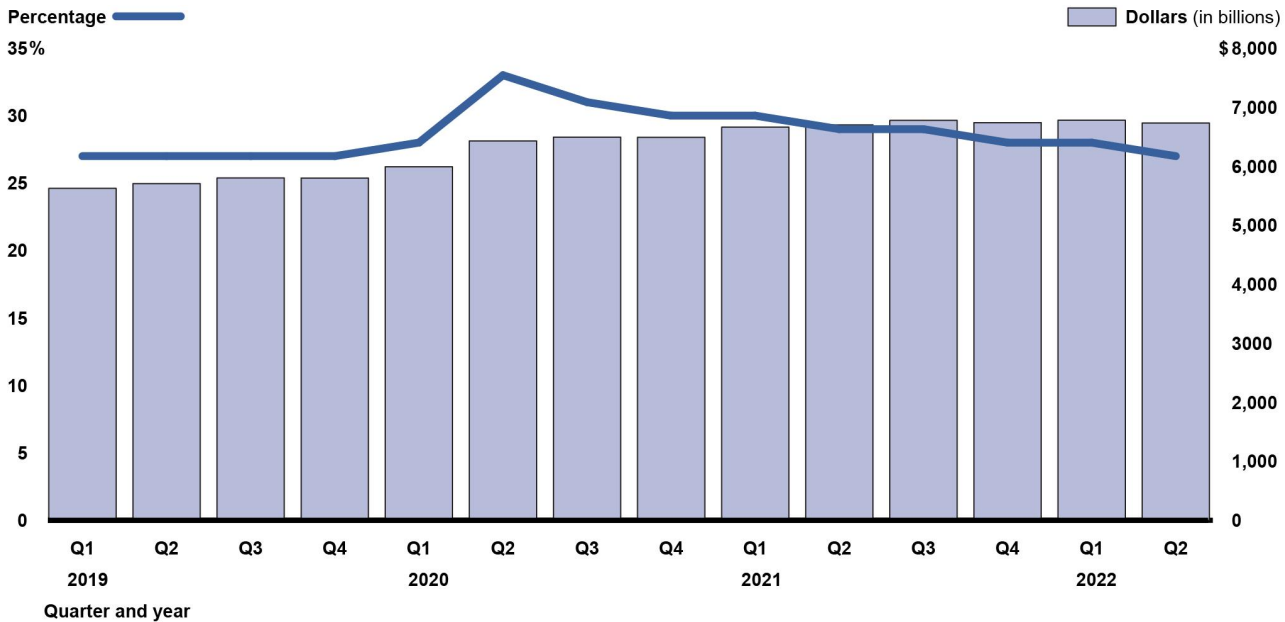
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## Near-Term Default Risks in Markets the Federal Lending Facilities Operated in Appear to Be Low, but Vulnerabilities Exist

Although borrowing by businesses and state and local governments to withstand the disruptions from the pandemic could leave them vulnerable to distress if their incomes decline or the assets they own fall in value, the debt levels carried by these institutions appear to be sustainable. Key indicators of vulnerability arising from business and state and local government debts continue to improve and have largely returned to near or below prepandemic levels. However, factors such as rising interest rates, high inflation, supply chain disruptions, and the ongoing public health emergency create uncertainty about the economic outlook. This could make the credit markets supporting businesses and state and local governments vulnerable in the near future.

**Large businesses.** Corporate bonds outstanding have remained elevated since December 2020 when the lending facilities were terminated and appear to be sustainable. The ratio of corporate bonds to the gross domestic product, which reflects sustainability of the debt, has further declined from its pandemic highs because of the rapid pace of growth in gross domestic product (see fig. 10). A lower ratio suggests lower chances of default as borrowers would have sufficient income to cover debt payments. Bankruptcy filings have fallen below or are near prepandemic levels, but a decline in corporate profitability due to continued supply chain disruptions and rising interest rates could affect the ability of firms to service their debt, which would have adverse effects on corporate credit markets.

**Figure 10: Ratio of Nonfinancial Corporate Bonds Outstanding to Gross Domestic Product, First Quarter 2019–Second Quarter 2022**



Source: GAO analysis of data from the Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-23-105629

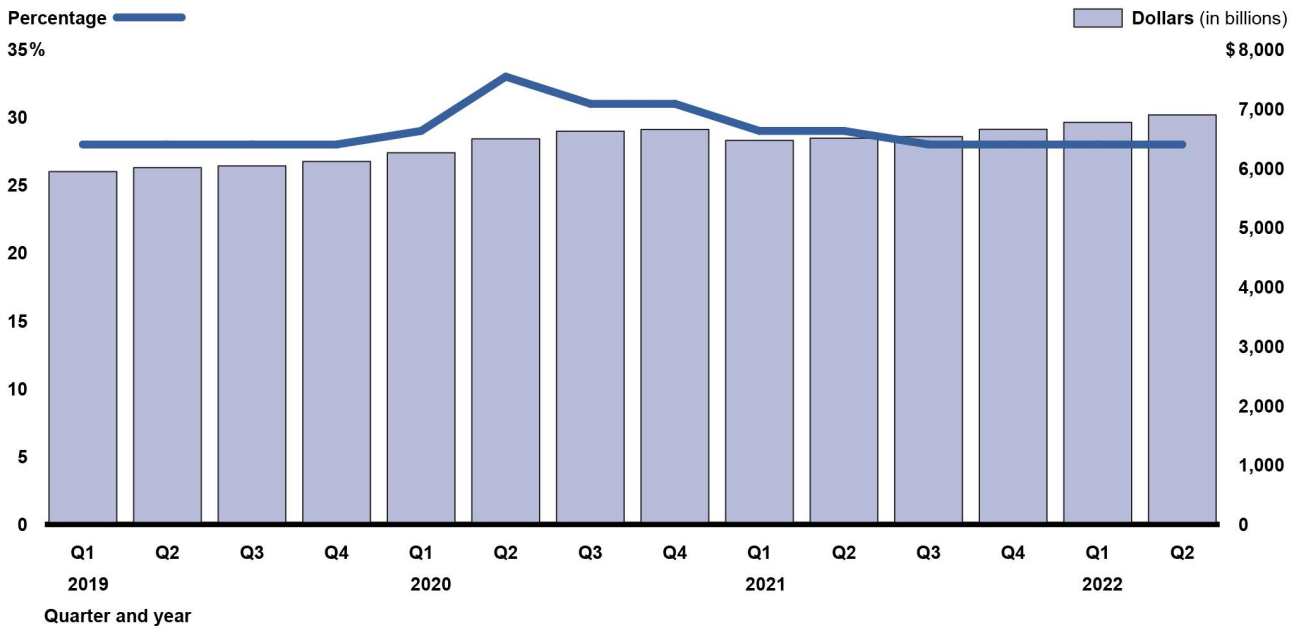
**Accessible Data for Figure 10: Ratio of Nonfinancial Corporate Bonds Outstanding to Gross Domestic Product, First Quarter 2019–Second Quarter 2022**

Quarter	Nonfinancial Corporate Business Bonds	Ratio of Nonfinancial Corporate Business Bonds to GDP
2019q1	5626	27%
2019q2	5705	27%
2019q3	5801	27%
2019q4	5800	27%
2020q1	5991	28%
2020q2	6429	33%
2020q3	6493	31%
2020q4	6491	30%
2021q1	6662	30%
2021q2	6700	29%
2021q3	6777	29%
2021q4	6739	28%
2022q1	6780	28%
2022q2	6732	27%

Note: The gross domestic product is seasonally adjusted.

**Small businesses.** Small business loans outstanding have increased since the second quarter of 2021, after the lending facilities that supported small businesses stopped providing loans. The level of small business debt appears to be sustainable, as indicated by the ratio of the loans to the gross domestic product (see fig. 11). Additionally, data from Dun & Bradstreet show that credit card delinquencies (at 61 days or more past due) have improved slightly, as have trade credit delinquencies (the percentage of delinquent dollars—those at 91 days or more past due—out of all outstanding balances). The small business failure index, which represents the stability of small businesses, has also improved.<sup>36</sup> However, increasing labor costs and prices for other inputs, such as materials and transportation, could reduce small businesses' earnings and their ability to service their loans, which would dampen the credit market for small businesses.

**Figure 11: Ratio of Small Business Loans Outstanding to Gross Domestic Product, First Quarter 2019–Second Quarter 2022**



Source: GAO analysis of data from the Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-23-105629

<sup>36</sup>According to Dun & Bradstreet, a business is considered to have failed when it declares bankruptcy or goes out of business with a certain level of outstanding debt relative to its size.

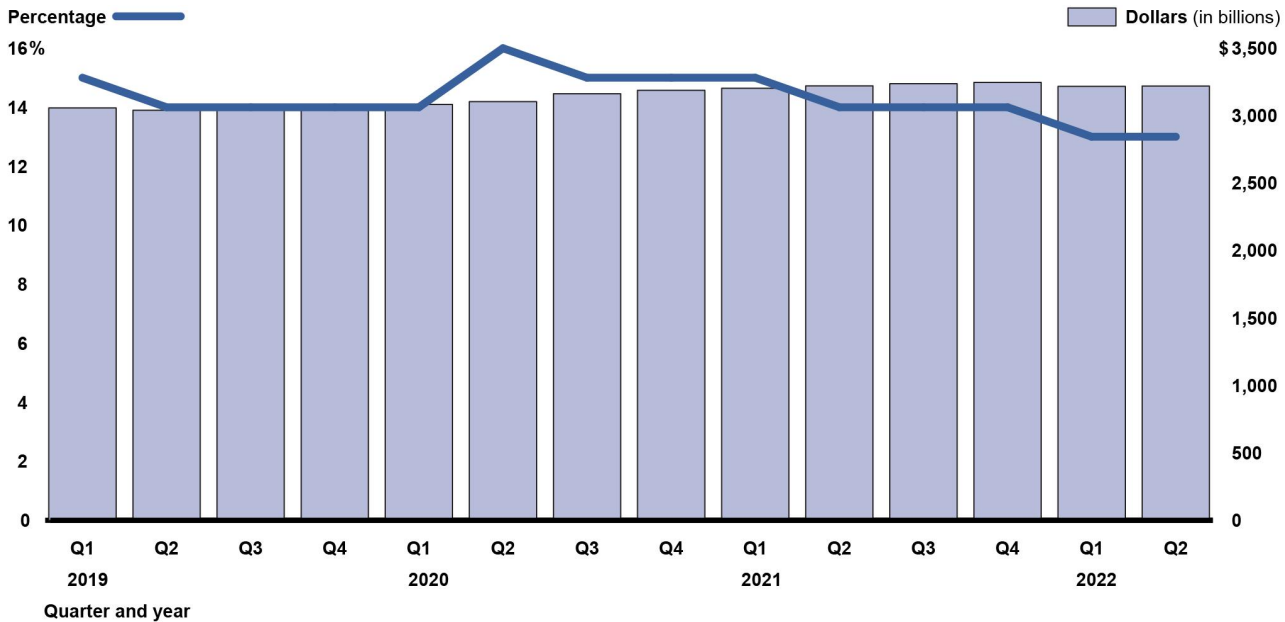
**Accessible Data for Figure 11: Ratio of Small Business Loans Outstanding to Gross Domestic Product, First Quarter 2019–Second Quarter 2022**

Quarter	Nonfinancial NonCorporate Business Loans	Ratio of Nonfinancial NonCorporate Business Loans to GDP
2019q1	5943	28%
2019q2	6009	28%
2019q3	6038	28%
2019q4	6115	28%
2020q1	6261	29%
2020q2	6494	33%
2020q3	6624	31%
2020q4	6653	31%
2021q1	6469	29%
2021q2	6507	29%
2021q3	6532	28%
2021q4	6654	28%
2022q1	6773	28%
2022q2	6897	28%

Note: The loans include mortgages, depository institution loans, and other loans and advances. The gross domestic product is seasonally adjusted.

**State and local governments.** Municipal bonds outstanding have increased since the first quarter of 2021, and the level of state and local government bonds outstanding appears to be sustainable, as indicated by the ratio of municipal securities to the gross domestic product (see fig. 12). Also, state and local government revenues, especially from individual income taxes, have generally increased since the first quarter of 2021. These indicators suggest increased investor confidence in the ability of these institutions to service their debt. However, the public health emergency could adversely affect revenues of state and local governments while increasing their expenditures, which could reduce their ability to service their debt and strain credit markets for state and local governments.

**Figure 12: Ratio of State and Local Government Securities Outstanding to Gross Domestic Product, First Quarter 2019–Second Quarter 2022**



Source: GAO analysis of data from the Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-23-105629

**Accessible Data for Figure 12: Ratio of State and Local Government Securities Outstanding to Gross Domestic Product, First Quarter 2019–Second Quarter 2022**

Quarter	State and Local Govt Securities	Ratio of State and Local Govt Securities to GDP
2019q1	3058	15%
2019q2	3040	14%
2019q3	3041	14%
2019q4	3075	14%
2020q1	3083	14%
2020q2	3104	16%
2020q3	3162	15%
2020q4	3188	15%
2021q1	3203	15%
2021q2	3221	14%
2021q3	3237	14%
2021q4	3246	14%
2022q1	3217	13%
2022q2	3220	13%

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Note: The bonds outstanding consist mostly of long-term securities—those with maturities of more than 13 months. The gross domestic product is seasonally adjusted.

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## Most Main Street Loans Have Performed Well, with Borrowers Generally Making Regular Interest Payments

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### Most Main Street Borrowers Are Making Regular Interest Payments on Time

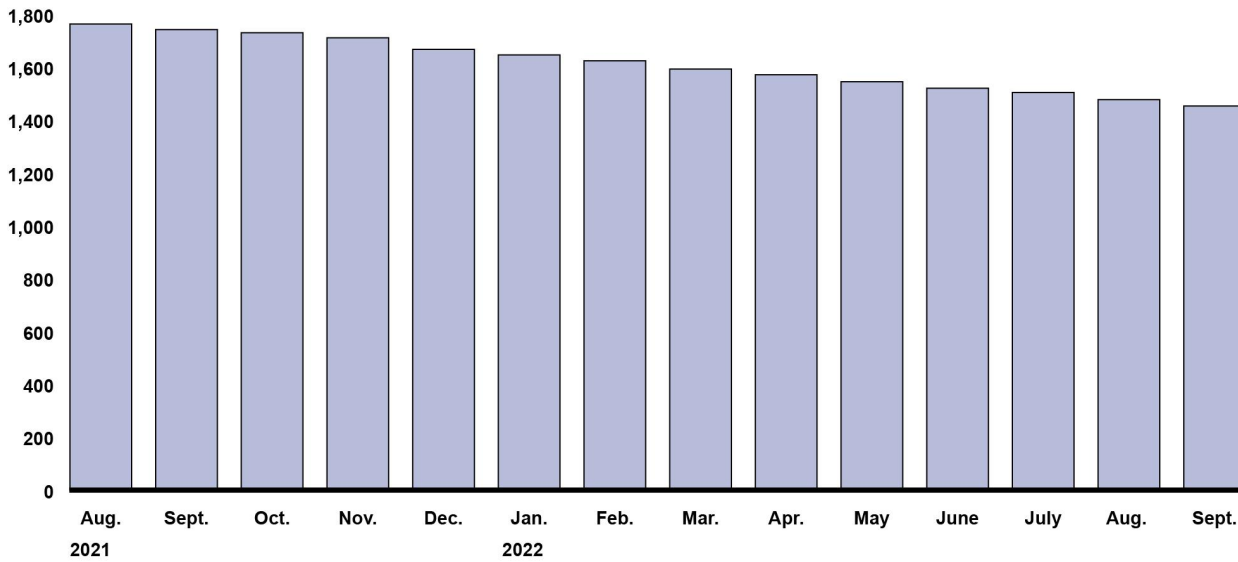
Since required interest payments for Main Street Lending Program loans began in August 2021, most borrowers have been making their regular interest payments.<sup>37</sup> As of the end of September 2022 (the most recent loan performance data available), 1,453 (or about 79 percent) of the 1,830 Main Street Lending Program loans that had been made remained outstanding. The number of outstanding loans has declined over time as a result of borrowers fully repaying loans, as well as a few losses discussed later in this report (see fig.13).

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<sup>37</sup>Loans issued under the Main Street Lending Program are recourse loans and have a 5-year maturity, deferral of principal payments for 2 years, and deferral of interest payments for 1 year. Loan amounts are amortized over the remaining term of the loan, with 15 percent of principal due at the end of the third year, 15 percent of principal due at the end of the fourth year, and a balloon payment of 70 percent of principal due at maturity at the end of the fifth year.

**Figure 13: Main Street Lending Program Outstanding Loans, by Month, August 2021–September 2022**

Number of outstanding loans



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

**Accessible Data for Figure 13: Main Street Lending Program Outstanding Loans, by Month, August 2021–September 2022**

Date	Outstanding loans
Aug 2021	1763
Sep 2021	1742
Oct 2021	1730
Nov 2021	1711
Dec 2021	1667
Jan 2022	1646
Feb 2022	1624
Mar 2022	1593
Apr 2022	1571
May 2022	1545
June 2022	1520
July 2022	1504
Aug 2022	1477
Sept 2022	1453

Note: Some loans were charged off and considered losses or were prepaid prior to interest payments coming due in August 2021.

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As of the end of September 2022, nearly all borrowers had been making timely regular interest payments. On average, 1 percent of outstanding loans had monthly delinquencies (loans more than 30 days late) from August 2021 through September 2022. According to Federal Reserve Bank of Boston (FRBB) officials, the number of delinquencies fluctuates from month to month because once a payment is made to make the loan current, the loan is no longer recorded as delinquent. According to FRBB data, the first loan became delinquent in October 2021 and as of the end of September 2022, 2.1 percent of outstanding loans were delinquent.

While almost all borrowers are making regular interest payments on time, their ability to pay could change when principal payments come due in 2023, the end of the third year since the loan origination date. According to FRBB officials, some borrowers have started making contributions toward their principal payments even though they are not required to do so, but a large majority of loans outstanding (about 81 percent) have not. The first required principal payment for the earliest loans made would begin in July 2023. At that time, a one-time payment of 15 percent of the principal loan amount plus capitalized interest will be due.

According to FRBB officials, the amounts due in 2023 once principal payments begin will be substantially more than the regular interest payments borrowers have been making. For instance, the principal payment due at the end of the third year for the smallest loan amount of \$100,000 could be at least \$15,000, while payment due for the largest loan of \$300 million could be at least \$45 million. Furthermore, the uncertainties in the economic outlook noted earlier could affect repayment.

Borrowers making regular interest payments have been spread across various loan-size categories. As of the end of September 2022, about 60 percent of the loans for which borrowers were making regular interest payments were for less than \$6 million, and 15 percent were for loans of less than \$1 million. From the third quarter of 2021 through the third quarter of 2022, the distribution of loans for which borrowers were making regular interest payments generally aligned with the distribution of Main

Street Lending Program loans made in each of these loan-size categories (see table 1).<sup>38</sup>

**Table 1: Percentage of Main Street Loans Making Regular Interest Payments, by Loan Size, Third Quarter 2021–Third Quarter 2022**

Percentage of loans (number of loans)						Percentage of all Main Street Lending Program loans
Loan size	Third quarter 2021	Fourth quarter 2021	First quarter 2022	Second quarter 2022	Third quarter 2022	
< \$1 million	14.8%	14.8%	14.7%	14.8%	15.1%	15%
\$1 to < \$3 million	25.1%	24.8%	25.0%	24.9%	25.2%	25%
\$3 to < \$6 million	19.7%	19.9%	19.8%	20.0%	19.8%	20%
\$6 to < \$14 million	19.9%	20.0%	19.8%	19.9%	19.7%	20%
> \$14 million	20.4%	20.5%	20.7%	20.4%	20.2%	20%
<b>Total</b>	<b>100%</b> <b>(1,742)</b>	<b>100%</b> <b>(1,660)</b>	<b>100%</b> <b>(1,578)</b>	<b>100%</b> <b>(1,503)</b>	<b>100%</b> <b>(1,423)</b>	<b>100%</b> <b>(1,830)</b>

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

Note: Main Street loans making regular interest payments reflect outstanding Main Street loans that are current, where borrowers are making timely interest payments. They do not include outstanding delinquent loans. Data for each quarter reflect the percentage or number of loans as of the end of the month for that quarter (end of September 2021, December 2021, March 2022, June 2022, and September 2022).

Similarly, borrowers making regular interest payments have also been spread across various business-size categories and generally reflect the overall distribution of Main Street Lending Program loans. As of the end of September 2022, about 66 percent of borrowers making regular interest payments were businesses with less than \$20 million in 2019 gross revenue. This distribution generally aligned with the number of Main Street loans made to borrowers in the business-size categories we analyzed. From the third quarter of 2021 through the third quarter of 2022, the distribution of borrowers making regular interest payments has also been generally consistent with that of Main Street loans made in each business-size category (see table 2).

<sup>38</sup>We established the categories of loan size for our analysis in consultation with FRBB to ensure each category had a sufficient number of loans so as to not make an individual loan identifiable. We obtained aggregate data on borrower payments from FRBB based on these predetermined ranges. We took the same approach for establishing categories for business size.

**Table 2: Percentage of Main Street Loans Making Regular Interest Payments, by Business Size, Third Quarter 2021–Third Quarter 2022**

Gross revenue, 2019	Percentage of loans (number of loans)					Percentage of all Main Street Lending Program loans
	Third quarter 2021	Fourth quarter 2021	First quarter 2022	Second quarter 2022	Third quarter 2022	
< \$3 million	19.7%	20.1%	20.3%	20.6%	21.1%	19%
\$3 to < \$10 million	27.2%	27.0%	26.9%	27.0%	27.0%	27%
\$10 to < \$20 million	18.5%	18.2%	17.9%	17.9%	17.6%	18%
\$20 to < \$40 million	13.8%	13.9%	14.1%	14.1%	14.1%	14%
> \$40 million	20.8%	20.7%	20.8%	20.4%	20.2%	21%
<b>Total</b>	<b>100%</b> <b>(1,742)</b>	<b>100%</b> <b>(1,660)</b>	<b>100%</b> <b>(1,578)</b>	<b>100%</b> <b>(1,503)</b>	<b>100%</b> <b>(1,423)</b>	<b>100%</b> <b>(1,830)</b>

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

Note: Main Street loans making regular interest payments reflect outstanding Main Street loans that are current, where borrowers are making timely interest payments. They do not include outstanding delinquent loans. Data for each quarter reflect the percentage or number of loans as of the end of the month for that quarter (September 2021, December 2021, March 2022, June 2022, and September 2022).

## Characteristics of Fully Repaid Main Street Loans Are Generally Consistent with All Loans in the Program

While Main Street Lending Program loans have a 5-year maturity date, some borrowers voluntarily paid off their loans during the first and second year when no principal payments were required. As of the end of September 2022, 365 (or about 20 percent) of the 1,830 Main Street loans had been fully repaid, accounting for about \$3.5 billion in original principal loan amounts. As of September 2022, the number of loans that had been fully repaid each quarter had generally been steady, with 64 to 84 loans repaid in each quarter since the third quarter of 2021.<sup>39</sup>

While the Main Street Lending Program did not require lenders to track the reasons why borrowers fully repaid their loans ahead of schedule, FRBB officials told us that, based on conversations with lenders who did have that information, repayments have largely been the result of refinancing opportunities and cash from operations. As noted earlier, small businesses' access to credit has remained favorable since the

<sup>39</sup>The third quarter of a calendar year includes July, August, and September. However, the FRBB data we analyzed may include loans that were repaid before the third quarter of 2021.

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facilities stopped providing loans in January 2021 and continues to remain stable.

Fully repaid loans have been spread across various loan-size categories and generally reflect the distribution of overall loan sizes in the Main Street Lending Program. As of the end of September 2022, loans of more than \$14 million accounted for about 22 percent of the loans repaid, and loans of less than \$6 million accounted for about 60 percent of the loans repaid (see table 3).

**Table 3: Fully Repaid Main Street Loans, by Loan Size, Third Quarter 2021–Third Quarter 2022**

Number of loans (Percentage of fully repaid loans)							Percentage of all Main Street Lending Program loans (1,830 loans)
Loan size	Third quarter 2021 <sup>a</sup>	Fourth quarter 2021	First quarter 2022	Second quarter 2022	Third quarter 2022	Total	
< \$1 million	16	11	12	8	6	53 (15%)	15%
\$1 to < \$3 million	27	25	16	16	13	97 (27%)	25%
\$3 to < \$6 million	15	11	15	12	13	66 (18%)	20%
\$6 to < \$14 million	12	13	16	13	14	68 (19%)	20%
> \$14 million	14	14	14	21	18	81 (22%)	20%
<b>Total</b>	<b>84</b>	<b>74</b>	<b>73</b>	<b>70</b>	<b>64</b>	<b>365 (101%)</b>	<b>100%</b>

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

Note: Data for each quarter reflect the number of loans in the 3 months during that quarter. The total column for fully repaid loans does not sum to 100 percent because of rounding.

<sup>a</sup>The third quarter of a calendar year includes July, August, and September. However, the Federal Reserve Bank of Boston data we analyzed may include loans that were repaid before the third quarter of 2021.

Fully repaid Main Street loans have also been spread across various business-size categories. Specifically, as of the end of September 2022, the majority (about 61 percent) of fully repaid loans were from businesses with less than \$20 million in 2019 gross revenue. Additionally, about 25 percent of fully repaid loans were from businesses with more than \$40 million in 2019 gross revenue (see table 4). While the distribution of fully repaid loans was similar to that of Main Street loans made in almost all business-size categories we reviewed, the smallest business-size category (less than \$3 million in 2019 gross revenue) had fewer loans repaid proportionally than loans in the other business-size categories.

**Table 4: Fully Repaid Main Street Loans, by Business Size, Third Quarter 2021–Third Quarter 2022**

Number of loans (Percentage of fully repaid loans)							Percentage of all Main Street Lending Program loans (1,830 loans)
Gross revenue, 2019	Third quarter 2021 <sup>a</sup>	Fourth quarter 2021	First quarter 2022	Second quarter 2022	Third quarter 2022	Total	
< \$3 million	11	8	10	8	5	42 (12%)	19%
\$3 to < \$10 million	25	23	21	17	15	101 (28%)	27%
\$10 to < \$20 million	14	19	16	15	14	78 (21%)	18%
\$20 to < \$40 million	14	8	9	9	11	51 (14%)	14%
> \$40 million	20	16	17	21	19	93 (25%)	21%
<b>Total</b>	<b>84</b>	<b>74</b>	<b>73</b>	<b>70</b>	<b>64</b>	<b>365 (100%)</b>	<b>100%</b>

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

Note: Data for each quarter reflect the number of loans in the 3 months during that quarter.

<sup>a</sup>The third quarter of a calendar year includes July, August, and September. However, the Federal Reserve Bank of Boston data we analyzed may include loans that were repaid before the third quarter of 2021.

## Less Than 1 Percent of Main Street Loans Have Resulted in Losses

As of the end of September 2022, of the 1,830 Main Street loans made, 14 loans (or less than 1 percent) had been charged off, totaling \$45 million in actual losses. Five of the 14 loans were recorded before the fourth quarter of 2021.<sup>40</sup> According to Main Street Lending Program documentation we reviewed, FRBB applies criteria for determining loan losses for Main Street loans, such as bankruptcy filings, days past due, and other factors.<sup>41</sup> Additionally, officials explained that two of the 14 loan losses were recorded as a “partial” loan loss. According to Main Street Lending Program documentation, this occurs when evidence suggests that a portion of the loan remains collectible.<sup>42</sup>

<sup>40</sup>Two of the loan losses were recorded before August 2021—before any Main Street Lending Program borrowers were required to make regular interest payments.

<sup>41</sup>FRBB officials said that loans deemed as a loss were recognized as such because of credit events, such as bankruptcy filings, liquidation, or failure to make scheduled payments.

<sup>42</sup>Part of the “partial” charge-off loan is considered to be a loss, and part of the loan is considered to be collectible. Therefore, this loan is also accounted for in the number of outstanding loans.

The process for determining loan losses is separate from the loan repayment process. According to FRBB officials, loan losses are determined through a credit monitoring process that generally would include both qualitative and quantitative reviews. Specifically, FRBB monitors borrowers' credit performance based on credit scores, potential for distress, and vendor evaluation of applicable industries. Officials explained that because mandatory principal payments are not due until July 2023, there is no metric to indicate a loan's potential for a default at this time other than relying on qualitative assessments.

Larger loan amounts had resulted in fewer losses as of the end of September 2022. Specifically, all loans that had resulted in losses were loans that had an original principal loan amount of less than \$14 million (see table 5). Of the 14 loans that had resulted in losses, 11 were for less than \$6 million, and five of these losses were recorded prior to the fourth quarter of 2021. While about 20 percent of Main Street loans were for more than \$14 million, as of September 2022, none of these larger loans had resulted in losses.

**Table 5: Main Street Loan Losses, by Loan Size, Third Quarter 2021–Third Quarter 2022**

Loan size	Number of loans (Percentage of loan losses)						Percentage of all Main Street Lending Program loans (1,830 loans)
	Third quarter 2021 <sup>a</sup>	Fourth quarter 2021	First quarter 2022	Second quarter 2022	Third quarter 2022	Total	
< \$1 million	1	0	0	1	0	2 (14%)	15%
\$1 to < \$3 million	2	0	0	1	2	5 (36%)	25%
\$3 to < \$6 million	2	1	0	0	1	4 (29%)	20%
\$6 to < \$14 million	0	0	1	1	1	3 (21%)	20%
> \$14 million	0	0	0	0	0	0 (0%)	20%
<b>Total</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>14 (100%)<sup>b</sup></b>	<b>100%</b>

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

Note: Data for each quarter reflect the number of loans in the 3 months during that quarter.

<sup>a</sup>The third quarter of a calendar year includes July, August, and September. However, the Federal Reserve Bank of Boston data we analyzed may include loans that were repaid before the third quarter of 2021.

<sup>b</sup>Two loans were recorded as a "partial" charge-off. As a result, a portion of each loan is considered to be a loss, and a portion is considered to be still outstanding.

Additionally, businesses that had 2019 gross revenue of less than \$10 million accounted for most of the loans that had losses. As of the end of

September 2022, there were 11 loans in this category that had resulted in losses (see table 6).

**Table 6: Main Street Loan Losses, by Business Size, Third Quarter 2021–Third Quarter 2022**

Number of loans (Percentage of loan losses)							Percentage of all Main Street Lending Program loans (1,830 loans)
Gross revenue, 2019	Third quarter 2021 <sup>a</sup>	Fourth quarter 2021	First quarter 2022	Second quarter 2022	Third quarter 2022	Total	
< \$3 million	1	0	0	1	3	5 (36%)	19%
\$3 to < \$10 million	3	1	0	1	1	6 (43%)	27%
\$10 to < \$20 million	0	0	1	0	0	1 (7%)	18%
\$20 to < \$40 million	1	0	0	1	0	2 (14%)	14%
> \$40 million	0	0	0	0	0	0 (0%)	21%
<b>Total</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>14 (100%)<sup>b</sup></b>	<b>100%</b>

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

Note: Data for each quarter reflect the number of loans in the 3 months during that quarter.

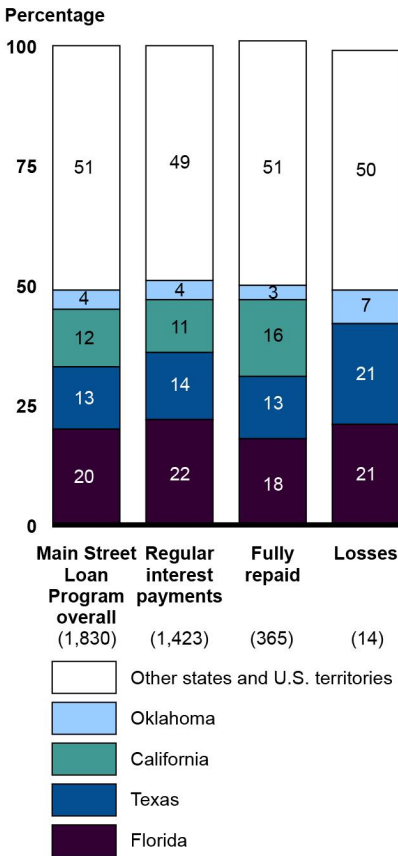
<sup>a</sup>The third quarter of a calendar year includes July, August, and September. However, the Federal Reserve Bank of Boston data we analyzed may include loans that were repaid before July 2021.

<sup>b</sup>Two loans were recorded as a “partial” charge-off. As a result, a portion of each loan is considered to be a loss, and a portion is considered to be still outstanding.

## Outstanding and Fully Repaid Main Street Loans Are Generally Concentrated in the States with the Most Loan Activity

As of the end of September 2022, outstanding and fully repaid Main Street loans were generally consistent with the overall geographic distribution of loans in the program. Four states—California, Florida, Oklahoma and Texas—accounted for nearly half of the 1,830 Main Street loans made. As of the end September 2022, these states accounted for about half of borrowers making regular interest payments and borrowers that had fully repaid their loans (see fig. 14). Specifically, these four states accounted for 51 percent of loans making regular interest payments and 50 percent of those that had been fully paid. Florida, Oklahoma, and Texas also accounted for almost half of the number of loans that had experienced losses as of the end of September 2022.

**Figure 14: Status of Main Street Lending Program Loans in States with the Largest Shares of Loans and Activity, as of September 2022**



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-23-105629

**Accessible Data for Figure 14: Status of Main Street Lending Program Loans in States with the Largest Shares of Loans and Activity, as of September 2022**

States and Territories	Main Street Lending Program Overall (1,830)	Regular interest payments (1,423)	Fully repaid (365)	Losses (14)
Florida	20%	22%	18%	21%
Texas	13%	14%	13%	21%
California	12%	11%	16%	0%
Oklahoma	4%	4%	3%	7%
Other states and U.S. territories	51%	49%	51%	50%

Note: Some columns do not sum to 100 percent because of rounding.

Additionally, as of the same date, three sectors—accommodation and food services, professional scientific and technical services, and manufacturing—accounted for at least one-third of borrowers making regular interest payments and borrowers that had fully repaid their loans. These three sectors accounted for about 34 percent of borrowers who were making regular interest payments and about 33 percent of fully repaid loans. These sectors were also the top three sectors for number of loans made through the Main Street Lending Program. Furthermore, borrowers in other key sectors have made regular interest payments or have fully repaid their loans. These sectors included construction; real estate rental and leasing; arts, entertainment, and recreation; health care and social assistance; information; and retail trade. Construction, the fourth-largest sector of Main Street loans made, experienced the greatest losses as of the end of September 2022.

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## Agency Comments

We provided a draft of this report to the Federal Reserve and Treasury for review and comment. The Federal Reserve provided technical comments, which we incorporated as appropriate. Treasury informed us it had no comments.

We are sending copies of this report to the appropriate congressional committees, the Chair of the Board of Governors of the Federal Reserve System, and the Secretary of the Treasury. This report will also be available at no charge on GAO's website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or [clementsm@gao.gov](mailto:clementsm@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



Michael E. Clements  
Director, Financial Markets and Community Investment

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*List of Committees*

The Honorable Patrick Leahy  
Chairman

The Honorable Richard Shelby  
Vice Chairman  
Committee on Appropriations  
United States Senate

The Honorable Sherrod Brown  
Chairman

The Honorable Patrick J. Toomey  
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The Honorable Patrick McHenry  
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Committee on Financial Services  
House of Representatives

The Honorable Peter A. DeFazio  
Chairman

The Honorable Sam Graves  
Ranking Member  
Committee on Transportation and Infrastructure  
House of Representatives

## Appendix I: Objectives, Scope, and Methodology

The objectives of this report were to examine (1) the status of the Board of Governors of the Federal Reserve System's (Federal Reserve) ongoing oversight of the CARES Act facilities and the extent to which Federal Reserve Banks have implemented improvements to their monitoring of the facilities, (2) what available evidence suggests about trends in credit markets that the facilities targeted, and (3) the status of Main Street loans and their characteristics and trends in loan performance.

To address the first objective, we analyzed documentation from the Federal Reserve's Division of Reserve Bank Operations and Payment Systems (RBOPS). This included its policies and procedures pertaining to the monitoring and controls of the CARES Act facilities. We reviewed planning documents and summaries of completed reviews of the facilities, and we interviewed Federal Reserve officials on RBOPS's framework and approach for ongoing monitoring of the facilities and results of RBOPS's oversight reviews. We also obtained written responses from Department of the Treasury officials about their oversight of the CARES Act facilities.

We compared RBOPS's monitoring plans against selected federal internal control standards, including the principles that management should establish and operate monitoring activities to monitor the internal control system and evaluate the results, and that management should remediate identified internal control deficiencies on a timely basis.<sup>1</sup> Additionally, we reviewed the Federal Reserve's periodic reports and financial statements for updates on potential and actual losses incurred by the Federal Reserve facilities.

To address the second objective, we analyzed indicators of credit markets affected by the facilities and the near-term vulnerabilities of these markets. We reviewed research from academics, the Federal Reserve, and industry experts, and we analyzed the most recently available data through August 2022 on indicators of credit markets affected by the facilities. To identify and select potential indicators, we reviewed several

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<sup>1</sup>See GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10 2014).

sources, including prior GAO work, reports and data from the Federal Reserve Board and Federal Reserve Bank of New York, the Office of Financial Research, and data from private organizations, including Bloomberg, the Securities Industry and Financial Markets Association, and Dun & Bradstreet.

The data on short-term and longer-term corporate credit market indicators we analyzed included credit spreads, issuances, and outstanding balances from the Federal Reserve, Federal Reserve Bank of New York's Corporate Market Distress Index database, Office of Financial Research's U.S. Money Market Fund Monitor, Bloomberg Terminal, and the Securities Industry and Financial Markets Association. The credit market indicators for small businesses we analyzed included data and surveys on credit market conditions experienced by small business owners from Dun & Bradstreet (on the health of employer and nonemployer businesses with fewer than 100 employees) and lenders from the Federal Reserve's Senior Loan Officer Opinion Survey. The municipal credit market indicators we analyzed included data on credit spreads and rates, and issuances from the Bloomberg Terminal and the Securities Industry and Financial Markets Association.

For the near-term indicators of vulnerabilities in these credit markets, we analyzed data from the Federal Reserve Board and Bureau of Economic Analysis to assess the potential sustainability of the debts of large businesses, small businesses, and state and local governments. We also analyzed bankruptcy filings of large businesses from the Bloomberg Terminal; credit card and trade credit delinquencies and failures of small businesses from Dun & Bradstreet; and state and local government tax revenue data from the Census Bureau. We also reviewed research from the Federal Reserve, the Office of Financial Research, and industry experts on economic conditions that could adversely affect the credit markets.

We took a number of steps to assess the reliability of the data sources and indicators of credit markets and near-term vulnerabilities for businesses and state and local governments. These included reviewing relevant documentation on data collection methodology and reviewing prior GAO work. We found that, collectively, the indicators were sufficiently reliable for the purpose of providing a general sense of how credit markets are performing.

To address the third objective, we obtained selected aggregate Main Street Lending Program loan performance data as of the end of

September 2022, the most recent data available from the Federal Reserve Bank of Boston (FRBB) for determining the status and characteristics of these loans. Specifically, we obtained monthly data on outstanding loans and principal amounts from August 2021 to September 2022. For the same period, we obtained monthly or quarterly data by different payment categories, including regular interest payments, prepayments, and losses. Within each payment category, we also obtained additional information from FRBB on various characteristics, such as loan size, business size, location, and industry/sector.

We analyzed the data to describe the characteristics of and trends in Main Street Lending Program borrower payments and compared them to characteristics of Main Street transaction data for all loans. We established the categories of loan size for our analysis in consultation with FRBB to ensure each category had a sufficient number of loans so as to not make an individual loan identifiable. We obtained aggregate data on borrower payments from FRBB based on these predetermined ranges. We took the same approach for establishing categories for business size.

To assess the reliability of these data, we interviewed FRBB officials and obtained written responses regarding Main Street Lending Program loan data and how FRBB aggregated and provided the data. We determined the data were sufficiently reliable for describing the status and characteristics of Main Street loans and their performance.

We conducted this performance audit from December 2021 to December 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Appendix II: GAO Contact and Staff Acknowledgments

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### GAO Contact

Michael E. Clements, [clementsm@gao.gov](mailto:clementsm@gao.gov), (202) 512-8678

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### Staff Acknowledgments

In addition to the contact named above, Tarek Mahmassani (Assistant Director), Jordan Anderson (Analyst in Charge), Daniel Flavin, Chir-Jen Huang, John Karikari, Marc Molino, Bryan Prince, Jessica Sandler, Jennifer Schwartz, and Farrah Stone made key contributions to this report.