



December 2023

FEDERAL RESERVE LENDING PROGRAMS

Status of Monitoring and Main Street Lending Program

Accessible Version

GAO Highlights

Highlights of [GAO-24-106482](#), a report to congressional committees

Why GAO Did This Study

As of September 2023, several of the Federal Reserve's 13 lending facilities continued to hold large amounts of outstanding assets and loans. Nine of the 13 facilities received funds appropriated through the CARES Act (section 4003). Of these nine, six had a total of about \$12 billion in outstanding assets and loans. About 72 percent of this amount—about \$8.6 billion—was held by facilities under the Main Street Lending Program, which supported loans to small and midsize businesses and nonprofits. The Federal Reserve is required to monitor and report on the facilities until they no longer hold outstanding assets or loans.

The CARES Act includes 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 the credit markets that the facilities targeted, and (3) the status and performance of Main Street Lending Program loans.

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

View [GAO-24-106482](#). For more information, contact Michael E. Clements at (202) 512-8678 or clementsm@gao.gov.

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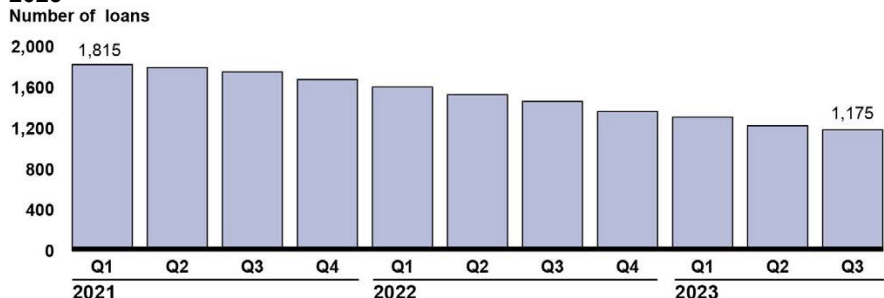
What GAO Found

In response to the COVID-19 pandemic, the Board of Governors of the Federal Reserve System authorized 13 emergency lending programs—known as facilities—to ensure the flow of credit to various parts of the economy. To improve oversight, the Federal Reserve issued five internal reports from December 2020 through June 2023 that identified opportunities to enhance internal processes and controls, including for collateral and asset management. GAO found that Federal Reserve Banks, which manage the facilities, addressed almost all of these opportunities. As of September 2023, no new enhancement opportunities had been identified. GAO also found the Federal Reserve's plans for ongoing monitoring of the facilities generally aligned with federal internal control standards for ongoing monitoring of an entity's internal control system.

GAO analysis shows that while uncertainties exist in the credit markets targeted by the facilities, vulnerabilities remain low. Corporate bond issuances are higher than prepandemic levels, and credit spreads (which reflect borrowing costs) generally remain low. These factors indicate that corporations have relatively easy access to credit. However, according to GAO analysis of available data and survey results, small businesses' access to credit has decreased since 2022, as banks have tightened credit standards in response to a less positive economic outlook and industry-specific problems. Also, municipal bond issuances have decreased since mid-2022 and are at prepandemic levels. This trend reflects challenges for raising new debt or refinancing existing debt, especially given that interest rates have increased. However, debt levels carried in sectors the facilities targeted appear sustainable.

Of the 1,830 loans made through the Main Street Lending Program, 1,175 (or 64 percent) remained outstanding as of the end of August 2023, the most recent data available (see figure). Since required interest payments began in August 2021, most borrowers have been making them on time. However, delinquent payments increased to about 7.6 percent in August 2023, which may reflect the effects of increased interest payments as variable rates on Main Street loans have risen. GAO found that 610 loans (or about 33 percent) had been fully repaid, and 45 loans (or about 2.5 percent) had recorded losses.

Main Street Lending Program Outstanding Loans, First Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Main Street Lending Program Outstanding Loans, First Quarter 2021–Third Quarter 2023

Year	Quarter	Number of loans
2021	Q1	1815
2021	Q2	1786
2021	Q3	1742
2021	Q4	1668
2022	Q1	1595
2022	Q2	1521
2022	Q3	1453
2022	Q4	1356
2023	Q1	1301
2023	Q2	1218
2023	Q3	1175

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: Third quarter 2023 reflects data as of the end of August 2023.

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Abbreviations

CECL	Current Expected Credit Losses
GDP	gross domestic product
LIBOR	London Interbank Offered Rate
NAICS	North American Industry Classification System
RBOPS	Division of Reserve Bank Operations and Payment Systems
SOFR	Secured Overnight Financing Rate

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December 22, 2023

Congressional Committees

In response to the economic effects of the COVID-19 pandemic, in 2020 the Board of Governors of the Federal Reserve System authorized 13 emergency lending programs, known as facilities. These facilities were intended to support the flow of credit to employers, consumers, small and midsize businesses, state and local governments, and nonprofit organizations.¹ Nine of the 13 facilities received funds appropriated by the CARES Act.² The 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.³

As of September 30, 2023, the CARES Act facilities had about \$12 billion in outstanding assets and loans. Approximately \$8.6 billion (or about 72 percent) of this amount was held by the Main Street Lending Program facilities, which targeted small and midsize businesses and nonprofits.⁴ Main Street loans have a 5-year maturity, and thus any currently outstanding loans will not mature until July 2025 or later.

Section 4026(f) of the CARES Act contains a provision for us to report annually on the loans, loan guarantees, and other investments provided

¹The 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.

²To 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). We refer to these facilities as CARES Act facilities.

³The Federal Reserve also established four emergency lending facilities that did not receive CARES Act appropriations (we refer these to as non-CARES Act facilities). These facilities were intended to serve various markets and credit needs. On July 30, 2021, the last of the non-CARES Act facilities stopped purchasing assets or extending credit.

⁴This amount includes Main Street loan participations at face value, net of an allowance for loan losses updated as of June 30, 2023.

under section 4003 of the CARES Act.⁵ This report examines (1) the Federal Reserve’s oversight and monitoring of the CARES Act facilities, (2) what available evidence suggests about trends in credit markets that CARES Act 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.⁶ Additionally, we reviewed the Federal Reserve’s periodic reports and financial statements for updates on potential and actual losses incurred by the facilities. We also interviewed RBOPS officials.

To address the second objective, we analyzed indicators of the performance of credit markets affected by the facilities and the near-term vulnerabilities of these markets. 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 analyzed data from January 2019 through September 2023 (the most recent available) on indicators of the performance of credit markets affected by the facilities. The reports we reviewed included research on economic conditions that could adversely affect the credit markets. To assess the reliability of the data for our second objective, we reviewed documentation on the data collection methodologies and reviewed prior GAO work. We found that, collectively,

⁵Specifically, we are to 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. Our previous reports were GAO, *Federal Reserve Lending Programs: Risks Remain Low in Related Credit Markets, and Main Street Loans Have Generally Performed Well*, [GAO-23-105629](#) (Washington, D.C.: Dec. 19, 2022); *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, available at <https://www.gao.gov/coronavirus>.

⁶See GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10 2014).

the indicators were sufficiently reliable for the purpose of providing a general sense of how credit markets are performing.

For the third objective, we conducted loan-level analysis of Main Street Lending Program data as of the end of August 2023, the most recent data available from the Federal Reserve Bank of Boston. To assess the reliability of the data for our third objective, we reviewed documentation, including the data dictionary, for Main Street loan data, and we performed electronic testing on-site for outliers, missing data, and erroneous values. We also gathered information from Federal Reserve Bank of Boston officials about the collection methodology. 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 2022 to December 2023 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.

Background

The Federal Reserve System and Emergency Lending Authority

The Federal Reserve Act established the Federal Reserve System as the country's central bank.⁷ The Federal Reserve System consists of three parts: the Federal Reserve Board, Reserve Banks, and the Federal Open Market Committee.⁸ The Federal Reserve Board is a federal agency located in Washington, D.C., that oversees the operations of the Reserve

⁷Federal Reserve Act, Pub. L. No. 63-43, 38 Stat. 251 (1913).

⁸The 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.

Banks and shares with them the responsibility for supervising and regulating certain financial institutions and activities. The Federal Reserve System is divided into 12 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.⁹ 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.¹⁰

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 nine facilities using funds appropriated by the CARES Act.¹¹ The Federal Reserve cited a number of factors in determining that unusual and exigent circumstances existed. These factors included disruption in the financial markets, reduced availability of credit, a heightened need for credit, and an increase in business expenditures.

In general, the CARES Act facilities were designed to address broad sectors of the economy, such as large corporations, small and midsize

⁹Reserve 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.

¹⁰12 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.

¹¹The Federal Reserve established 13 emergency lending facilities in response to the COVID-19 pandemic. Four emergency lending facilities—the Commercial Paper Funding Facility, Money Market Mutual Fund Liquidity Facility, Paycheck Protection Program Liquidity Facility, and Primary Dealer Credit Facility—were non-CARES Act facilities. All four stopped purchasing assets or extending credit by July 30, 2021. In March 2023, the Federal Reserve established another emergency lending facility to boost operating banks' liquidity and minimize contagion after Silicon Valley Bank and Signature Bank failed. The Bank Term Funding Program was established on March 12, 2023, and is to remain active until at least March 11, 2024.

businesses, and state and local governments. 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 support the facilities. Of this total, as of September 30, 2023, the Federal Reserve had returned about \$89.1 billion to Treasury, leaving about \$13 billion available to cover any potential losses the facilities 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 (see table 1).¹²

Table 1: Federal Reserve Facilities Established with CARES Act Funding

CARES Act–supported facilities	Number of facilities	Facility activity	Termination date	Transaction amount (in billions of dollars)
Primary Market Corporate Credit Facility and Secondary Market Corporate Credit Facility	2	Support large businesses by purchasing qualifying corporate bonds and other eligible assets	Dec. 31, 2020	14.3 ^a
Main Street Lending Program	5 ^b	Support small and midsize for-profit businesses and nonprofit organizations by purchasing participations in eligible loans	Jan. 8, 2021	16.5 ^c
Municipal Liquidity Facility	1	Support states, certain counties, municipalities, multistate entities, and revenue bond issuers by purchasing eligible notes that these entities issued	Dec. 31, 2020	6.4
Term Asset-Backed Securities Loan Facility	1	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	Dec. 31, 2020	3.7

Source: GAO analysis of Federal Reserve Board documents and data. | GAO-24-106482

^aThe Primary Market Corporate Credit Facility did not conduct any transactions.

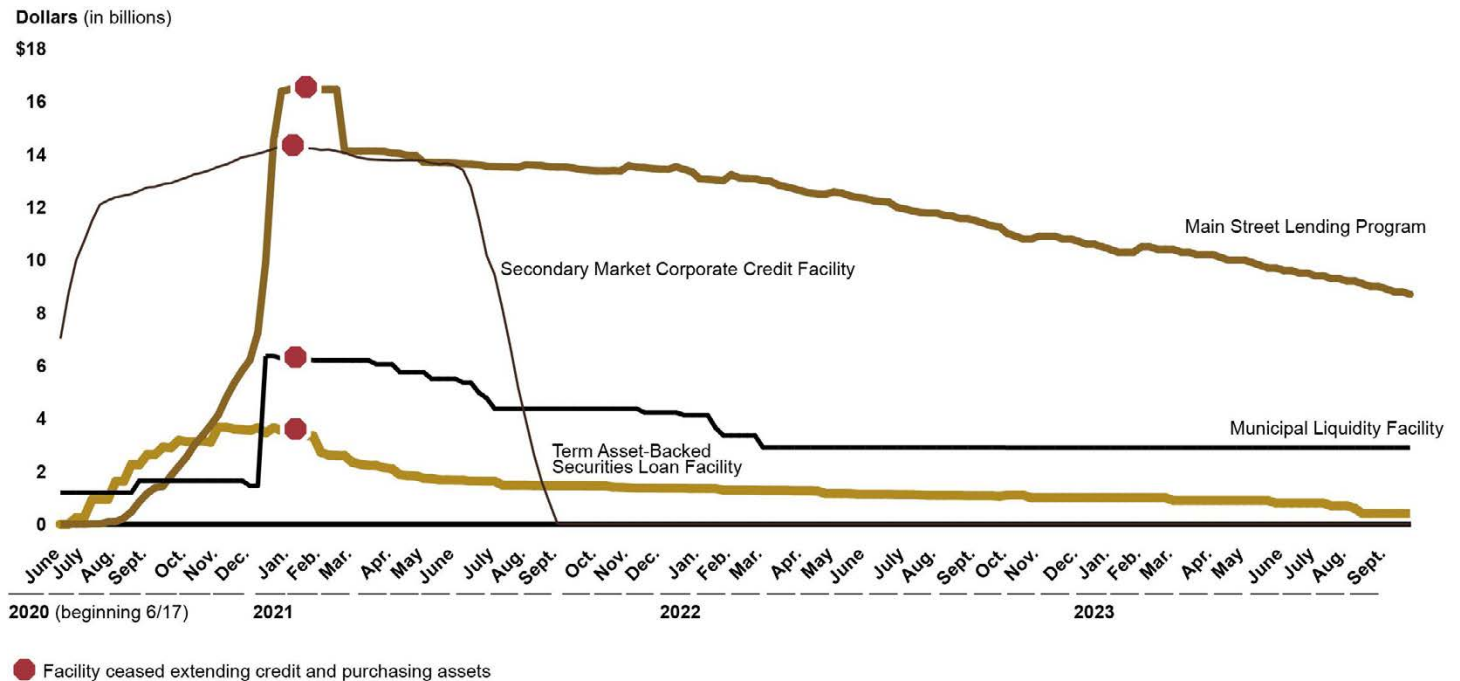
^bThe Main Street Lending Program comprised five facilities: the Main Street New Loan Facility, Main Street Priority Loan Facility, Main Street Expanded Loan Facility, Nonprofit Organization New Loan Facility, and Nonprofit Organization Expanded Loan Facility.

^cThe transaction amount refers to the Federal Reserve’s participation in Main Street Lending Program loans, which is the purchase of 95 percent of lenders’ authorized loan amount to eligible borrowers. The Nonprofit Organization Expanded Loan Facility did not conduct any transactions.

¹²For the Main Street Lending Program, the transaction amount refers to the Federal Reserve’s participation in the Main Street loans, which is the purchase of 95 percent of lenders’ authorized loan amount to eligible borrowers.

For the facilities that received CARES Act funds, outstanding assets peaked between November 2020 and January 2021 (see fig. 1).¹³ As of September 2023, the facilities that continued to hold assets were the Municipal Liquidity Facility, the Term Asset-Backed Securities Loan Facility, and four facilities under the Main Street Lending Program.¹⁴ All of the Secondary Market Corporate Credit Facility’s holdings in exchange-traded funds and corporate bond assets had either matured or been sold as of August 31, 2021.

Figure 1: Outstanding Assets of Federal Reserve Lending Facilities Supported by CARES Act Funding, June 2020–September 2023



Source: GAO analysis of Federal Reserve System documents and data. | GAO-24-106482

¹³Outstanding assets refers to assets, such as corporate and municipal bonds, that the facilities purchased and had not disposed of through sale or other means. One of the two entities that borrowed from (sold eligible notes to) the Municipal Liquidity Facility has repaid all of its borrowings. Rather than purchasing loans, the Term Asset-Backed Securities Loan Facility provided loans in exchange for eligible asset-backed securities.

¹⁴The Main Street Lending Program’s Nonprofit Organization Expanded Loan Facility did not conduct any transactions.

Accessible Data for Figure 1: Outstanding Assets of Federal Reserve Lending Facilities Supported by CARES Act Funding, June 2020–September 2023

Year	Month	SMCCF	MLF	MSLP	TASLF
2020	June	7.027	1.2	0	0
2020	June	8.71	1.2	0	0
2020	July	10.006	1.2	0	0.252
2020	July	10.716	1.2	0	0.252
2020	July	11.485	1.2	0.012	0.937
2020	July	12.1	1.2	0.014	0.937
2020	July	12.255	1.2	0.082	0.937
2020	Aug.	12.374	1.2	0.095	1.619
2020	Aug.	12.435	1.2	0.226	1.619
2020	Aug.	12.498	1.2	0.472	2.266
2020	Aug.	12.617	1.651	0.855	2.256
2020	Sept.	12.75	1.651	1.172	2.639
2020	Sept.	12.771	1.651	1.38	2.639
2020	Sept.	12.867	1.651	1.445	2.922
2020	Sept.	12.911	1.651	1.837	2.896
2020	Sept.	13.022	1.651	2.195	3.18
2020	Oct.	13.118	1.651	2.553	3.127
2020	Oct.	13.247	1.651	3.018	3.127
2020	Oct.	13.309	1.651	3.358	3.159
2020	Oct.	13.405	1.651	3.732	3.099
2020	Nov.	13.532	1.651	4.14	3.675
2020	Nov.	13.61	1.651	4.785	3.675
2020	Nov.	13.747	1.651	5.338	3.6
2020	Nov.	13.882	1.651	5.808	3.587
2020	Dec.	13.942	1.454	6.212	3.548
2020	Dec.	14.021	1.454	7.237	3.655
2020	Dec.	14.105	6.361	9.911	3.458
2020	Dec.	14.202	6.361	14.501	3.656
2020	Dec.	14.315	6.283	16.385	3.552
2021	Jan.	14.248	6.283	16.456	3.552
2021	Jan.	14.254	6.283	16.504	3.438
2021	Jan.	14.227	6.283	16.494	3.352
2021	Jan.	14.212	6.203	16.448	3.343
2021	Feb.	14.163	6.203	16.45	2.717
2021	Feb.	14.179	6.203	16.453	2.613

Letter

Year	Month	SMCCF	MLF	MSLP	TASLF
2021	Feb.	14.115	6.203	16.453	2.593
2021	Feb.	14.058	6.203	14.135	2.593
2021	Mar.	13.943	6.203	14.116	2.336
2021	Mar.	13.86	6.203	14.115	2.27
2021	Mar.	13.817	6.203	14.123	2.227
2021	Mar.	13.8	6.058	14.117	2.227
2021	Mar.	13.788	6.058	14.107	2.135
2021	Apr.	13.766	6.058	14.044	2.101
2021	Apr.	13.768	5.758	14.023	1.872
2021	Apr.	13.774	5.758	13.956	1.84
2021	Apr.	13.765	5.758	13.952	1.833
2021	May	13.757	5.758	13.703	1.745
2021	May	13.661	5.508	13.687	1.733
2021	May	13.629	5.508	13.684	1.679
2021	May	13.658	5.508	13.678	1.676
2021	June	13.566	5.508	13.662	1.675
2021	June	13.405	5.358	13.639	1.675
2021	June	12.765	5.358	13.634	1.628
2021	June	11.573	4.982	13.605	1.628
2021	June	10.174	4.771	13.542	1.622
2021	July	9.451	4.373	13.533	1.622
2021	July	8.148	4.373	13.519	1.483
2021	July	6.713	4.373	13.517	1.481
2021	July	5.153	4.373	13.5	1.479
2021	Aug.	3.894	4.373	13.607	1.479
2021	Aug.	2.629	4.373	13.591	1.47
2021	Aug.	1.595	4.373	13.57	1.469
2021	Aug.	0.781	4.373	13.519	1.461
2021	Sept.	0	4.373	13.514	1.461
2021	Sept.	0	4.373	13.512	1.461
2021	Sept.	0	4.373	13.478	1.46
2021	Sept.	0	4.373	13.421	1.46
2021	Sept.	0	4.373	13.394	1.456
2021	Oct.	0	4.373	13.373	1.456
2021	Oct.	0	4.373	13.373	1.456
2021	Oct.	0	4.373	13.381	1.409
2021	Oct.	0	4.373	13.375	1.403

Letter

Year	Month	SMCCF	MLF	MSLP	TASLF
2021	Nov.	0	4.373	13.567	1.386
2021	Nov.	0	4.373	13.505	1.368
2021	Nov.	0	4.228	13.493	1.368
2021	Nov.	0	4.228	13.463	1.368
2021	Dec.	0	4.228	13.442	1.36
2021	Dec.	0	4.228	13.437	1.36
2021	Dec.	0	4.228	13.521	1.36
2021	Dec.	0	4.131	13.43	1.359
2021	Dec.	0	4.131	13.34	1.346
2022	Jan.	0	4.131	13.072	1.346
2022	Jan.	0	4.131	13.054	1.346
2022	Jan.	0	3.649	13.03	1.345
2022	Jan.	0	3.358	13.006	1.291
2022	Feb.	0	3.358	13.227	1.291
2022	Feb.	0	3.358	13.108	1.286
2022	Feb.	0	3.358	13.087	1.286
2022	Feb.	0	3.358	13.075	1.286
2022	Mar.	0	2.907	13.001	1.275
2022	Mar.	0	2.907	12.973	1.275
2022	Mar.	0	2.907	12.836	1.275
2022	Mar.	0	2.907	12.765	1.275
2022	Mar.	0	2.907	12.692	1.264
2022	Apr.	0	2.907	12.607	1.264
2022	Apr.	0	2.907	12.532	1.264
2022	Apr.	0	2.907	12.496	1.25
2022	Apr.	0	2.907	12.492	1.16
2022	May	0	2.907	12.581	1.16
2022	May	0	2.907	12.531	1.16
2022	May	0	2.907	12.429	1.159
2022	May	0	2.907	12.367	1.141
2022	June	0	2.907	12.325	1.141
2022	June	0	2.907	12.24	1.141
2022	June	0	2.907	12.212	1.141
2022	June	0	2.907	12.184	1.139
2022	June	0	2.907	11.987	1.126
2022	July	0	2.907	11.929	1.126
2022	July	0	2.907	11.86	1.126

Letter

Year	Month	SMCCF	MLF	MSLP	TASLF
2022	July	0	2.907	11.796	1.107
2022	July	0	2.907	11.774	1.09
2022	Aug.	0	2.907	11.771	1.09
2022	Aug.	0	2.907	11.688	1.09
2022	Aug.	0	2.907	11.661	1.09
2022	Aug.	0	2.907	11.57	1.09
2022	Aug.	0	2.907	11.558	1.076
2022	Sept.	0	2.907	11.479	1.076
2022	Sept.	0	2.907	11.393	1.076
2022	Sept.	0	2.907	11.295	1.076
2022	Sept.	0	2.907	11.248	1.058
2022	Oct.	0	2.9	11	1.1
2022	Oct.	0	2.9	10.9	1.1
2022	Oct.	0	2.9	10.8	1.1
2022	Oct.	0	2.9	10.8	1
2022	Nov.	0	2.9	10.9	1
2022	Nov.	0	2.9	10.9	1
2022	Nov.	0	2.9	10.9	1
2022	Nov.	0	2.9	10.8	1
2022	Nov.	0	2.9	10.8	1
2022	Dec.	0	2.9	10.7	1
2022	Dec.	0	2.9	10.6	1
2022	Dec.	0	2.9	10.6	1
2022	Dec.	0	2.9	10.5	1
2023	Jan.	0	2.9	10.4	1
2023	Jan.	0	2.9	10.3	1
2023	Jan.	0	2.9	10.3	1
2023	Jan.	0	2.9	10.3	1
2023	Feb.	0	2.9	10.5	1
2023	Feb.	0	2.9	10.5	1
2023	Feb.	0	2.9	10.4	1
2023	Feb.	0	2.9	10.4	1
2023	Mar.	0	2.9	10.4	0.9
2023	Mar.	0	2.9	10.3	0.9
2023	Mar.	0	2.9	10.3	0.9
2023	Mar.	0	2.9	10.2	0.9
2023	Mar.	0	2.9	10.2	0.9

Letter

Year	Month	SMCCF	MLF	MSLP	TASLF
2023	Apr.	0	2.9	10.2	0.9
2023	Apr.	0	2.9	10.1	0.9
2023	Apr.	0	2.9	10	0.9
2023	Apr.	0	2.9	10	0.9
2023	May	0	2.9	10	0.9
2023	May	0	2.9	9.9	0.9
2023	May	0	2.9	9.8	0.9
2023	May	0	2.9	9.7	0.9
2023	May	0	2.9	9.7	0.8
2023	June	0	2.9	9.6	0.8
2023	June	0	2.9	9.6	0.8
2023	June	0	2.9	9.5	0.8
2023	June	0	2.9	9.5	0.8
2023	July	0	2.9	9.4	0.8
2023	July	0	2.9	9.4	0.8
2023	July	0	2.9	9.3	0.7
2023	July	0	2.9	9.3	0.7
2023	Aug.	0	2.9	9.2	0.7
2023	Aug.	0	2.9	9.2	0.6
2023	Aug.	0	2.9	9.1	0.4
2023	Aug.	0	2.9	9	0.4
2023	Aug.	0	2.9	9	0.4
2023	Sept.	0	2.9	8.9	0.4
2023	Sept	0	2.9	8.8	0.4
2023	Sept	0	2.9	8.8	0.4
2023	Sept	0	2.9	8.7	0.4

Source: GAO analysis of Federal Reserve System documents and data. | GAO-24-106482

Note: Since February 24, 2021, the Main Street Lending Program's outstanding assets have been 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 midsize for-profit borrowers and nonprofit organizations.

Federal Reserve Oversight of the Facilities

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 facilities. RBOPS's general framework for oversight 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. These include 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, RBOPS prepares interim reports at 6-month intervals, unless a change in timing is approved by the credit facilities' oversight steering group and advisors.¹⁵ These reports summarize the scope of oversight activities and any enhancement opportunities related to facility processes and controls. As of September 2023, RBOPS had issued five interim reports to Reserve Bank management communicating the results of phase three reviews, cumulatively covering December 2020–June 2023.

As we previously reported, RBOPS has a process for determining if enhancement opportunities have been addressed.¹⁶ RBOPS officials said Reserve Bank staff notify RBOPS when they have completed steps to address an enhancement opportunity. RBOPS then analyzes the actions taken by 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 management, walk-throughs with Reserve Bank staff to

¹⁵RBOPS'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.

¹⁶See [GAO-23-105629](#).

understand new or updated processes, and reviews of documentation such as process flows and procedures.

As we also previously reported, two of the remaining CARES Act 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 continues to have more robust operations related to the management of its remaining loans.

Federal Reserve Oversight Continues, and Reserve Banks Generally Implemented Previously Identified Enhancements

Federal Reserve Has Not Identified Additional Opportunities to Enhance Controls

RBOPS's interim reports issued to the applicable Reserve Banks for the two most recent 6-month periods, covering July 2022–June 2023, identified no new opportunities to enhance facilities' processes and controls. 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.¹⁷ 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 tracked the relevant facilities' progress in addressing previously identified enhancements. RBOPS communicated the results of its ongoing monitoring 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.

¹⁷See [GAO-14-704G](#) and [GAO-23-105629](#).

In early 2023, RBOPS reassessed operation and risk factors to calibrate its oversight activities for the year. RBOPS identified three overall focus areas for 2023: (1) collateral and asset management; (2) operations and controls; and (3) cybersecurity, resiliency, and data management. RBOPS further divided the operations and controls area into four subfocus areas: risk management; vendor management; internal controls; and resources, roles, and responsibilities.

RBOPS noted the following for each focus area:

- **Collateral and asset management.** RBOPS will continue to monitor underlying collateral, such as by overseeing decisions on asset valuation and disposition.
- **Operations and controls.** RBOPS will use the components of the operations and controls function to obtain reasonable assurance that controls are present and are functioning in a manner that addresses evolving risks.
- **Cybersecurity, resiliency, and data management.** To strengthen risk-management practices, reduce cyber risks, and maintain resiliency for the facilities, RBOPS will continue to oversee ongoing operations and improvements to the cybersecurity programs through various oversight activities, such as regular reviews.

According to RBOPS's 2023 planning documentation, phase three oversight will continue to take an adaptive approach, given the differing nature of the facilities and the maturity of the underlying assets and investments. Board staff will consult with and coordinate ongoing oversight activities with Reserve Bank control functions, such as risk management and internal audit, and with external auditors.

Reserve Banks Implemented Almost All Enhancements to Processes and Controls

Reserve Banks have implemented processes to address all 20 opportunities to enhance processes and controls that RBOPS has identified in its phase two and three oversight reviews.¹⁸ Of the 20 identified enhancement opportunities, RBOPS has completed its review of 19. RBOPS is currently reviewing materials for the remaining opportunity, which relates to the validation of one facility's credit

¹⁸The 20 opportunities identified include the Paycheck Protection Program Liquidity Facility, which is a non-CARES Act facility.

evaluation model. During 2023, RBOPS took measures to balance ongoing oversight of the CARES Act facilities with efforts to support other activities, including the Federal Reserve's response to 2023 banking stress and the announcement and implementation of the Bank Term Funding Program.

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

As of September 30, 2023, the Main Street Lending Program facilities were the only ones that had experienced losses. The Main Street facilities had recognized approximately \$257 million in actual loan losses, net of subsequent recoveries, as of that date. This accounts for about 1.6 percent of the total transaction amount the program conducted.

Effective January 1, 2023, the Federal Reserve adopted the Current Expected Credit Losses (CECL) methodology for the Main Street Lending Program facilities, in accordance with updated standards issued by the Financial Accounting Standards Board.¹⁹ While the Federal Reserve recorded an amount to increase credit losses under the CECL methodology, the amount recorded was immaterial, meaning it had no effect on reported losses.

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 losses. The evaluation of loan participations purchased by the Main Street Lending Program, including those in nonaccrual status, resulted in recording a loan loss allowance of \$820 million as of September 30, 2023.

¹⁹The Federal Reserve estimates allowances for credit losses 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 Losses methodology. As described in the Financial Accounting Standards Board's Accounting Standards Update 2016-13, the new methodology for estimating allowances aims to provide more timely recognition of credit losses. During 2022, Reserve Bank stakeholders, in conjunction with input from RBOPS, formed a working group whose goal was to assist Reserve Banks in their CECL adoption efforts. The working group developed a survey that included a set of questions to tailor its approach to adoption and to solicit feedback from key members of the financial reporting functional areas across the Federal Reserve System.

Individually assessed loss allowance. According to Federal Reserve officials, to generate the individually assessed loss allowance for Main Street Lending Program facilities, the Federal Reserve Bank of Boston evaluates loans with an outstanding balance of \$10 million or greater that fail to meet certain criteria related to loan performance or credit rating. The Reserve Bank does this to determine if it is likely that the borrower will not repay all of the principal and interest. If the Reserve Bank determines that a loss is likely, the Main Street Lending Program facilities recognize a loan loss allowance for that loan.

Collectively assessed loss allowance. The collectively assessed loss allowance takes into account the probability that some portion of a pool of borrowers will default and the losses that would be incurred if loans were to default, applied to the outstanding principal of loans. A loan may be subject to the collectively assessed 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 individually assessed allowance.

Source: Board of Governors of the Federal Reserve System. | GAO-24-106482

According to Federal Reserve officials, the Main Street Lending Program facilities' allowance for loan losses consists of the individually assessed loss allowance for impaired loan participations and the collectively assessed loss allowance for all other loan participations (see sidebar). Taken together, these allowances reflect management's estimate of expected credit losses inherent in the loan portfolio.

Uncertainties Exist in the Credit Markets Targeted by the Lending Facilities, but Vulnerabilities Remain Low

The Federal Reserve implemented the 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 pandemic.²⁰ We found that since the termination of the facilities, while uncertainties exist in credit markets, near-term default risks in the markets

²⁰In our December 2022 report, we discussed trends in these credit markets up to the third quarter of 2022; see [GAO-23-105629](#). Available indicators suggested at that time that risks in the credit markets targeted by the lending facilities appeared to be low, but that vulnerabilities existed. Risks in corporate credit markets had remained low, but vulnerabilities existed in certain short-term funding markets. Additionally, according to surveys of small businesses and lenders, access to credit had generally been favorable since the facilities stopped providing loans. Borrowing costs in municipal markets had generally remained low since the Municipal Liquidity Facility ceased activity.

the facilities operated in appear to be low, as vulnerabilities also remain low.²¹

Uncertainties Exist in Corporate Credit Markets, but Risks Remain Low

The Federal Reserve established three facilities in May and June 2020 primarily to support longer-term credit markets for large businesses, and these facilities were terminated on December 31, 2020.²² Since then, risks in these markets have remained low.²³

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. Credit rating agencies assign these ratings to indicate the companies' investment risks and payment capabilities. Bonds rated above a certain threshold are called investment-grade bonds.

Source: GAO. | GAO-24-106482

The corporate bond market distress index, which incorporates a wide range of indicators, including pricing in primary and secondary markets, suggests market functioning risks have generally continued to remain near pre-pandemic levels since early 2021. As shown in figure 2, the market index, which combines indexes for investment grade and non-investment-grade bonds, has generally remained low, although the index

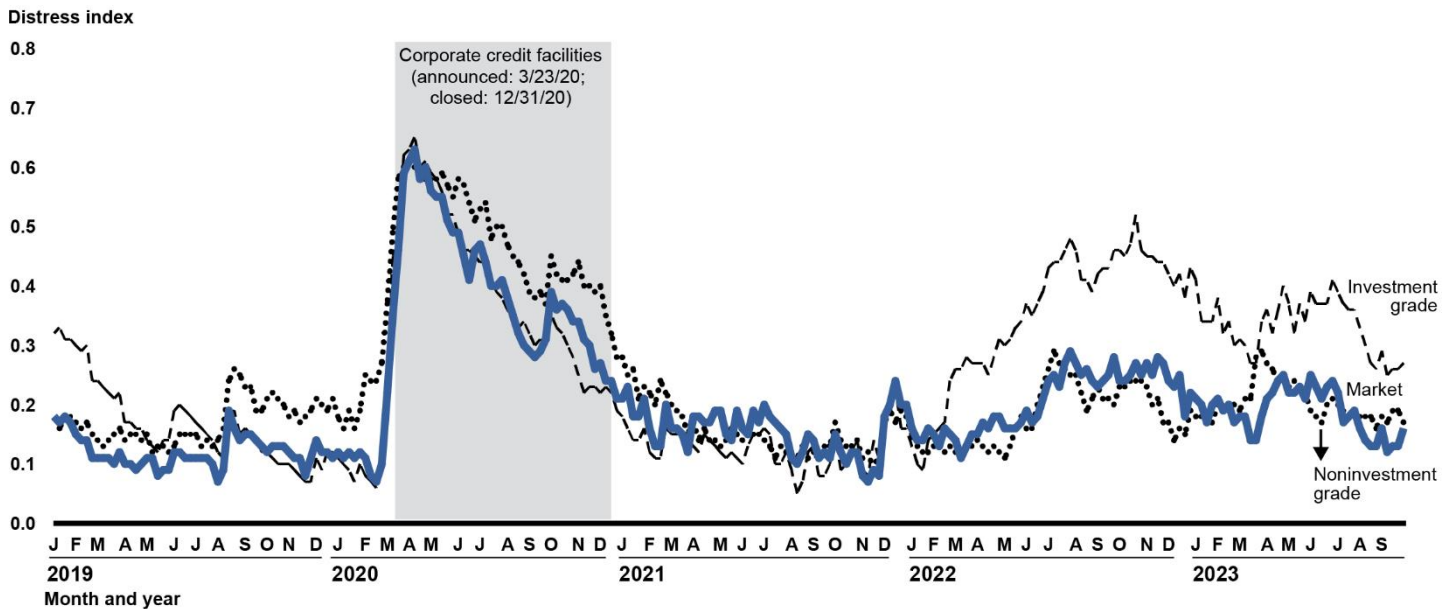
²¹Risks in credit markets involve risks to both the issuer and counterparty, such as default risk. Other risks include liquidity risk, which is the risk that a given security or asset cannot be traded promptly in the market (for example, to prevent a loss). In general, vulnerability is the weakness in the credit markets that could create the risk of a potential loss.

²²These were the Secondary Market Corporate Credit Facility, Term Asset-Backed Securities Loan Facility, and Primary Market Corporate Credit Facility.

²³The Federal Reserve also established four non-CARES Act facilities to support the functioning of short-term credit markets. See app. II for more information on these facilities.

for investment-grade bonds has been relatively high since February 2022.²⁴

Figure 2: Corporate Bond Market Distress Index, January 2019–September 2023



Source: GAO analysis of Federal Reserve Bank of New York data. | GAO-24-106482

Accessible Data for Figure 2: Corporate Bond Market Distress Index, January 2019–September 2023

Year	Month	Market	Investment grade	Noninvestment grade
2019	January	0.18	0.32	0.17
2019	January	0.17	0.33	0.16
2019	January	0.18	0.31	0.18
2019	January	0.17	0.31	0.18
2019	February	0.15	0.3	0.17
2019	February	0.14	0.29	0.16
2019	February	0.14	0.3	0.17
2019	February	0.11	0.24	0.15

²⁴The corporate bond market distress index identifies distressed periods as those 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. The reason for the relatively high index for investment-grade bonds is unclear. According to Federal Reserve officials, there have been prior episodes when 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.

Letter

Year	Month	Market	Investment grade	Noninvestment grade
2019	March	0.11	0.24	0.14
2019	March	0.11	0.23	0.13
2019	March	0.11	0.22	0.14
2019	March	0.1	0.21	0.15
2019	March	0.12	0.22	0.16
2019	April	0.1	0.17	0.14
2019	April	0.1	0.17	0.15
2019	April	0.09	0.16	0.15
2019	April	0.1	0.16	0.14
2019	May	0.11	0.14	0.15
2019	May	0.11	0.13	0.12
2019	May	0.08	0.12	0.13
2019	May	0.09	0.14	0.13
2019	May	0.09	0.14	0.12
2019	June	0.12	0.19	0.13
2019	June	0.12	0.2	0.15
2019	June	0.11	0.19	0.15
2019	June	0.11	0.18	0.15
2019	July	0.11	0.17	0.15
2019	July	0.11	0.16	0.13
2019	July	0.11	0.15	0.14
2019	July	0.1	0.14	0.13
2019	July	0.07	0.12	0.14
2019	July	0.09	0.11	0.16
2019	July	0.19	0.19	0.24
2019	July	0.16	0.19	0.26
2019	July	0.14	0.15	0.25
2019	September	0.15	0.16	0.23
2019	September	0.15	0.15	0.23
2019	September	0.14	0.14	0.19
2019	September	0.13	0.12	0.19
2019	October	0.12	0.12	0.21
2019	October	0.13	0.11	0.22
2019	October	0.13	0.1	0.21
2019	October	0.13	0.1	0.2
2019	November	0.12	0.1	0.18
2019	November	0.11	0.09	0.19

Letter

Year	Month	Market	Investment grade	Noninvestment grade
2019	November	0.11	0.08	0.17
2019	November	0.08	0.07	0.18
2019	November	0.11	0.07	0.19
2019	December	0.14	0.11	0.21
2019	December	0.12	0.09	0.2
2019	December	0.12	0.12	0.19
2019	December	0.11	0.12	0.21
2020	January	0.12	0.11	0.18
2020	January	0.11	0.1	0.16
2020	January	0.12	0.09	0.19
2020	January	0.11	0.07	0.16
2020	January	0.12	0.1	0.19
2020	February	0.11	0.08	0.25
2020	February	0.08	0.07	0.24
2020	February	0.07	0.06	0.24
2020	February	0.1	0.09	0.27
2020	March	0.22	0.22	0.37
2020	March	0.35	0.45	0.49
2020	March	0.46	0.49	0.58
2020	March	0.59	0.62	0.6
2020	April	0.61	0.63	0.61
2020	April	0.63	0.65	0.6
2020	April	0.58	0.6	0.6
2020	April	0.6	0.61	0.58
2020	May	0.56	0.59	0.58
2020	May	0.55	0.58	0.58
2020	May	0.55	0.56	0.59
2020	May	0.51	0.52	0.57
2020	May	0.49	0.52	0.55
2020	June	0.49	0.49	0.58
2020	June	0.45	0.46	0.57
2020	June	0.41	0.46	0.54
2020	June	0.46	0.45	0.51
2020	July	0.47	0.44	0.53
2020	July	0.44	0.44	0.54
2020	July	0.4	0.41	0.48
2020	July	0.4	0.39	0.5

Letter

Year	Month	Market	Investment grade	Noninvestment grade
2020	July	0.41	0.38	0.5
2020	August	0.38	0.36	0.47
2020	August	0.35	0.35	0.45
2020	August	0.32	0.33	0.44
2020	August	0.3	0.34	0.42
2020	September	0.29	0.32	0.39
2020	September	0.28	0.3	0.38
2020	September	0.29	0.31	0.39
2020	September	0.31	0.3	0.37
2020	October	0.39	0.35	0.45
2020	October	0.36	0.33	0.42
2020	October	0.37	0.32	0.41
2020	October	0.36	0.3	0.41
2020	October	0.34	0.28	0.42
2020	November	0.34	0.25	0.44
2020	November	0.31	0.22	0.4
2020	November	0.3	0.23	0.4
2020	November	0.26	0.23	0.39
2020	December	0.27	0.22	0.4
2020	December	0.24	0.23	0.35
2020	December	0.24	0.22	0.32
2020	December	0.21	0.19	0.28
2021	January	0.21	0.18	0.28
2021	January	0.23	0.16	0.25
2021	January	0.18	0.14	0.26
2021	January	0.18	0.14	0.21
2021	January	0.21	0.16	0.23
2021	February	0.16	0.12	0.22
2021	February	0.13	0.11	0.2
2021	February	0.13	0.11	0.24
2021	February	0.2	0.16	0.22
2021	March	0.16	0.15	0.2
2021	March	0.16	0.15	0.19
2021	March	0.15	0.15	0.18
2021	March	0.12	0.14	0.15
2021	April	0.18	0.13	0.17
2021	April	0.18	0.12	0.14

Letter

Year	Month	Market	Investment grade	Noninvestment grade
2021	April	0.17	0.15	0.16
2021	April	0.17	0.14	0.14
2021	April	0.19	0.13	0.14
2021	May	0.19	0.12	0.13
2021	May	0.15	0.11	0.14
2021	May	0.14	0.12	0.16
2021	May	0.19	0.11	0.15
2021	June	0.16	0.1	0.14
2021	June	0.15	0.13	0.15
2021	June	0.19	0.15	0.15
2021	June	0.17	0.15	0.15
2021	July	0.2	0.16	0.14
2021	July	0.18	0.15	0.13
2021	July	0.17	0.1	0.11
2021	July	0.16	0.1	0.13
2021	July	0.15	0.12	0.12
2021	August	0.11	0.09	0.11
2021	August	0.1	0.05	0.11
2021	August	0.12	0.07	0.13
2021	August	0.15	0.12	0.11
2021	September	0.14	0.13	0.12
2021	September	0.11	0.08	0.12
2021	September	0.12	0.08	0.13
2021	September	0.11	0.1	0.13
2021	October	0.15	0.14	0.17
2021	October	0.12	0.09	0.14
2021	October	0.1	0.1	0.13
2021	October	0.12	0.12	0.13
2021	October	0.12	0.14	0.14
2021	November	0.08	0.09	0.11
2021	November	0.07	0.08	0.12
2021	November	0.09	0.14	0.09
2021	November	0.08	0.11	0.12
2021	December	0.18	0.18	0.17
2021	December	0.2	0.21	0.19
2021	December	0.24	0.23	0.17
2021	December	0.2	0.16	0.19

Letter

Year	Month	Market	Investment grade	Noninvestment grade
2021	December	0.2	0.16	0.18
2022	January	0.16	0.13	0.15
2022	January	0.14	0.1	0.13
2022	January	0.14	0.09	0.12
2022	January	0.16	0.14	0.12
2022	February	0.15	0.15	0.13
2022	February	0.13	0.16	0.14
2022	February	0.16	0.17	0.12
2022	February	0.15	0.24	0.13
2022	March	0.14	0.26	0.12
2022	March	0.11	0.26	0.12
2022	March	0.13	0.28	0.13
2022	March	0.15	0.27	0.13
2022	April	0.15	0.27	0.14
2022	April	0.17	0.27	0.13
2022	April	0.16	0.25	0.12
2022	April	0.18	0.28	0.13
2022	April	0.18	0.31	0.12
2022	May	0.16	0.3	0.11
2022	May	0.16	0.31	0.13
2022	May	0.16	0.33	0.16
2022	May	0.17	0.34	0.18
2022	June	0.19	0.37	0.16
2022	June	0.17	0.35	0.16
2022	June	0.18	0.37	0.2
2022	June	0.21	0.39	0.23
2022	July	0.24	0.43	0.26
2022	July	0.25	0.44	0.29
2022	July	0.23	0.44	0.27
2022	July	0.27	0.46	0.26
2022	July	0.29	0.48	0.25
2022	August	0.27	0.46	0.25
2022	August	0.25	0.41	0.22
2022	August	0.26	0.41	0.19
2022	August	0.24	0.39	0.21
2022	September	0.23	0.42	0.23
2022	September	0.24	0.43	0.21

Letter

Year	Month	Market	Investment grade	Noninvestment grade
2022	September	0.25	0.43	0.21
2022	September	0.28	0.46	0.2
2022	October	0.24	0.46	0.23
2022	October	0.24	0.45	0.23
2022	October	0.25	0.47	0.24
2022	October	0.27	0.52	0.24
2022	October	0.25	0.46	0.24
2022	November	0.27	0.45	0.23
2022	November	0.25	0.45	0.2
2022	November	0.28	0.44	0.21
2022	November	0.27	0.44	0.17
2022	December	0.24	0.42	0.17
2022	December	0.23	0.4	0.14
2022	December	0.25	0.42	0.16
2022	December	0.18	0.38	0.15
2022	December	0.22	0.43	0.19
2023	January	0.21	0.41	0.18
2023	January	0.2	0.34	0.18
2023	January	0.17	0.34	0.17
2023	January	0.2	0.34	0.17
2023	February	0.21	0.38	0.2
2023	February	0.19	0.32	0.19
2023	February	0.2	0.34	0.19
2023	February	0.17	0.3	0.2
2023	March	0.18	0.31	0.19
2023	March	0.18	0.3	0.21
2023	March	0.14	0.27	0.21
2023	March	0.14	0.27	0.28
2023	March	0.18	0.34	0.29
2023	April	0.21	0.36	0.27
2023	April	0.22	0.32	0.26
2023	April	0.24	0.36	0.24
2023	April	0.25	0.4	0.24
2023	May	0.22	0.37	0.23
2023	May	0.22	0.32	0.24
2023	May	0.23	0.37	0.23
2023	May	0.21	0.34	0.22

Letter

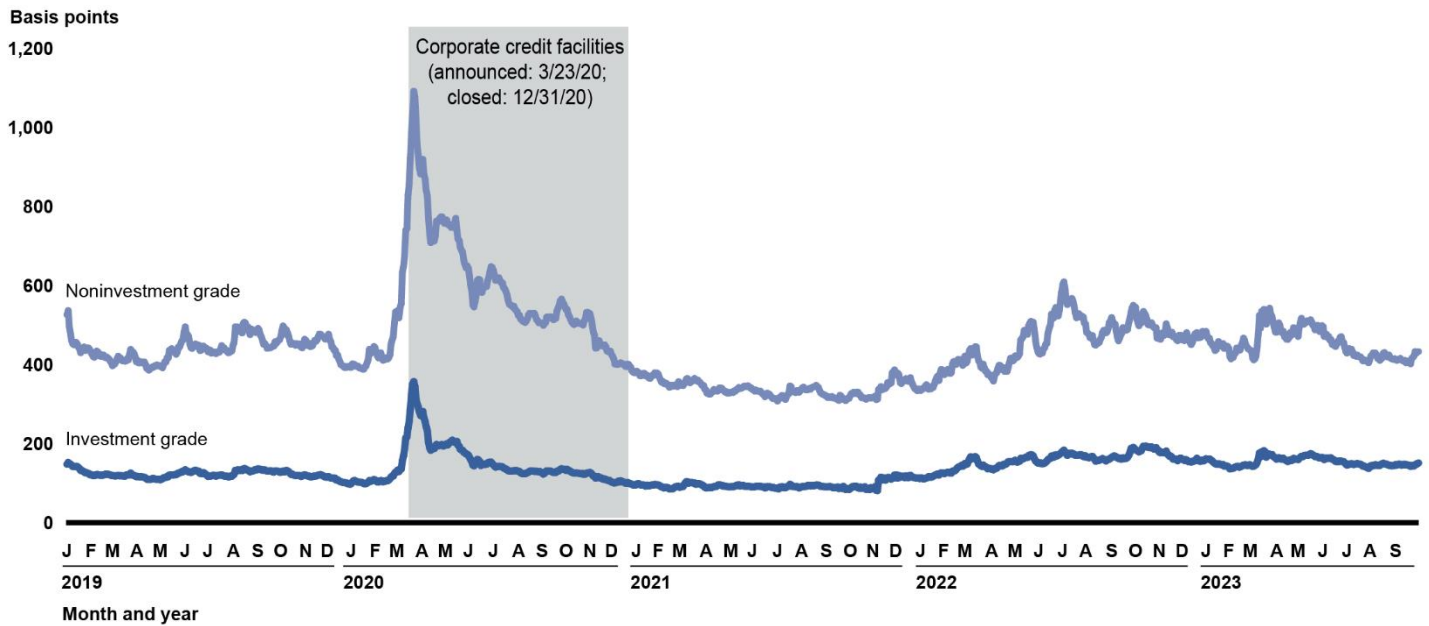
Year	Month	Market	Investment grade	Noninvestment grade
2023	June	0.25	0.39	0.19
2023	June	0.23	0.37	0.18
2023	June	0.21	0.37	0.17
2023	June	0.23	0.37	0.2
2023	June	0.24	0.41	0.21
2023	July	0.22	0.39	0.2
2023	July	0.17	0.37	0.19
2023	July	0.18	0.36	0.18
2023	July	0.19	0.36	0.18
2023	August	0.16	0.33	0.18
2023	August	0.14	0.3	0.18
2023	August	0.13	0.27	0.18
2023	August	0.13	0.26	0.16
2023	September	0.16	0.29	0.18
2023	September	0.12	0.25	0.17
2023	September	0.13	0.26	0.19
2023	September	0.13	0.26	0.19
2023	September	0.16	0.27	0.17

Source: GAO analysis of Federal Reserve Bank of New York data. | GAO-24-106482

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 et al., "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 distressed periods as those 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.

Additionally, although spreads on corporate bonds generally have increased since December 2020 for both investment-grade and non-investment-grade bonds, they remain close to prepandemic levels (see fig. 3). This indicates healthier economic conditions in this credit market compared to the pandemic period.

Figure 3: Spreads on Corporate Bonds, January 2019–September 2023



Source: GAO analysis of Bloomberg Fixed Income Credit Monitor data. | GAO-24-106482

Accessible Data for Figure 3: Spreads on Corporate Bonds, January 2019–September 2023 (2019 data)

Year	Month	Investment grade	Date	Noninvestment grade
2019	January	147.923	1/2/2019	525.986
2019	January	152.202	1/3/2019	536.79
2019	January	149.07	1/4/2019	496.993
2019	January	148.083	1/7/2019	477.381
2019	January	145.503	1/8/2019	461.21
2019	January	142.326	1/9/2019	452.772
2019	January	142.547	1/10/2019	450.432
2019	January	142.294	1/11/2019	452.282
2019	January	142.786	1/14/2019	456.105
2019	January	141.949	1/15/2019	452.032
2019	January	139.59	1/16/2019	444.418
2019	January	136.769	1/17/2019	439.927
2019	January	132.357	1/18/2019	430.091
2019	January	132.283	1/22/2019	441.863
2019	January	130.053	1/23/2019	441.134
2019	January	128.836	1/24/2019	444.681

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	January	126.558	1/25/2019	435.757
2019	January	126.81	1/28/2019	441.576
2019	January	125.437	1/29/2019	442.64
2019	January	124.31	1/30/2019	441.818
2019	January	121.833	1/31/2019	437.997
2019	February	121.99	2/1/2019	430.75
2019	February	120.773	2/4/2019	426.167
2019	February	118.99	2/5/2019	420.566
2019	February	118.97	2/6/2019	418.672
2019	February	121.435	2/7/2019	429.381
2019	February	121.904	2/8/2019	434.053
2019	February	122.002	2/11/2019	432.369
2019	February	120.698	2/12/2019	424.225
2019	February	119.949	2/13/2019	421.551
2019	February	120.816	2/14/2019	425.594
2019	February	119.851	2/15/2019	420.447
2019	February	121.401	2/19/2019	424.297
2019	February	121.905	2/20/2019	419.802
2019	February	122.877	2/21/2019	417.346
2019	February	122.173	2/22/2019	418.815
2019	February	122.239	2/25/2019	416.274
2019	February	122.112	2/26/2019	414.081
2019	February	121.326	2/27/2019	408.571
2019	February	119.347	2/28/2019	404.494
2019	March	119.332	3/1/2019	397.408
2019	March	118.914	3/4/2019	400.511
2019	March	118.391	3/5/2019	401.663
2019	March	118.598	3/6/2019	407.262
2019	March	119.084	3/7/2019	414.629
2019	March	119.765	3/8/2019	421.378
2019	March	118.729	3/11/2019	416.892
2019	March	119.02	3/12/2019	416.571
2019	March	118.633	3/13/2019	410.974
2019	March	118.679	3/14/2019	409.676
2019	March	118.178	3/15/2019	410.241
2019	March	117.948	3/18/2019	408.986
2019	March	120.663	3/19/2019	409.507

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	March	121.605	3/20/2019	415.299
2019	March	120.674	3/21/2019	412.249
2019	March	122.657	3/22/2019	426.978
2019	March	125.571	3/25/2019	438.506
2019	March	120.908	3/26/2019	428.403
2019	March	120.824	3/27/2019	431.903
2019	March	119.465	3/28/2019	427.283
2019	March	117.958	3/29/2019	419.414
2019	April	116.667	4/1/2019	407.312
2019	April	117.193	4/2/2019	410.764
2019	April	116.752	4/3/2019	404.416
2019	April	116.095	4/4/2019	404.601
2019	April	116.541	4/5/2019	407.337
2019	April	115.778	4/8/2019	404.388
2019	April	115.574	4/9/2019	405.767
2019	April	114.986	4/10/2019	406.608
2019	April	113.318	4/11/2019	400.725
2019	April	110.806	4/12/2019	391.08
2019	April	109.793	4/15/2019	389.071
2019	April	109.481	4/16/2019	386.268
2019	April	109.536	4/17/2019	388.304
2019	April	110.244	4/18/2019	393.031
2019	April	111.48	4/22/2019	393.407
2019	April	111.393	4/23/2019	393.262
2019	April	110.95	4/24/2019	396.763
2019	April	110.408	4/25/2019	396.359
2019	April	110.065	4/26/2019	399.232
2019	April	110.472	4/29/2019	396.716
2019	April	110.239	4/30/2019	397.823
2019	May	108.69	5/1/2019	395.636
2019	May	110.684	5/2/2019	394.986
2019	May	111.415	5/3/2019	392.196
2019	May	113.616	5/6/2019	399.991
2019	May	114.379	5/7/2019	407.064
2019	May	114.736	5/8/2019	406.642
2019	May	117.007	5/9/2019	417.511
2019	May	116.383	5/10/2019	416.921

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	May	120.705	5/13/2019	436.123
2019	May	120.517	5/14/2019	434.372
2019	May	121.638	5/15/2019	440.413
2019	May	120.801	5/16/2019	433.159
2019	May	121.525	5/17/2019	432.957
2019	May	122.033	5/20/2019	430.581
2019	May	122.043	5/21/2019	426.485
2019	May	123.302	5/22/2019	431.607
2019	May	125.662	5/23/2019	444.686
2019	May	126.177	5/24/2019	444.697
2019	May	127.919	5/28/2019	452.948
2019	May	129.281	5/29/2019	459.499
2019	May	129.096	5/30/2019	462.752
2019	May	131.669	5/31/2019	482.875
2019	June	133.893	6/3/2019	495.577
2019	June	131.595	6/4/2019	478.951
2019	June	129.789	6/5/2019	475.287
2019	June	128.697	6/6/2019	470.947
2019	June	128.435	6/7/2019	453.001
2019	June	127.374	6/10/2019	443.143
2019	June	128.475	6/11/2019	440.989
2019	June	130.221	6/12/2019	447.974
2019	June	131.781	6/13/2019	450.129
2019	June	132.923	6/14/2019	452.029
2019	June	131.257	6/17/2019	450.461
2019	June	129.674	6/18/2019	444.877
2019	June	130.063	6/19/2019	449.132
2019	June	124.863	6/20/2019	435.596
2019	June	124.815	6/21/2019	436.56
2019	June	124.099	6/24/2019	439.762
2019	June	126.821	6/25/2019	446.688
2019	June	124.978	6/26/2019	440.217
2019	June	122.8	6/27/2019	442.541
2019	June	120.007	6/28/2019	440.25
2019	July	117.258	7/1/2019	432.802
2019	July	118.223	7/2/2019	437.156
2019	July	118.026	7/3/2019	436.406

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	July	118.458	7/5/2019	428.773
2019	July	119.489	7/8/2019	430.153
2019	July	120.379	7/9/2019	431.52
2019	July	119.301	7/10/2019	432.098
2019	July	117.835	7/11/2019	427.897
2019	July	119.039	7/12/2019	430.309
2019	July	120.056	7/15/2019	432.365
2019	July	120.184	7/16/2019	431.728
2019	July	120.594	7/17/2019	439.162
2019	July	121.331	7/18/2019	447.938
2019	July	119.26	7/19/2019	443.284
2019	July	118.779	7/22/2019	442.673
2019	July	117.53	7/23/2019	437.28
2019	July	117.366	7/24/2019	436.819
2019	July	117.419	7/25/2019	432.447
2019	July	115.907	7/26/2019	429.895
2019	July	116.606	7/29/2019	431.199
2019	July	118.079	7/30/2019	434.606
2019	July	117.642	7/31/2019	434.388
2019	August	120.509	8/1/2019	449.444
2019	August	122.744	8/2/2019	456.007
2019	August	132.442	8/5/2019	495.562
2019	August	130.565	8/6/2019	491.175
2019	August	133.704	8/7/2019	495.42
2019	August	133.072	8/8/2019	486.979
2019	August	131.839	8/9/2019	483.964
2019	August	133.782	8/12/2019	493.2
2019	August	131.768	8/13/2019	480.094
2019	August	135.85	8/14/2019	504.223
2019	August	137.207	8/15/2019	507.203
2019	August	135.952	8/16/2019	504.728
2019	August	133.691	8/19/2019	493.934
2019	August	133.154	8/20/2019	495.642
2019	August	130.862	8/21/2019	484.802
2019	August	128.911	8/22/2019	476.022
2019	August	130.617	8/23/2019	490.311
2019	August	130.311	8/26/2019	484.322

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	August	131.491	8/27/2019	486.373
2019	August	133.709	8/28/2019	485.975
2019	August	133.464	8/29/2019	481.157
2019	August	134.076	8/30/2019	482.104
2019	September	136.464	9/3/2019	491.439
2019	September	135.414	9/4/2019	487.774
2019	September	134.522	9/5/2019	475.314
2019	September	134.497	9/6/2019	470.131
2019	September	132.985	9/9/2019	460.417
2019	September	133.192	9/10/2019	451.244
2019	September	133.549	9/11/2019	453.087
2019	September	132.095	9/12/2019	448.598
2019	September	130.487	9/13/2019	441.481
2019	September	131.297	9/16/2019	441.731
2019	September	130.859	9/17/2019	442.521
2019	September	131.381	9/18/2019	443.016
2019	September	130.501	9/19/2019	444.367
2019	September	128.76	9/20/2019	447.146
2019	September	128.319	9/23/2019	447.106
2019	September	130.925	9/24/2019	457.772
2019	September	130.702	9/25/2019	453.794
2019	September	130.413	9/26/2019	458.258
2019	September	129.212	9/27/2019	461.465
2019	September	128.132	9/30/2019	463.045
2019	October	127.879	10/1/2019	471.003
2019	October	129.55	10/2/2019	485.782
2019	October	130.491	10/3/2019	497.675
2019	October	128.758	10/4/2019	493.149
2019	October	129.495	10/7/2019	477.708
2019	October	132.446	10/8/2019	487.86
2019	October	130.672	10/9/2019	479.722
2019	October	129.293	10/10/2019	471.605
2019	October	125.625	10/11/2019	459.29
2019	October	122.681	10/15/2019	451.558
2019	October	123.085	10/16/2019	455.01
2019	October	121.492	10/17/2019	451.165
2019	October	120.265	10/18/2019	452.728

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	October	119.126	10/21/2019	449.103
2019	October	119.775	10/22/2019	452.836
2019	October	120.04	10/23/2019	451.493
2019	October	119.805	10/24/2019	452.151
2019	October	118.818	10/25/2019	447.238
2019	October	117.131	10/28/2019	443.867
2019	October	118.461	10/29/2019	442.886
2019	October	120.295	10/30/2019	450.963
2019	October	121.686	10/31/2019	463.937
2019	November	120.255	11/1/2019	461.598
2019	November	118.96	11/4/2019	452.414
2019	November	118.043	11/5/2019	448.406
2019	November	117.818	11/6/2019	453.613
2019	November	116.275	11/7/2019	445.639
2019	November	116.387	11/8/2019	446.371
2019	November	116.882	11/12/2019	448.198
2019	November	117.83	11/13/2019	456.34
2019	November	118.329	11/14/2019	461.763
2019	November	118.136	11/15/2019	459.192
2019	November	119.381	11/18/2019	462.959
2019	November	120.399	11/19/2019	470.425
2019	November	121.308	11/20/2019	477.454
2019	November	121.858	11/21/2019	476.629
2019	November	120.605	11/22/2019	474.25
2019	November	118.76	11/25/2019	471.394
2019	November	117.536	11/26/2019	469.941
2019	November	115.846	11/27/2019	465.013
2019	November	115.365	11/29/2019	464.843
2019	December	115.584	12/2/2019	465.851
2019	December	116.73	12/3/2019	476.849
2019	December	114.949	12/4/2019	464.336
2019	December	113.123	12/5/2019	458.224
2019	December	112.751	12/6/2019	444.868
2019	December	112.296	12/9/2019	443.14
2019	December	112.543	12/10/2019	436.571
2019	December	112.255	12/11/2019	436.297
2019	December	107.966	12/12/2019	422.782

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2019	December	108.61	12/13/2019	424.289
2019	December	106.121	12/16/2019	414.182
2019	December	104.794	12/17/2019	407.74
2019	December	103.693	12/18/2019	399.74
2019	December	102.625	12/19/2019	398.562
2019	December	101.623	12/20/2019	395.671
2019	December	101.541	12/23/2019	392.931
2019	December	100.891	12/24/2019	395.08
2019	December	100.508	12/26/2019	393.06
2019	December	98.965	12/27/2019	393.786
2019	December	98.765	12/30/2019	395.859
2019	December	97.33	12/31/2019	393.216

Accessible Data for Figure 3: Spreads on Corporate Bonds, January 2019–September 2023 (2020 data)

Year	Month	Investment grade	Date	Noninvestment grade
2020	January	99.249	1/2/2020	393.243
2020	January	102.842	1/3/2020	401.568
2020	January	106.011	1/6/2020	401.069
2020	January	106.555	1/7/2020	399.798
2020	January	105.195	1/8/2020	396.08
2020	January	104.165	1/9/2020	395.99
2020	January	102.777	1/10/2020	396.156
2020	January	102.735	1/13/2020	392.155
2020	January	102.633	1/14/2020	391.378
2020	January	102.218	1/15/2020	391.429
2020	January	101.188	1/16/2020	388.471
2020	January	99.228	1/17/2020	388.332
2020	January	98.963	1/21/2020	394.16
2020	January	99.073	1/22/2020	396.597
2020	January	100.786	1/23/2020	405.162
2020	January	102.514	1/24/2020	413.477
2020	January	106.493	1/27/2020	438.644
2020	January	105.087	1/28/2020	427.756
2020	January	105.684	1/29/2020	431.648
2020	January	107.15	1/30/2020	434.127
2020	January	109.288	1/31/2020	445.784
2020	February	108.06	2/3/2020	442.654
2020	February	106.052	2/4/2020	431.499
2020	February	103.39	2/5/2020	422.379
2020	February	102.985	2/6/2020	416.992
2020	February	105.368	2/7/2020	426.612
2020	February	106.435	2/10/2020	429.644
2020	February	105.974	2/11/2020	418.106
2020	February	103.714	2/12/2020	410.977
2020	February	105.055	2/13/2020	411.88
2020	February	105.215	2/14/2020	413.592
2020	February	106.464	2/18/2020	417.421
2020	February	106.24	2/19/2020	414.445
2020	February	108.303	2/20/2020	417.564
2020	February	110.813	2/21/2020	423.782

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2020	February	115.365	2/24/2020	451.25
2020	February	117.868	2/25/2020	462.273
2020	February	118.135	2/26/2020	471.161
2020	February	124.268	2/27/2020	504.957
2020	February	127.654	2/28/2020	533.133
2020	March	129.102	3/2/2020	528.474
2020	March	133.239	3/3/2020	537.13
2020	March	129.514	3/4/2020	518.58
2020	March	135.743	3/5/2020	544.994
2020	March	135.993	3/6/2020	553.532
2020	March	156.529	3/9/2020	633.254
2020	March	168.195	3/10/2020	647.349
2020	March	187.184	3/11/2020	676.819
2020	March	214.695	3/12/2020	740.446
2020	March	217.492	3/13/2020	744.834
2020	March	240.186	3/16/2020	829.731
2020	March	256.401	3/17/2020	856.895
2020	March	286.918	3/18/2020	920.736
2020	March	324.651	3/19/2020	986.707
2020	March	350.57	3/20/2020	1034.33
2020	March	357.069	3/23/2020	1091.7
2020	March	345.167	3/24/2020	1077.96
2020	March	313.454	3/25/2020	1021.72
2020	March	300.642	3/26/2020	957.652
2020	March	292.4	3/27/2020	927.799
2020	March	280.817	3/30/2020	897.083
2020	March	271.38	3/31/2020	882.383
2020	April	278.59	4/1/2020	906.764
2020	April	281.549	4/2/2020	919.174
2020	April	264.887	4/3/2020	881.269
2020	April	255.668	4/6/2020	869.394
2020	April	242.613	4/7/2020	840.283
2020	April	231.036	4/8/2020	824.334
2020	April	203.416	4/9/2020	768.776
2020	April	190.069	4/13/2020	731.858
2020	April	183.505	4/14/2020	708.766
2020	April	189.14	4/15/2020	728.865

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2020	April	189.714	4/16/2020	725.085
2020	April	187.489	4/17/2020	713.024
2020	April	191.994	4/20/2020	725.582
2020	April	197.779	4/21/2020	762.898
2020	April	196.585	4/22/2020	760.74
2020	April	194.669	4/23/2020	762.547
2020	April	195.972	4/24/2020	770.803
2020	April	197.281	4/27/2020	773.65
2020	April	197.443	4/28/2020	773.529
2020	April	194.035	4/29/2020	763.908
2020	April	195.374	4/30/2020	757.605
2020	May	198.051	5/1/2020	762.325
2020	May	199.388	5/4/2020	765.985
2020	May	197.191	5/5/2020	754.962
2020	May	201.52	5/6/2020	753.021
2020	May	204.16	5/7/2020	754.125
2020	May	205.508	5/8/2020	747.329
2020	May	208.822	5/11/2020	753.573
2020	May	204.585	5/12/2020	747.512
2020	May	203.608	5/13/2020	758.283
2020	May	203.226	5/14/2020	770.103
2020	May	205.367	5/15/2020	738.576
2020	May	195.942	5/18/2020	717.626
2020	May	193.268	5/19/2020	713.969
2020	May	185.639	5/20/2020	695.989
2020	May	184.342	5/21/2020	689.254
2020	May	182.96	5/22/2020	684.551
2020	May	178.623	5/26/2020	663.831
2020	May	176.907	5/27/2020	654.212
2020	May	174.404	5/28/2020	645.052
2020	May	173.382	5/29/2020	649.84
2020	June	170.913	6/1/2020	644.239
2020	June	165.813	6/2/2020	625.369
2020	June	160.156	6/3/2020	601.492
2020	June	156.048	6/4/2020	589.343
2020	June	146.038	6/5/2020	551.562
2020	June	144.188	6/8/2020	546.192

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2020	June	148.709	6/9/2020	561.19
2020	June	149.814	6/10/2020	576.153
2020	June	160.21	6/11/2020	613.288
2020	June	158.615	6/12/2020	615.943
2020	June	154.848	6/15/2020	614.873
2020	June	145.036	6/16/2020	583.906
2020	June	147.309	6/17/2020	582.671
2020	June	148.577	6/18/2020	593.135
2020	June	147.459	6/19/2020	595.94
2020	June	147.56	6/22/2020	597.143
2020	June	147.727	6/23/2020	597.354
2020	June	151.387	6/24/2020	612.381
2020	June	152.12	6/25/2020	621.197
2020	June	153.21	6/26/2020	634.093
2020	June	153.225	6/29/2020	647.551
2020	June	149.863	6/30/2020	646.086
2020	July	146.745	7/1/2020	638.508
2020	July	143.481	7/2/2020	628.059
2020	July	140.803	7/6/2020	613.345
2020	July	142.551	7/7/2020	613.932
2020	July	142.029	7/8/2020	614.158
2020	July	142.579	7/9/2020	619.568
2020	July	142.441	7/10/2020	612.443
2020	July	141.926	7/13/2020	607.148
2020	July	141.256	7/14/2020	606.748
2020	July	138.662	7/15/2020	595.225
2020	July	137.67	7/16/2020	591.874
2020	July	135.47	7/17/2020	586.131
2020	July	134.584	7/20/2020	577.037
2020	July	131.642	7/21/2020	563.173
2020	July	130.6	7/22/2020	553.275
2020	July	130.385	7/23/2020	550.935
2020	July	130.723	7/24/2020	549.085
2020	July	130.875	7/27/2020	546.285
2020	July	131.763	7/28/2020	547.993
2020	July	131.236	7/29/2020	540.248
2020	July	132.11	7/30/2020	537.287

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2020	July	131.386	7/31/2020	533.826
2020	August	129.657	8/3/2020	524.621
2020	August	129.491	8/4/2020	524.905
2020	August	126.777	8/5/2020	515.415
2020	August	124.676	8/6/2020	513.565
2020	August	124.503	8/7/2020	509.422
2020	August	123.887	8/10/2020	509.007
2020	August	124.239	8/11/2020	506.681
2020	August	124.959	8/12/2020	510.072
2020	August	127.02	8/13/2020	515.911
2020	August	128.081	8/14/2020	525.898
2020	August	130.036	8/17/2020	529.783
2020	August	131.152	8/18/2020	529.113
2020	August	130.892	8/19/2020	528.369
2020	August	130.716	8/20/2020	529.9
2020	August	129.77	8/21/2020	529.968
2020	August	130.011	8/24/2020	523.421
2020	August	129.877	8/25/2020	514.385
2020	August	129.642	8/26/2020	511.107
2020	August	129.637	8/27/2020	506.324
2020	August	129.221	8/28/2020	505.844
2020	August	127.918	8/31/2020	505.37
2020	September	125.765	9/1/2020	504.475
2020	September	123.225	9/2/2020	499.596
2020	September	124.963	9/3/2020	503.388
2020	September	128.236	9/4/2020	506.644
2020	September	131.27	9/8/2020	520.279
2020	September	130.603	9/9/2020	517.179
2020	September	130.358	9/10/2020	519.628
2020	September	130.219	9/11/2020	520.813
2020	September	129.767	9/14/2020	520.405
2020	September	128.294	9/15/2020	517.938
2020	September	127.538	9/16/2020	513.729
2020	September	127.685	9/17/2020	515.762
2020	September	127.376	9/18/2020	517.228
2020	September	130.316	9/21/2020	536.309
2020	September	130.347	9/22/2020	543.219

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2020	September	132.044	9/23/2020	551.106
2020	September	134.942	9/24/2020	561.284
2020	September	136.526	9/25/2020	565.751
2020	September	135.121	9/28/2020	557.168
2020	September	134.737	9/29/2020	553.478
2020	September	134.838	9/30/2020	546.252
2020	October	132.56	10/1/2020	539.477
2020	October	134.831	10/2/2020	539.314
2020	October	132.179	10/5/2020	526.49
2020	October	131.65	10/6/2020	521.691
2020	October	129.184	10/7/2020	513.964
2020	October	127.993	10/8/2020	508.156
2020	October	126.591	10/9/2020	503.995
2020	October	125.441	10/13/2020	501.578
2020	October	125.388	10/14/2020	503.341
2020	October	125.913	10/15/2020	510.052
2020	October	125.496	10/16/2020	507.162
2020	October	125.069	10/19/2020	504.951
2020	October	124.781	10/20/2020	503.89
2020	October	124.461	10/21/2020	503.816
2020	October	124.614	10/22/2020	502.286
2020	October	122.983	10/23/2020	500.276
2020	October	123.87	10/26/2020	511.148
2020	October	123.179	10/27/2020	515.721
2020	October	125.013	10/28/2020	531.919
2020	October	126.229	10/29/2020	532.009
2020	October	126.66	10/30/2020	530.985
2020	November	127.233	11/2/2020	528.616
2020	November	125.459	11/3/2020	517.15
2020	November	121.766	11/4/2020	500.836
2020	November	118.274	11/5/2020	482.384
2020	November	117.626	11/6/2020	474.753
2020	November	112.968	11/9/2020	442.064
2020	November	113.5	11/10/2020	442.388
2020	November	116.71	11/12/2020	461.042
2020	November	115.321	11/13/2020	460.721
2020	November	113.115	11/16/2020	452.879

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2020	November	112.927	11/17/2020	451.731
2020	November	111.01	11/18/2020	447.391
2020	November	110.168	11/19/2020	448.689
2020	November	110.798	11/20/2020	449.951
2020	November	109.676	11/23/2020	445.219
2020	November	107.647	11/24/2020	434.605
2020	November	107.026	11/25/2020	432.871
2020	November	107.189	11/27/2020	432.987
2020	November	105.219	11/30/2020	433.915
2020	December	103.014	12/1/2020	425.567
2020	December	102.279	12/2/2020	420.522
2020	December	100.849	12/3/2020	414.646
2020	December	100.922	12/4/2020	401.409
2020	December	101.519	12/7/2020	401.072
2020	December	102.885	12/8/2020	399.924
2020	December	105.091	12/9/2020	401.117
2020	December	103.328	12/10/2020	402.569
2020	December	105.893	12/11/2020	404.588
2020	December	105.077	12/14/2020	403.575
2020	December	103.596	12/15/2020	401.009
2020	December	102.358	12/16/2020	400.297
2020	December	100.501	12/17/2020	396.274
2020	December	100.32	12/18/2020	394.834
2020	December	101.587	12/21/2020	400.893
2020	December	100.889	12/22/2020	400.614
2020	December	98.978	12/23/2020	396.495
2020	December	98.51	12/24/2020	392.979
2020	December	97.115	12/28/2020	383.889
2020	December	95.326	12/29/2020	380.922
2020	December	95.129	12/30/2020	379.786
2020	December	95.026	12/31/2020	379.769

Accessible Data for Figure 3: Spreads on Corporate Bonds, January 2019–September 2023 (2021 data)

Year	Month	Investment grade	Date	Noninvestment grade
2021	January	97.497	1/4/2021	383.168
2021	January	98.741	1/5/2021	381.996

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	January	98.624	1/6/2021	377.735
2021	January	96.262	1/7/2021	372.114
2021	January	95.261	1/8/2021	371.674
2021	January	95.956	1/11/2021	374.327
2021	January	95.367	1/12/2021	377.811
2021	January	94.099	1/13/2021	377.603
2021	January	92.869	1/14/2021	371.537
2021	January	94.65	1/15/2021	373.452
2021	January	93.612	1/19/2021	370.663
2021	January	93.53	1/20/2021	365.982
2021	January	94.167	1/21/2021	365.18
2021	January	94.89	1/22/2021	369.871
2021	January	95.58	1/25/2021	373.243
2021	January	95.054	1/26/2021	372.781
2021	January	96.77	1/27/2021	379.209
2021	January	96.459	1/28/2021	375.725
2021	January	95.971	1/29/2021	378.735
2021	February	95.294	2/1/2021	376.332
2021	February	94.327	2/2/2021	368.751
2021	February	92.535	2/3/2021	361.579
2021	February	90.592	2/4/2021	355.865
2021	February	90.051	2/5/2021	357.672
2021	February	88.25	2/8/2021	352.575
2021	February	89.398	2/9/2021	351.501
2021	February	89.381	2/10/2021	353.129
2021	February	88.792	2/11/2021	350.425
2021	February	88.2	2/12/2021	347.005
2021	February	85.535	2/16/2021	342.452
2021	February	86.38	2/17/2021	346.491
2021	February	85.864	2/18/2021	347.361
2021	February	86.187	2/19/2021	345.409
2021	February	88.414	2/22/2021	346.216
2021	February	90.414	2/23/2021	348.586
2021	February	91.002	2/24/2021	347.753
2021	February	92.46	2/25/2021	344.439
2021	February	92.129	2/26/2021	356.838
2021	March	89.598	3/1/2021	348.859

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	March	91.104	3/2/2021	349.635
2021	March	90.971	3/3/2021	347.258
2021	March	91.899	3/4/2021	347.025
2021	March	96.685	3/5/2021	352.996
2021	March	101.178	3/8/2021	357.688
2021	March	104.137	3/9/2021	364.296
2021	March	103.547	3/10/2021	364.431
2021	March	100.353	3/11/2021	355.421
2021	March	101.186	3/12/2021	354.107
2021	March	101.571	3/15/2021	357.033
2021	March	101.527	3/16/2021	357.919
2021	March	100.291	3/17/2021	360.542
2021	March	100.878	3/18/2021	365.012
2021	March	97.628	3/19/2021	362.769
2021	March	97.687	3/22/2021	358.856
2021	March	99.14	3/23/2021	360.607
2021	March	98.808	3/24/2021	356.357
2021	March	98.079	3/25/2021	354.69
2021	March	95.835	3/26/2021	350.147
2021	March	94.891	3/29/2021	346.719
2021	March	93.404	3/30/2021	347.032
2021	March	89.655	3/31/2021	338.328
2021	April	88.448	4/1/2021	336.08
2021	April	88.396	4/5/2021	327.795
2021	April	88.575	4/6/2021	327.831
2021	April	88.691	4/7/2021	324.877
2021	April	89.353	4/8/2021	325.585
2021	April	88.909	4/9/2021	329.382
2021	April	89.835	4/12/2021	331.035
2021	April	91.453	4/13/2021	337.029
2021	April	91.501	4/14/2021	335.304
2021	April	91.695	4/15/2021	334.465
2021	April	93.952	4/16/2021	332.849
2021	April	95.65	4/19/2021	334.651
2021	April	96.003	4/20/2021	341.239
2021	April	94.855	4/21/2021	340.729
2021	April	94.357	4/22/2021	340.216

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	April	92.96	4/23/2021	335.738
2021	April	93.122	4/26/2021	334.056
2021	April	92.403	4/27/2021	330.4
2021	April	91.861	4/28/2021	331.459
2021	April	91.386	4/29/2021	327.758
2021	April	91.121	4/30/2021	328.265
2021	April	90.881	5/3/2021	328.499
2021	May	91.404	5/4/2021	330.194
2021	May	91.372	5/5/2021	330.186
2021	May	91.038	5/6/2021	329.385
2021	May	92.202	5/7/2021	333.946
2021	May	93.067	5/10/2021	333.098
2021	May	94.547	5/11/2021	337.087
2021	May	94.579	5/12/2021	337.534
2021	May	95.853	5/13/2021	342.112
2021	May	93.099	5/14/2021	340.333
2021	May	93.616	5/17/2021	340.203
2021	May	93.781	5/18/2021	341.622
2021	May	94.283	5/19/2021	344.09
2021	May	92.61	5/20/2021	345.913
2021	May	91.894	5/21/2021	344.518
2021	May	91.744	5/24/2021	344.205
2021	May	92.671	5/25/2021	346.64
2021	May	91.871	5/26/2021	343.967
2021	May	91.649	5/27/2021	341.2
2021	May	90.674	5/28/2021	340.82
2021	June	90.133	6/1/2021	337.195
2021	June	90.205	6/2/2021	336.113
2021	June	90.957	6/3/2021	333.091
2021	June	92.065	6/4/2021	335.813
2021	June	92.276	6/7/2021	332.949
2021	June	92.36	6/8/2021	332.61
2021	June	92.458	6/9/2021	332.584
2021	June	92.408	6/10/2021	332.794
2021	June	91.012	6/11/2021	328.591
2021	June	90.973	6/14/2021	325.45
2021	June	90.821	6/15/2021	325.758

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	June	88.236	6/16/2021	318.895
2021	June	89.03	6/17/2021	323.316
2021	June	91.442	6/18/2021	327.787
2021	June	91.261	6/21/2021	323.524
2021	June	91.378	6/22/2021	324.89
2021	June	89.917	6/23/2021	320.217
2021	June	89.357	6/24/2021	317.309
2021	June	89.247	6/25/2021	314.065
2021	June	88.362	6/28/2021	314.544
2021	June	87.753	6/29/2021	313.645
2021	June	87.609	6/30/2021	311.39
2021	July	87.476	7/1/2021	307.852
2021	July	85.71	7/2/2021	311.733
2021	July	89.923	7/6/2021	317.611
2021	July	89.942	7/7/2021	316.83
2021	July	91.287	7/8/2021	322.209
2021	July	89.084	7/9/2021	316.044
2021	July	89.891	7/12/2021	315.72
2021	July	88.794	7/13/2021	312.038
2021	July	89.835	7/14/2021	318.877
2021	July	91.983	7/15/2021	324.644
2021	July	92.549	7/16/2021	326.607
2021	July	97.05	7/19/2021	346.018
2021	July	95.4	7/20/2021	343.917
2021	July	92.085	7/21/2021	333.029
2021	July	91.439	7/22/2021	331.906
2021	July	91.58	7/23/2021	330.504
2021	July	90.88	7/26/2021	329.314
2021	July	91.713	7/27/2021	334.467
2021	July	90.094	7/28/2021	334.013
2021	July	88.129	7/29/2021	330.198
2021	July	89.558	7/30/2021	333.848
2021	August	90.544	8/2/2021	338.032
2021	August	91.803	8/3/2021	341.636
2021	August	91.493	8/4/2021	342.783
2021	August	91.339	8/5/2021	339.019
2021	August	91.899	8/6/2021	336.062

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	August	93.452	8/9/2021	336.355
2021	August	94.144	8/10/2021	336.75
2021	August	94.344	8/11/2021	339.969
2021	August	93.189	8/12/2021	337.644
2021	August	93.484	8/13/2021	341.477
2021	August	93.93	8/16/2021	342.76
2021	August	94.023	8/17/2021	343.773
2021	August	94.237	8/18/2021	343.927
2021	August	95.073	8/19/2021	347.518
2021	August	95.034	8/20/2021	344.954
2021	August	94.843	8/23/2021	342.084
2021	August	93.804	8/24/2021	334.652
2021	August	92.232	8/25/2021	328.616
2021	August	92.131	8/26/2021	326.668
2021	August	91.441	8/27/2021	324.414
2021	August	91.505	8/30/2021	324.144
2021	August	91	8/31/2021	322.219
2021	September	91.077	9/1/2021	320.544
2021	September	91.204	9/2/2021	317.326
2021	September	91.36	9/3/2021	318.512
2021	September	91.737	9/7/2021	317.256
2021	September	90.784	9/8/2021	317.533
2021	September	89.755	9/9/2021	319.223
2021	September	88.645	9/10/2021	315.982
2021	September	88.5	9/13/2021	315.314
2021	September	88.606	9/14/2021	315.231
2021	September	89.193	9/15/2021	312.688
2021	September	90.182	9/16/2021	312.913
2021	September	86.777	9/17/2021	309.541
2021	September	89.11	9/20/2021	322.511
2021	September	88.73	9/21/2021	320.275
2021	September	86.751	9/22/2021	315.855
2021	September	91.886	9/23/2021	311.995
2021	September	87.901	9/24/2021	311.429
2021	September	84.149	9/27/2021	308.921
2021	September	86.19	9/28/2021	313.536
2021	September	86.613	9/29/2021	314.035

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	September	84.051	9/30/2021	314.827
2021	October	86.52	10/1/2021	321.669
2021	October	89.026	10/4/2021	326.698
2021	October	91.463	10/5/2021	327.443
2021	October	90.456	10/6/2021	329.98
2021	October	92.643	10/7/2021	326.927
2021	October	92.78	10/8/2021	327.754
2021	October	89.44	10/12/2021	330.389
2021	October	88.474	10/13/2021	329.961
2021	October	87.622	10/14/2021	323.554
2021	October	90.178	10/15/2021	322.896
2021	October	87.411	10/18/2021	316.454
2021	October	89.194	10/19/2021	316.706
2021	October	90.013	10/20/2021	316.231
2021	October	90.75	10/21/2021	313.869
2021	October	84.425	10/22/2021	312.38
2021	October	85.902	10/25/2021	314.66
2021	October	85.49	10/26/2021	316.333
2021	October	83.708	10/27/2021	317.446
2021	October	88.537	10/28/2021	315.673
2021	October	85.898	10/29/2021	315.9
2021	November	86.896	11/1/2021	317.252
2021	November	86.222	11/2/2021	318.633
2021	November	91.302	11/3/2021	320.231
2021	November	82.081	11/4/2021	311.53
2021	November	81.648	11/5/2021	312.845
2021	November	107.92	11/8/2021	337.489
2021	November	106.675	11/9/2021	337.085
2021	November	115.052	11/10/2021	344.304
2021	November	108.209	11/12/2021	336.57
2021	November	113.71	11/15/2021	341.621
2021	November	112.227	11/16/2021	338.959
2021	November	107.633	11/17/2021	340.007
2021	November	110.642	11/18/2021	343.847
2021	November	114.27	11/19/2021	354.462
2021	November	114.348	11/22/2021	350.393
2021	November	112.865	11/23/2021	352.188

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2021	November	110.495	11/24/2021	353.558
2021	November	112.933	11/26/2021	379.566
2021	November	113.245	11/29/2021	372.549
2021	November	120.651	11/30/2021	386.694
2021	December	113.659	12/1/2021	376.067
2021	December	120.878	12/2/2021	373.978
2021	December	112.976	12/3/2021	378.033
2021	December	119.124	12/6/2021	373.352
2021	December	115.309	12/7/2021	354.441
2021	December	116.646	12/8/2021	352.272
2021	December	117.557	12/9/2021	359.525
2021	December	116.513	12/10/2021	357.963
2021	December	113.887	12/13/2021	359.704
2021	December	118.505	12/14/2021	364.484
2021	December	118.294	12/15/2021	360.473
2021	December	113.733	12/16/2021	357.888
2021	December	119.058	12/17/2021	364.434
2021	December	119.913	12/20/2021	366.851
2021	December	117.115	12/21/2021	355.142
2021	December	114.908	12/22/2021	349.235
2021	December	114.521	12/23/2021	343.116
2021	December	113.636	12/27/2021	338.912
2021	December	113.008	12/28/2021	338.233
2021	December	112.524	12/29/2021	334.279
2021	December	112.8	12/30/2021	338.462
2021	December	111.895	12/31/2021	337.674

Accessible Data for Figure 3: Spreads on Corporate Bonds, January 2019–September 2023 (2022 data)

Year	Month	Investment grade	Date	Noninvestment grade
2022	January	112.951	1/3/2022	334.749
2022	January	113.078	1/4/2022	338.881
2022	January	111.308	1/5/2022	338.55
2022	January	111.455	1/6/2022	341.679
2022	January	112.085	1/7/2022	345.896
2022	January	112.923	1/10/2022	348.966
2022	January	114.104	1/11/2022	344.739
2022	January	116.614	1/12/2022	337.947
2022	January	115.936	1/13/2022	344.411
2022	January	115.256	1/14/2022	338.81
2022	January	116.255	1/18/2022	341.412
2022	January	117.523	1/19/2022	342.392
2022	January	119.599	1/20/2022	350.776
2022	January	120.834	1/21/2022	359.88
2022	January	122.483	1/24/2022	366.5
2022	January	122.848	1/25/2022	371.087
2022	January	120.633	1/26/2022	359.699
2022	January	124.213	1/27/2022	376.995
2022	January	126.306	1/28/2022	387.762
2022	January	126.432	1/31/2022	386.803
2022	February	124.815	2/1/2022	378.109
2022	February	124.388	2/2/2022	375.042
2022	February	125.83	2/3/2022	378.432
2022	February	126.965	2/4/2022	385.852
2022	February	127.84	2/7/2022	387.999
2022	February	126.906	2/8/2022	383.104
2022	February	125.622	2/9/2022	377.491
2022	February	125.681	2/10/2022	380.095
2022	February	130.29	2/11/2022	402.336
2022	February	131.064	2/14/2022	407.64
2022	February	131.264	2/15/2022	402.092
2022	February	134.147	2/16/2022	400.29
2022	February	137.821	2/17/2022	409.787
2022	February	140.487	2/18/2022	413.282
2022	February	141.3	2/22/2022	410.049

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2022	February	142.897	2/23/2022	406.624
2022	February	145.13	2/24/2022	412.958
2022	February	143.043	2/25/2022	398.243
2022	February	145.776	2/28/2022	411.552
2022	March	150.046	3/1/2022	421.637
2022	March	147.416	3/2/2022	404.248
2022	March	148.661	3/3/2022	409.126
2022	March	155.76	3/4/2022	424.921
2022	March	161.857	3/7/2022	436.439
2022	March	166.73	3/8/2022	440.541
2022	March	161.638	3/9/2022	423.999
2022	March	165.748	3/10/2022	432.55
2022	March	166.432	3/11/2022	439.298
2022	March	167.116	3/14/2022	445.321
2022	March	164.401	3/15/2022	444.786
2022	March	155.664	3/16/2022	420.898
2022	March	148.544	3/17/2022	409.854
2022	March	146.251	3/18/2022	404.955
2022	March	144.039	3/21/2022	393.379
2022	March	142.387	3/22/2022	391.153
2022	March	145.715	3/23/2022	401.016
2022	March	142.654	3/24/2022	391.844
2022	March	141.215	3/25/2022	383.479
2022	March	140.105	3/28/2022	383.066
2022	March	136.43	3/29/2022	374.642
2022	March	137.987	3/30/2022	376.235
2022	March	137.556	3/31/2022	373.51
2022	April	135.778	4/1/2022	367.383
2022	April	135.016	4/4/2022	365.247
2022	April	134.059	4/5/2022	358.511
2022	April	137.356	4/6/2022	373.091
2022	April	137.237	4/7/2022	377.724
2022	April	138.31	4/8/2022	380.167
2022	April	141.603	4/11/2022	391.314
2022	April	144.591	4/12/2022	398.266
2022	April	144.745	4/13/2022	397.784
2022	April	144.014	4/14/2022	388.213

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2022	April	144.069	4/15/2022	388.276
2022	April	147.658	4/18/2022	392.621
2022	April	147.206	4/19/2022	382.401
2022	April	148.345	4/20/2022	385.757
2022	April	151.072	4/21/2022	382.848
2022	April	154.166	4/22/2022	392.964
2022	April	154.291	4/25/2022	405.007
2022	April	155.258	4/26/2022	416.018
2022	April	154.403	4/27/2022	410.92
2022	April	154.146	4/28/2022	409.518
2022	April	155.527	4/29/2022	411.715
2022	May	157.837	5/2/2022	421.978
2022	May	155.174	5/3/2022	417.516
2022	May	153.188	5/4/2022	418.499
2022	May	155.275	5/5/2022	422.266
2022	May	155.771	5/6/2022	427.809
2022	May	162.853	5/9/2022	462.655
2022	May	160.962	5/10/2022	465.838
2022	May	161.614	5/11/2022	470.157
2022	May	163.351	5/12/2022	486.341
2022	May	164.721	5/13/2022	482.23
2022	May	166.46	5/16/2022	488.382
2022	May	165.162	5/17/2022	476.939
2022	May	169.79	5/18/2022	498.422
2022	May	170.569	5/19/2022	505.272
2022	May	172.439	5/20/2022	509.305
2022	May	171.017	5/23/2022	500.197
2022	May	169.009	5/24/2022	507.137
2022	May	162.118	5/25/2022	488.263
2022	May	156.575	5/26/2022	461.735
2022	May	154.175	5/27/2022	444.178
2022	May	151.302	5/31/2022	433.913
2022	June	151.256	6/1/2022	428.219
2022	June	150.354	6/2/2022	426.731
2022	June	151.059	6/3/2022	431.993
2022	June	149.055	6/6/2022	429.339
2022	June	150.118	6/7/2022	439.594

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2022	June	150.658	6/8/2022	442.589
2022	June	153.397	6/9/2022	451.575
2022	June	156.008	6/10/2022	453.769
2022	June	159.97	6/13/2022	480.357
2022	June	161.863	6/14/2022	492.04
2022	June	162.855	6/15/2022	498.751
2022	June	168.569	6/16/2022	527.34
2022	June	165.031	6/17/2022	522.168
2022	June	165.666	6/21/2022	518.204
2022	June	170.974	6/22/2022	538.792
2022	June	171.865	6/23/2022	544.636
2022	June	169.244	6/24/2022	528.807
2022	June	170.886	6/27/2022	523.391
2022	June	173.195	6/28/2022	536.895
2022	June	174.964	6/29/2022	562.2
2022	June	178.375	6/30/2022	584.405
2022	July	180.88	7/1/2022	602.7
2022	July	183.541	7/5/2022	609.229
2022	July	179.53	7/6/2022	589.784
2022	July	175.111	7/7/2022	567.959
2022	July	170.423	7/8/2022	552.291
2022	July	173.824	7/11/2022	558.825
2022	July	175.657	7/12/2022	561.013
2022	July	174.72	7/13/2022	560.517
2022	July	175.873	7/14/2022	567.26
2022	July	173.843	7/15/2022	560.599
2022	July	173.473	7/18/2022	547.461
2022	July	170.62	7/19/2022	531.843
2022	July	170.534	7/20/2022	518.77
2022	July	170.469	7/21/2022	525.787
2022	July	171.219	7/22/2022	528.974
2022	July	172.232	7/25/2022	520.273
2022	July	172.43	7/26/2022	524.007
2022	July	169.263	7/27/2022	521.013
2022	July	169.393	7/28/2022	520.604
2022	July	166.771	7/29/2022	505.118
2022	August	168.963	8/1/2022	502.722

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2022	August	165.873	8/2/2022	481.547
2022	August	165.19	8/3/2022	479.783
2022	August	164.466	8/4/2022	476.063
2022	August	165.068	8/5/2022	468.079
2022	August	167.052	8/8/2022	470.499
2022	August	167.759	8/9/2022	473.482
2022	August	164.093	8/10/2022	462.139
2022	August	160.812	8/11/2022	450.604
2022	August	155.994	8/12/2022	449.542
2022	August	157.11	8/15/2022	454.516
2022	August	158.323	8/16/2022	454.268
2022	August	158.082	8/17/2022	456.196
2022	August	159.151	8/18/2022	464.001
2022	August	160.774	8/19/2022	469.607
2022	August	162.348	8/22/2022	481.723
2022	August	160.03	8/23/2022	486.627
2022	August	158.845	8/24/2022	482.55
2022	August	156.642	8/25/2022	480.592
2022	August	158.273	8/26/2022	483.268
2022	August	160.535	8/29/2022	492.382
2022	August	161.103	8/30/2022	506.85
2022	August	163.129	8/31/2022	510.653
2022	September	165.13	9/1/2022	519.155
2022	September	167.235	9/2/2022	508.725
2022	September	168.683	9/6/2022	501.531
2022	September	168.376	9/7/2022	502.282
2022	September	166.29	9/8/2022	486.001
2022	September	164.175	9/9/2022	469.223
2022	September	162.767	9/12/2022	460.467
2022	September	163.549	9/13/2022	467.865
2022	September	161.269	9/14/2022	474.95
2022	September	161.286	9/15/2022	480.272
2022	September	163.959	9/16/2022	493.576
2022	September	162.189	9/19/2022	489.987
2022	September	163.625	9/20/2022	489.146
2022	September	163.179	9/21/2022	487.204
2022	September	165.658	9/22/2022	489.201

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2022	September	170.314	9/23/2022	505.767
2022	September	176.575	9/26/2022	515.41
2022	September	187.675	9/27/2022	532.39
2022	September	186.65	9/28/2022	543.625
2022	September	190.67	9/29/2022	549.864
2022	September	187.504	9/30/2022	538.689
2022	October	184.954	10/3/2022	545.028
2022	October	183.068	10/4/2022	517.512
2022	October	181.169	10/5/2022	506.404
2022	October	179.457	10/6/2022	498.434
2022	October	183.035	10/7/2022	507.459
2022	October	182.114	10/10/2022	505.579
2022	October	188.651	10/11/2022	527.147
2022	October	193.576	10/12/2022	534.466
2022	October	192.214	10/13/2022	529.41
2022	October	193.894	10/14/2022	524.164
2022	October	192.386	10/17/2022	514.057
2022	October	190.877	10/18/2022	501.458
2022	October	191.912	10/19/2022	502.034
2022	October	189.815	10/20/2022	499.993
2022	October	191.853	10/21/2022	506.042
2022	October	188.976	10/24/2022	499.683
2022	October	186.661	10/25/2022	494.462
2022	October	188.05	10/26/2022	493.709
2022	October	190.219	10/27/2022	493.411
2022	October	184.495	10/28/2022	467.056
2022	October	183.566	10/31/2022	472.284
2022	November	178.515	11/1/2022	465.425
2022	November	177.254	11/2/2022	464.212
2022	November	178.892	11/3/2022	479.62
2022	November	177.529	11/4/2022	478.076
2022	November	177.079	11/7/2022	473.799
2022	November	177.942	11/8/2022	482.445
2022	November	181.116	11/9/2022	503.17
2022	November	174.333	11/10/2022	493.112
2022	November	171.213	11/14/2022	477.549
2022	November	168.351	11/15/2022	475.144

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2022	November	168.402	11/16/2022	480.636
2022	November	166.048	11/17/2022	481.903
2022	November	161.259	11/18/2022	470.798
2022	November	160.597	11/21/2022	470.801
2022	November	161.486	11/22/2022	468.772
2022	November	159.235	11/23/2022	463.364
2022	November	157.191	11/25/2022	460.653
2022	November	161.507	11/28/2022	473.685
2022	November	162.923	11/29/2022	472.682
2022	November	163.138	11/30/2022	473.761
2022	December	160.522	12/1/2022	462.859
2022	December	159.68	12/2/2022	462.695
2022	December	157.889	12/5/2022	461.012
2022	December	159.828	12/6/2022	472.329
2022	December	158.501	12/7/2022	480.724
2022	December	156.152	12/8/2022	471.589
2022	December	154.176	12/9/2022	461.926
2022	December	154.446	12/12/2022	455.733
2022	December	153.504	12/13/2022	450.772
2022	December	155.596	12/14/2022	456.036
2022	December	155.541	12/15/2022	465.522
2022	December	156.996	12/16/2022	476.331
2022	December	158.696	12/19/2022	479.264
2022	December	162.904	12/20/2022	480.919
2022	December	158.369	12/21/2022	467.956
2022	December	156.643	12/22/2022	472.813
2022	December	155.434	12/23/2022	468.595
2022	December	158.136	12/27/2022	471.157
2022	December	157.244	12/28/2022	484.158
2022	December	156.891	12/29/2022	483.809
2022	December	158.703	12/30/2022	480.303

Accessible Data for Figure 3: Spreads on Corporate Bonds, January 2019–September 2023 (2023 data)

Year	Month	Investment grade	Date	Noninvestment grade
2023	January	161.894	1/3/2023	484.206
2023	January	160.904	1/4/2023	471.769

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2023	January	160.812	1/5/2023	465.762
2023	January	161.608	1/6/2023	466.932
2023	January	159.021	1/9/2023	455.769
2023	January	157.503	1/10/2023	453.117
2023	January	154.493	1/11/2023	447.398
2023	January	151.822	1/12/2023	444.758
2023	January	149.743	1/13/2023	435.747
2023	January	148.043	1/17/2023	438.052
2023	January	147.661	1/18/2023	447.413
2023	January	149.224	1/19/2023	458.185
2023	January	148.284	1/20/2023	452.679
2023	January	146.935	1/23/2023	446.343
2023	January	147.047	1/24/2023	450.356
2023	January	146.947	1/25/2023	452.828
2023	January	143.534	1/26/2023	441.207
2023	January	143.755	1/27/2023	441.954
2023	January	143.839	1/30/2023	446.872
2023	January	142.684	1/31/2023	445.896
2023	February	140.268	2/1/2023	441.139
2023	February	136.377	2/2/2023	420.609
2023	February	136.823	2/3/2023	414.832
2023	February	137.609	2/6/2023	419.194
2023	February	138.053	2/7/2023	418.439
2023	February	139.865	2/8/2023	427.686
2023	February	141.145	2/9/2023	429.633
2023	February	142.09	2/10/2023	441.99
2023	February	142.755	2/13/2023	441.864
2023	February	140.723	2/14/2023	436.44
2023	February	141.022	2/15/2023	437.105
2023	February	142.546	2/16/2023	448.692
2023	February	144.436	2/17/2023	455.298
2023	February	145.562	2/21/2023	466.987
2023	February	146.121	2/22/2023	460.996
2023	February	146.174	2/23/2023	448.795
2023	February	145.095	2/24/2023	445.65
2023	February	145.495	2/27/2023	440.096
2023	February	146.183	2/28/2023	438.632

Letter

Year	Month	Investment grade	Date	Noninvestment grade
2023	March	146.113	3/1/2023	436.058
2023	March	144.065	3/2/2023	434.796
2023	March	142.546	3/3/2023	416.811
2023	March	143.014	3/6/2023	412.193
2023	March	145.097	3/7/2023	414.63
2023	March	147.087	3/8/2023	421.875
2023	March	153.021	3/9/2023	447.386
2023	March	160.803	3/10/2023	477.16
2023	March	176.234	3/13/2023	524.669
2023	March	167.33	3/14/2023	492.473
2023	March	179.46	3/15/2023	534.911
2023	March	174.116	3/16/2023	506.842
2023	March	181.915	3/17/2023	539.731
2023	March	179.588	3/20/2023	536.705
2023	March	165.913	3/21/2023	502.293
2023	March	168.731	3/22/2023	521.38
2023	March	173.42	3/23/2023	532.526
2023	March	173.449	3/24/2023	542.597
2023	March	171.66	3/27/2023	526.092
2023	March	172.665	3/28/2023	522.425
2023	March	168.411	3/29/2023	506.792
2023	March	166.089	3/30/2023	495.783
2023	March	163.955	3/31/2023	482.836
2023	April	161.081	4/3/2023	482.019
2023	April	163.059	4/4/2023	494.999
2023	April	164.132	4/5/2023	505.453
2023	April	163.288	4/6/2023	499.408
2023	April	161.367	4/10/2023	486.171
2023	April	160.935	4/11/2023	480.574
2023	April	163.088	4/12/2023	484.427
2023	April	159.823	4/13/2023	470.578
2023	April	158.484	4/14/2023	468.258
2023	April	156.731	4/17/2023	464.214
2023	April	154.99	4/18/2023	463.752
2023	April	157.468	4/19/2023	467.887
2023	April	158.796	4/20/2023	480.871
2023	April	157.553	4/21/2023	474.083

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Year	Month	Investment grade	Date	Noninvestment grade
2023	April	158.339	4/24/2023	478.371
2023	April	162.568	4/25/2023	493.127
2023	April	162.016	4/26/2023	491.771
2023	April	160.764	4/27/2023	478.952
2023	April	160.819	4/28/2023	480.644
2023	May	159.675	5/1/2023	471.454
2023	May	162.873	5/2/2023	493.516
2023	May	165.6	5/3/2023	507.189
2023	May	167.984	5/4/2023	517.189
2023	May	167.136	5/5/2023	503.946
2023	May	169.453	5/8/2023	502.231
2023	May	170.125	5/9/2023	504.572
2023	May	170.182	5/10/2023	507.244
2023	May	170.188	5/11/2023	510.768
2023	May	170.476	5/12/2023	509.336
2023	May	173.053	5/15/2023	508.299
2023	May	174.692	5/16/2023	513.465
2023	May	173.64	5/17/2023	507.41
2023	May	171.138	5/18/2023	499.96
2023	May	169.622	5/19/2023	496.743
2023	May	167.358	5/22/2023	488.064
2023	May	167.335	5/23/2023	493.924
2023	May	167.17	5/24/2023	499.246
2023	May	164.664	5/25/2023	490.617
2023	May	163.72	5/26/2023	483.914
2023	May	164.107	5/30/2023	489.645
2023	May	165.108	5/31/2023	498.532
2023	June	164.245	6/1/2023	496.232
2023	June	159.839	6/2/2023	471.491
2023	June	163.142	6/5/2023	477.801
2023	June	163.654	6/6/2023	476.469
2023	June	163.153	6/7/2023	468.683
2023	June	163.492	6/8/2023	470.952
2023	June	163.444	6/9/2023	462.094
2023	June	163.782	6/12/2023	463.404
2023	June	160.814	6/13/2023	451.302
2023	June	159.781	6/14/2023	449.783

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Year	Month	Investment grade	Date	Noninvestment grade
2023	June	157.827	6/15/2023	451.472
2023	June	155.404	6/16/2023	445.92
2023	June	154.742	6/20/2023	451.683
2023	June	155.81	6/21/2023	459.115
2023	June	154.728	6/22/2023	457.078
2023	June	156.314	6/23/2023	468.983
2023	June	155.887	6/26/2023	470.487
2023	June	155.162	6/27/2023	458.231
2023	June	154.587	6/28/2023	456.023
2023	June	151.684	6/29/2023	444.562
2023	June	148.181	6/30/2023	432.939
2023	July	146.02	7/3/2023	429.271
2023	July	146.644	7/5/2023	431.837
2023	July	148.773	7/6/2023	440.307
2023	July	148.348	7/7/2023	432.788
2023	July	149.573	7/10/2023	438.823
2023	July	147.952	7/11/2023	431.783
2023	July	147.213	7/12/2023	423.217
2023	July	148.055	7/13/2023	424.999
2023	July	148.662	7/14/2023	421.343
2023	July	149.935	7/17/2023	424.427
2023	July	148.871	7/18/2023	420.424
2023	July	148.166	7/19/2023	420.098
2023	July	147.56	7/20/2023	419.309
2023	July	145.977	7/21/2023	415.785
2023	July	143.159	7/24/2023	409.867
2023	July	143.55	7/25/2023	411.544
2023	July	141.556	7/26/2023	411.09
2023	July	140.584	7/27/2023	409.125
2023	July	139.689	7/28/2023	409.159
2023	July	137.633	7/31/2023	404.809
2023	August	140.044	8/1/2023	411.506
2023	August	144.401	8/2/2023	421.548
2023	August	143.368	8/3/2023	423.19
2023	August	145.054	8/4/2023	429.384
2023	August	145.001	8/7/2023	426.101
2023	August	146.468	8/8/2023	429.172

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Year	Month	Investment grade	Date	Noninvestment grade
2023	August	145.947	8/9/2023	424.308
2023	August	145.221	8/10/2023	415.768
2023	August	145.697	8/11/2023	414.101
2023	August	145.218	8/14/2023	410.8
2023	August	147.619	8/15/2023	415.738
2023	August	148.688	8/16/2023	416.488
2023	August	150.566	8/17/2023	428.895
2023	August	148.97	8/18/2023	430.418
2023	August	148.229	8/21/2023	426.113
2023	August	147.935	8/22/2023	422.126
2023	August	146.392	8/23/2023	419.1
2023	August	145.433	8/24/2023	424.106
2023	August	144.904	8/25/2023	417.444
2023	August	144.289	8/28/2023	415.273
2023	August	144.392	8/29/2023	414.625
2023	August	144.614	8/30/2023	413.436
2023	August	145.246	8/31/2023	415.189
2023	September	146.997	9/1/2023	411.953
2023	September	145.964	9/4/2023	410.749
2023	September	147.586	9/5/2023	412.6
2023	September	148.078	9/6/2023	413.944
2023	September	147.496	9/7/2023	415.671
2023	September	145.742	9/8/2023	411.278
2023	September	146.319	9/11/2023	410.217
2023	September	147.548	9/12/2023	409.486
2023	September	147.642	9/13/2023	410.699
2023	September	146.176	9/14/2023	404.623
2023	September	146.29	9/15/2023	405.966
2023	September	145.673	9/18/2023	409.04
2023	September	144.616	9/19/2023	408.497
2023	September	142.552	9/20/2023	402.001
2023	September	144.826	9/21/2023	415.72
2023	September	143.733	9/22/2023	418.549
2023	September	143.955	9/25/2023	422.136
2023	September	146.62	9/26/2023	433.035
2023	September	147.492	9/27/2023	429.388
2023	September	149.926	9/28/2023	432.414

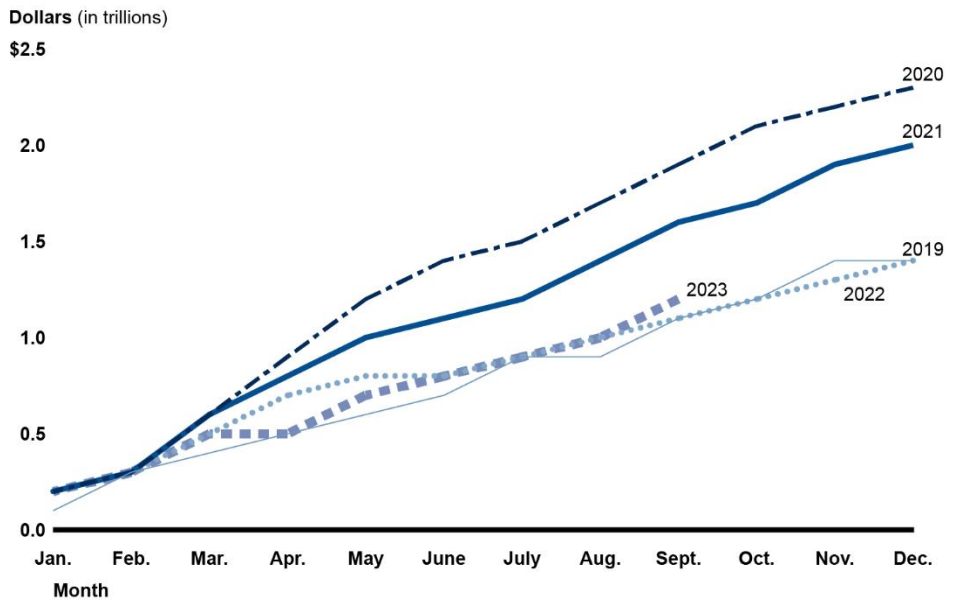
Year	Month	Investment grade	Date	Noninvestment grade
2023	September	151.106	9/29/2023	432.963

Source: GAO analysis of Bloomberg Fixed Income Credit Monitor data. | GAO-24-106482

Note: The spreads in this figure are option-adjusted spreads on dollar-denominated investment-grade and non-investment-grade bonds. A basis point is 1/100th of a percentage point.

Although corporate bond issuances have decreased from 2020 levels, they are still above the 2019 prepandemic levels, indicating that corporations have relatively easy access to longer-term credit markets (see fig. 4). The increase in the issuances of corporate bonds in 2020 and 2021 occurred as companies took advantage of low interest rates that prevailed to refinance their debt out to longer maturities.

Figure 4: Annual Cumulative Issuances of Corporate Bonds, January 2019–September 2023



Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Accessible Data for Figure 4: Annual Cumulative Issuances of Corporate Bonds, January 2019–September 2023

Month	2019 (dollars in trillions)	2020 (dollars in trillions)	2021 (dollars in trillions)	2022 (dollars in trillions)	2023 (dollars in trillions)
Jan.	0.1	0.2	0.2	0.2	0.2
Feb.	0.3	0.3	0.3	0.3	0.3
Mar.	0.4	0.6	0.6	0.5	0.5

Month	2019 (dollars in trillions)	2020 (dollars in trillions)	2021 (dollars in trillions)	2022 (dollars in trillions)	2023 (dollars in trillions)
Apr.	0.5	0.9	0.8	0.7	0.5
May	0.6	1.2	1	0.8	0.7
June	0.7	1.4	1.1	0.8	0.8
July	0.9	1.5	1.2	0.9	0.9
Aug.	0.9	1.7	1.4	1	1
Sept.	1.1	1.9	1.6	1.1	1.2
Oct.	1.2	2.1	1.7	1.2	
Nov.	1.4	2.2	1.9	1.3	
Dec.	1.4	2.3	2	1.4	

Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

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

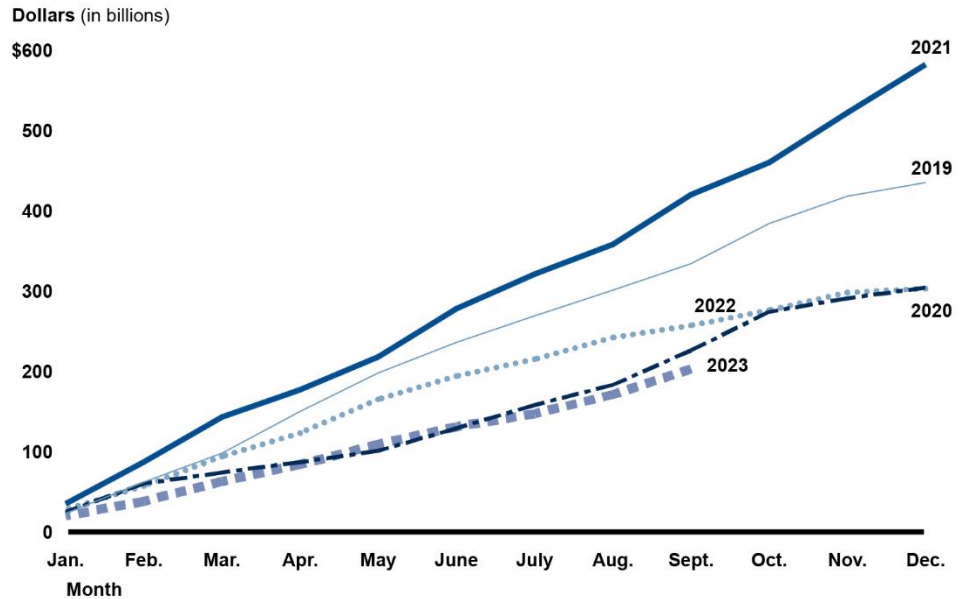
Asset-backed securities are tradable securities backed by pools of assets, such as loans, leases, or other cash-flow-producing assets. The holders of asset-backed securities are entitled to payments that are distributed by the underlying assets. Common underlying assets for asset-backed securities include auto loans and leases, credit card loans, student loans, insurance premiums, commercial mortgages, and small business 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.

Source: GAO. | GAO-24-106482

The recent increases in interest rates have not resulted in significant spillovers to corporate credit market functioning, and corporate credit spreads remain close to prepandemic levels. Additionally, many corporations extended the maturity of their debt as of July 2022, which should mitigate near-term refinancing risks.

However, businesses’ ability to manage their capital and diversify their income streams could be limited. For example, issuances of asset-backed securities—long-term debt instruments intended to support the provision of credit to businesses and consumers—have decreased since 2021. Issuances were above pandemic 2020 levels in 2021 but have decreased since then and were generally below 2020 pandemic levels in 2023 (see fig. 5). The decrease in issuances is partly due to uncertainty in overall economic activity, which could hamper businesses’ and consumers’ abilities to repay their loans.

Figure 5: Annual Cumulative Issuances of Asset-Backed Securities, January 2019–September 2023



Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Accessible Data for Figure 5: Annual Cumulative Issuances of Asset-Backed Securities, January 2019–September 2023

Month	2019 (dollars in billions)	2020 (dollars in billions)	2021 (dollars in billions)	2022 (dollars in billions)	2023 (dollars in billions)
Jan.	23	25	35	28	20
Feb.	62	60	87	57	38
Mar.	98	74	143	94	63
Apr.	150	87	177	123	84
May	198	101	218	165	109
June	236	129	278	194	131
July	269	158	321	215	147
Aug.	301	183	358	242	171
Sept.	334	226	420	257	203
Oct.	384	274	460	276	
Nov.	418	291	522	298	
Dec.	435	304	582	303	

Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Note: Total asset-backed securities include auto loans, collateralized debt obligations and collateralized loan obligations, credit card loans, equipment loans, student loans, and other securities, such as Small Business Administration pools and servicing advances.

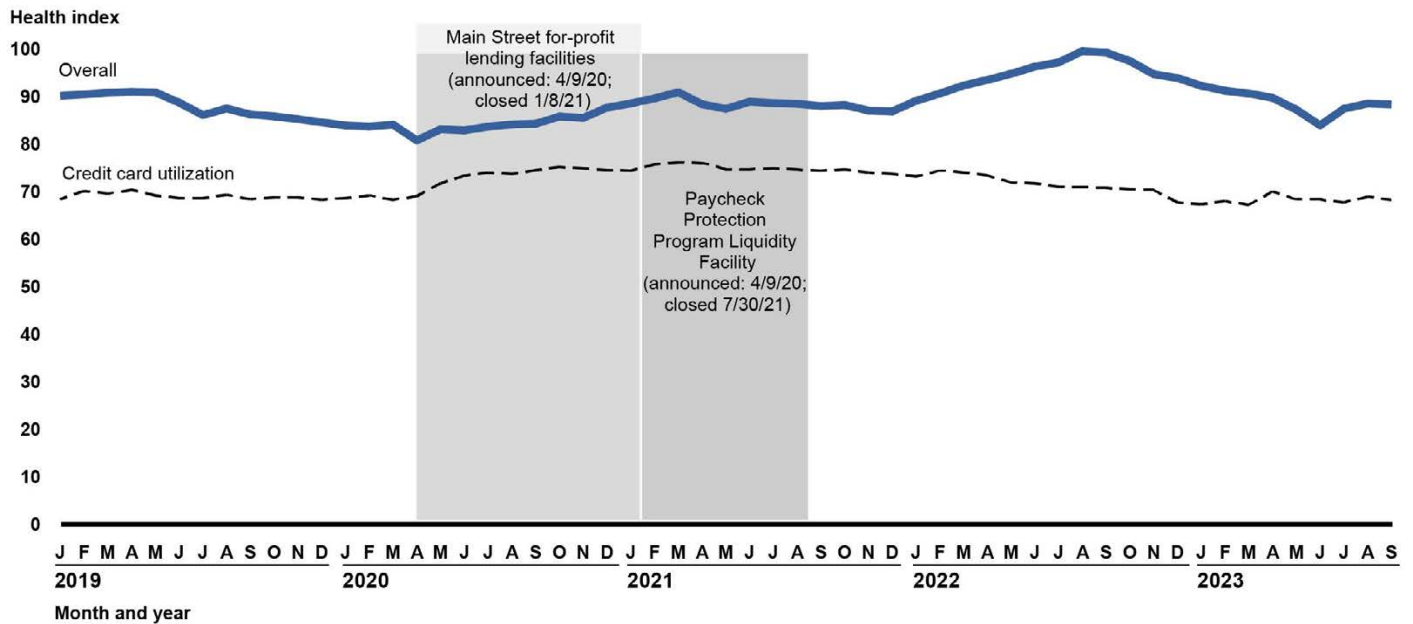
Small Businesses' Access to Credit Has Decreased since the Second Quarter 2022

The Federal Reserve announced the Main Street Lending Program in April 2020 to support the flow of credit to small and midsize businesses vulnerable to loss of revenue from the COVID-19 pandemic.²⁵ The Main Street for-profit lending facilities ceased providing loans to small businesses on January 8, 2021.

According to available data and survey results, small businesses' access to credit has decreased since the second quarter of 2022. For example, credit card utilization, an indicator of the ease of credit availability, decreased between May 2022 and July 2023, and is close to prepandemic levels (see fig. 6).

²⁵The Federal Reserve also established the Paycheck Protection Program Liquidity Facility, a non-CARES Act facility, to facilitate lending by eligible institutions that provided loans to small businesses under the Paycheck Protection Program. It stopped providing loans on July 30, 2021.

Figure 6: Small Business Health Index, January 2019–September 2023



Source: GAO analysis of Dun & Bradstreet data. | GAO-24-106482

Accessible Data for Figure 6: Small Business Health Index, January 2019–September 2023

Year	Month	Overall	Credit card utilization
2019	January	90.12	68.4
2019	February	90.4	70.12
2019	March	90.79	69.55
2019	April	90.96	70.34
2019	May	90.86	69.21
2019	June	88.7	68.62
2019	July	86.08	68.62
2019	August	87.44	69.34
2019	September	86.21	68.41
2019	October	85.78	68.81
2019	November	85.22	68.71
2019	December	84.53	68.24
2020	January	83.87	68.59
2020	February	83.65	69.22
2020	March	84.05	68.22
2020	April	80.73	69.05
2020	May	83.07	71.71

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Year	Month	Overall	Credit card utilization
2020	June	82.84	73.35
2020	July	83.62	73.96
2020	August	84.09	73.63
2020	September	84.24	74.48
2020	October	85.76	75.16
2020	November	85.47	74.88
2020	December	87.65	74.48
2021	January	88.51	74.41
2021	February	89.59	75.71
2021	March	90.87	76.12
2021	April	88.35	76.02
2021	May	87.39	74.65
2021	June	88.87	74.65
2021	July	88.57	74.87
2021	August	88.45	74.58
2021	September	87.97	74.39
2021	October	88.2	74.66
2021	November	87.01	73.91
2021	December	86.84	73.67
2022	January	89.07	73.14
2022	February	90.6	74.42
2022	March	92.29	73.97
2022	April	93.46	73.36
2022	May	94.75	71.89
2022	June	96.26	71.7
2022	July	97.15	71
2022	August	99.51	70.9
2022	September	99.19	70.7
2022	October	97.43	70.5
2022	November	94.65	70.3
2022	December	93.86	67.7
2023	January	92.22	67.3
2023	February	91.2	67.9
2023	March	90.6	67.2
2023	April	89.7	70
2023	May	87.2	68.3
2023	June	83.9	68.3

Year	Month	Overall	Credit card utilization
2023	July	87.4	67.73
2023	August	88.5	68.9
2023	September	88.3	68.26

Source: GAO analysis of Dun & Bradstreet data. | GAO-24-106482

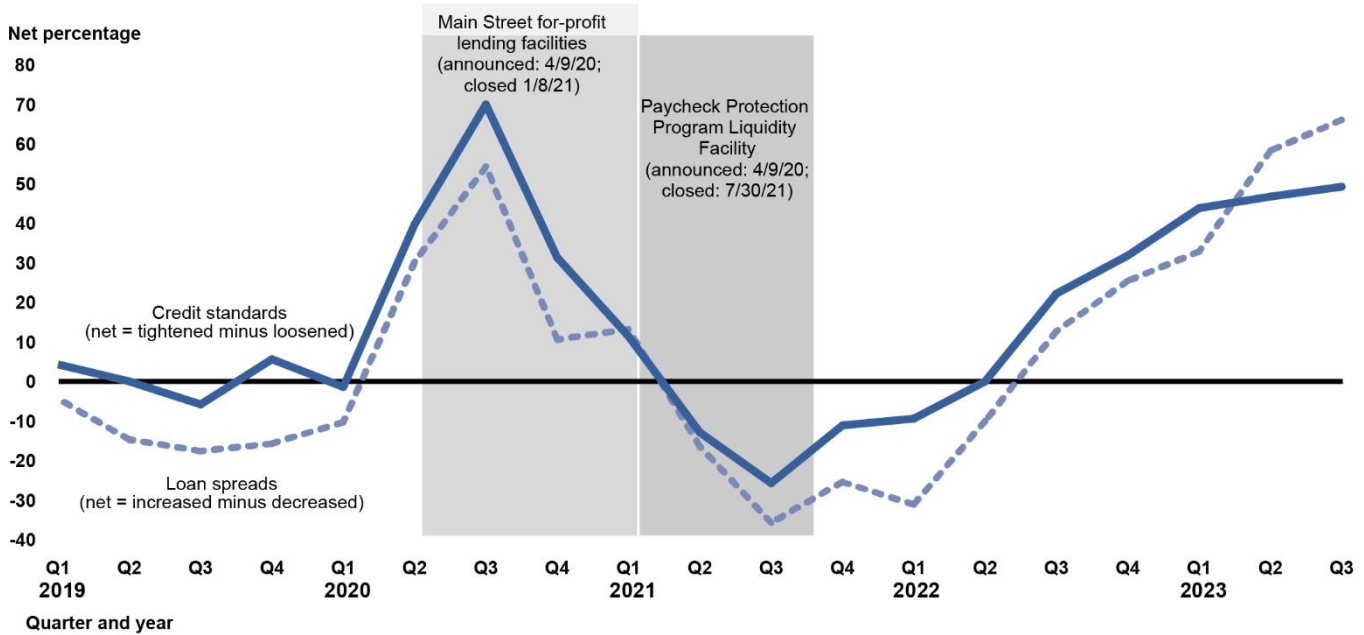
Note: The overall Small Business Health Index combines four data elements into a composite number that tracks the health of small businesses. These elements are the credit card utilization index, business failure index, credit card delinquency index (accounts at 61 or more days past due), and trade credit dollar delinquency index (the percentage of delinquent dollars—those at 91 days or more past due—out of all outstanding balances). 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 businesses. 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.

The overall health of small businesses improved after January 2022, but has deteriorated since October 2022. Specifically, the health of small businesses in some sectors—especially real estate, business services, financial services, and transportation—generally declined from July 2022 to July 2023.

Additionally, access to credit has been unfavorable since the first quarter of 2022, as banks appear to have tightened their credit standards and increased their loan spreads (see fig. 7), according to a Federal Reserve survey.²⁶ Reasons cited by the banks included a less favorable or more uncertain economic outlook, reduced tolerance for risk, worsening of industry-specific problems, and concerns about legislative changes or supervisory actions.

²⁶The July 2023 *Federal Reserve Senior Loan Officer Opinion Survey on Bank Lending Practices* includes banks' lending conditions for small businesses (those with annual sales of less than \$50 million); see <https://www.federalreserve.gov/data/sloos/sloos-202307.htm>, accessed Oct. 10, 2023.

Figure 7: Banks' Lending Conditions for Small Business Loans, First Quarter 2019–Third Quarter 2023



Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-24-106482

Accessible Data for Figure 7: Banks' Lending Conditions for Small Business Loans, First Quarter 2019–Third Quarter 2023

Year	Quarter	Credit standards	Loan spreads
2019	Q1	4.3	-4.4
2019	Q2	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	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	-10
2022	Q3	22.2	12.7
2022	Q4	31.8	25.4

Year	Quarter	Credit standards	Loan spreads
2023	Q1	43.8	32.8
2023	Q2	46.7	58.3
2023	Q3	49.2	66.1

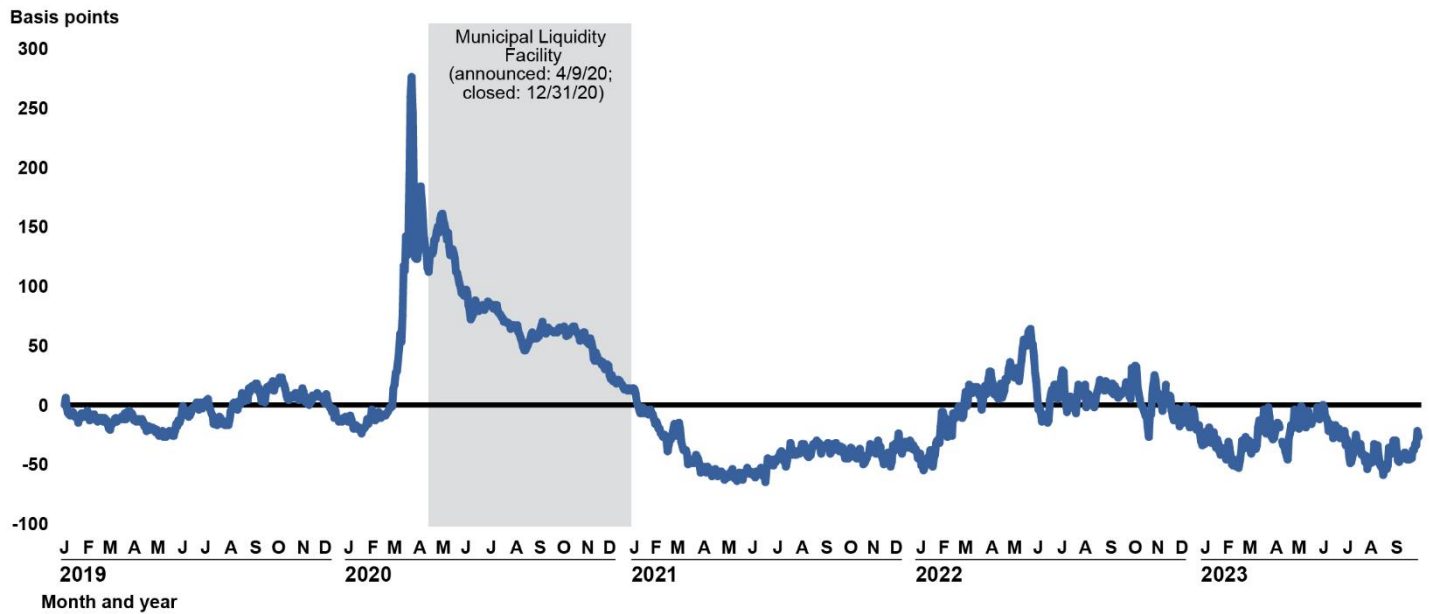
Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-24-106482

Note: We report results from the Federal Reserve’s Senior Loan Officer Opinion Survey on credit standards and loan spreads for commercial and industrial loans. A positive number for credit standards indicates that more banks are tightening rather than loosening standards. A positive number for loan spreads indicates that more banks are increasing rather than decreasing loan spreads. Because of 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-202307.htm>, accessed Oct. 10, 2023.

Municipal Credit Borrowing Costs Have Generally Remained Low, but Bond Issuances Have Decreased

The Federal Reserve established the Municipal Liquidity Facility in May 2020 to address deteriorating conditions in municipal credit markets; the facility stopped extending credit on December 31, 2020. Spreads on municipal bonds have generally remained low and have been generally at or below 2019 (prepandemic) levels since 2021 (see fig. 8). This trend suggests that investor confidence in the municipal credit market remains stable.

Figure 8: Spreads on Municipal Bonds, January 2019–September 2023



Source: GAO analysis of Bloomberg data. | GAO-24-106482

Accessible Data for Figure 8: Spreads on Municipal Bonds, January 2019–September 2023 (2019 data)

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

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

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

Letter

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

Letter

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

Letter

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

Letter

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

Letter

Year	Month	Basis points	Date
2019	December	-11	12/16/2019
2019	December	-12	12/17/2019
2019	December	-14	12/18/2019
2019	December	-13	12/19/2019
2019	December	-13	12/20/2019
2019	December	-14	12/23/2019
2019	December	-11	12/24/2019
2019	December	-11	12/26/2019
2019	December	-10	12/27/2019
2019	December	-12	12/30/2019
2019	December	-14	12/31/2019

Accessible Data for Figure 8: Spreads on Municipal Bonds, January 2019–September 2023 (2020 data)

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

Letter

Year	Month	Basis points	Date
2020	February	-4	2/24/2020
2020	February	-2	2/25/2020
2020	February	-2	2/26/2020
2020	February	-1	2/27/2020
2020	February	14	2/28/2020
2020	March	17	3/2/2020
2020	March	27	3/3/2020
2020	March	28	3/4/2020
2020	March	37	3/5/2020
2020	March	47	3/6/2020
2020	March	60	3/9/2020
2020	March	53	3/10/2020
2020	March	75	3/11/2020
2020	March	117	3/12/2020
2020	March	113	3/13/2020
2020	March	142	3/16/2020
2020	March	126	3/17/2020
2020	March	127	3/18/2020
2020	March	189	3/19/2020
2020	March	259	3/20/2020
2020	March	276	3/23/2020
2020	March	246	3/24/2020
2020	March	178	3/25/2020
2020	March	124	3/26/2020
2020	March	123	3/27/2020
2020	March	123	3/30/2020
2020	March	131	3/31/2020
2020	April	173	4/1/2020
2020	April	184	4/2/2020
2020	April	172	4/3/2020
2020	April	155	4/6/2020
2020	April	140	4/7/2020
2020	April	132	4/8/2020
2020	April	128	4/9/2020
2020	April	115	4/13/2020
2020	April	112	4/14/2020
2020	April	126	4/15/2020

Letter

Year	Month	Basis points	Date
2020	April	130	4/16/2020
2020	April	127	4/17/2020
2020	April	129	4/20/2020
2020	April	139	4/21/2020
2020	April	139	4/22/2020
2020	April	146	4/23/2020
2020	April	150	4/24/2020
2020	April	145	4/27/2020
2020	April	156	4/28/2020
2020	April	160	4/29/2020
2020	April	161	4/30/2020
2020	May	155	5/1/2020
2020	May	152	5/4/2020
2020	May	146	5/5/2020
2020	May	139	5/6/2020
2020	May	145	5/7/2020
2020	May	133	5/8/2020
2020	May	126	5/11/2020
2020	May	129	5/12/2020
2020	May	131	5/13/2020
2020	May	128	5/14/2020
2020	May	123	5/15/2020
2020	May	112	5/18/2020
2020	May	111	5/19/2020
2020	May	107	5/20/2020
2020	May	102	5/21/2020
2020	May	99	5/22/2020
2020	May	94	5/26/2020
2020	May	94	5/27/2020
2020	May	92	5/28/2020
2020	May	96	5/29/2020
2020	June	97	6/1/2020
2020	June	94	6/2/2020
2020	June	84	6/3/2020
2020	June	79	6/4/2020
2020	June	72	6/5/2020
2020	June	74	6/8/2020

Letter

Year	Month	Basis points	Date
2020	June	76	6/9/2020
2020	June	83	6/10/2020
2020	June	88	6/11/2020
2020	June	83	6/12/2020
2020	June	82	6/15/2020
2020	June	79	6/16/2020
2020	June	81	6/17/2020
2020	June	83	6/18/2020
2020	June	84	6/19/2020
2020	June	82	6/22/2020
2020	June	80	6/23/2020
2020	June	83	6/24/2020
2020	June	83	6/25/2020
2020	June	87	6/26/2020
2020	June	86	6/29/2020
2020	June	84	6/30/2020
2020	July	83	7/1/2020
2020	July	84	7/2/2020
2020	July	81	7/6/2020
2020	July	84	7/7/2020
2020	July	81	7/8/2020
2020	July	84	7/9/2020
2020	July	78	7/10/2020
2020	July	77	7/13/2020
2020	July	76	7/14/2020
2020	July	74	7/15/2020
2020	July	73	7/16/2020
2020	July	70	7/17/2020
2020	July	70	7/20/2020
2020	July	70	7/21/2020
2020	July	69	7/22/2020
2020	July	69	7/23/2020
2020	July	68	7/24/2020
2020	July	64	7/27/2020
2020	July	66	7/28/2020
2020	July	67	7/29/2020
2020	July	67	7/30/2020

Letter

Year	Month	Basis points	Date
2020	July	65	7/31/2020
2020	August	64	8/3/2020
2020	August	67	8/4/2020
2020	August	61	8/5/2020
2020	August	59	8/6/2020
2020	August	56	8/7/2020
2020	August	53	8/10/2020
2020	August	49	8/11/2020
2020	August	46	8/12/2020
2020	August	46	8/13/2020
2020	August	48	8/14/2020
2020	August	50	8/17/2020
2020	August	53	8/18/2020
2020	August	54	8/19/2020
2020	August	59	8/20/2020
2020	August	61	8/21/2020
2020	August	59	8/24/2020
2020	August	56	8/25/2020
2020	August	58	8/26/2020
2020	August	56	8/27/2020
2020	August	57	8/28/2020
2020	August	58	8/31/2020
2020	September	63	9/1/2020
2020	September	66	9/2/2020
2020	September	70	9/3/2020
2020	September	61	9/4/2020
2020	September	62	9/8/2020
2020	September	60	9/9/2020
2020	September	64	9/10/2020
2020	September	65	9/11/2020
2020	September	63	9/14/2020
2020	September	63	9/15/2020
2020	September	62	9/16/2020
2020	September	62	9/17/2020
2020	September	61	9/18/2020
2020	September	62	9/21/2020
2020	September	62	9/22/2020

Letter

Year	Month	Basis points	Date
2020	September	61	9/23/2020
2020	September	64	9/24/2020
2020	September	65	9/25/2020
2020	September	63	9/28/2020
2020	September	64	9/29/2020
2020	September	63	9/30/2020
2020	October	66	10/1/2020
2020	October	64	10/2/2020
2020	October	58	10/5/2020
2020	October	61	10/6/2020
2020	October	59	10/7/2020
2020	October	63	10/8/2020
2020	October	62	10/9/2020
2020	October	65	10/13/2020
2020	October	66	10/14/2020
2020	October	66	10/15/2020
2020	October	63	10/16/2020
2020	October	61	10/19/2020
2020	October	60	10/20/2020
2020	October	58	10/21/2020
2020	October	54	10/22/2020
2020	October	56	10/23/2020
2020	October	60	10/26/2020
2020	October	61	10/27/2020
2020	October	61	10/28/2020
2020	October	55	10/29/2020
2020	October	53	10/30/2020
2020	November	54	11/2/2020
2020	November	51	11/3/2020
2020	November	56	11/4/2020
2020	November	53	11/5/2020
2020	November	48	11/6/2020
2020	November	39	11/9/2020
2020	November	37	11/10/2020
2020	November	44	11/12/2020
2020	November	41	11/13/2020
2020	November	37	11/16/2020

Letter

Year	Month	Basis points	Date
2020	November	38	11/17/2020
2020	November	36	11/18/2020
2020	November	34	11/19/2020
2020	November	36	11/20/2020
2020	November	32	11/23/2020
2020	November	30	11/24/2020
2020	November	31	11/25/2020
2020	November	34	11/27/2020
2020	November	33	11/30/2020
2020	December	25	12/1/2020
2020	December	22	12/2/2020
2020	December	25	12/3/2020
2020	December	20	12/4/2020
2020	December	21	12/7/2020
2020	December	21	12/8/2020
2020	December	18	12/9/2020
2020	December	21	12/10/2020
2020	December	21	12/11/2020
2020	December	20	12/14/2020
2020	December	18	12/15/2020
2020	December	17	12/16/2020
2020	December	15	12/17/2020
2020	December	13	12/18/2020
2020	December	13	12/21/2020
2020	December	14	12/22/2020
2020	December	12	12/23/2020
2020	December	14	12/24/2020
2020	December	13	12/28/2020
2020	December	12	12/29/2020
2020	December	14	12/30/2020
2020	December	14	12/31/2020

Accessible Data for Figure 8: Spreads on Municipal Bonds, January 2019–September 2023 (2021 data)

Year	Month	Basis points	Date
2021	January	13	1/4/2021
2021	January	9	1/5/2021

Letter

Year	Month	Basis points	Date
2021	January	2	1/6/2021
2021	January	-1	1/7/2021
2021	January	-4	1/8/2021
2021	January	-7	1/11/2021
2021	January	-7	1/12/2021
2021	January	-2	1/13/2021
2021	January	-7	1/14/2021
2021	January	-4	1/15/2021
2021	January	-4	1/19/2021
2021	January	-5	1/20/2021
2021	January	-8	1/21/2021
2021	January	-7	1/22/2021
2021	January	-4	1/25/2021
2021	January	-7	1/26/2021
2021	January	-8	1/27/2021
2021	January	-12	1/28/2021
2021	January	-16	1/29/2021
2021	February	-14	2/1/2021
2021	February	-16	2/2/2021
2021	February	-20	2/3/2021
2021	February	-20	2/4/2021
2021	February	-24	2/5/2021
2021	February	-25	2/8/2021
2021	February	-27	2/9/2021
2021	February	-25	2/10/2021
2021	February	-26	2/11/2021
2021	February	-30	2/12/2021
2021	February	-39	2/16/2021
2021	February	-34	2/17/2021
2021	February	-29	2/18/2021
2021	February	-29	2/19/2021
2021	February	-25	2/22/2021
2021	February	-20	2/23/2021
2021	February	-16	2/24/2021
2021	February	-26	2/25/2021
2021	February	-17	2/26/2021
2021	March	-18	3/1/2021

Letter

Year	Month	Basis points	Date
2021	March	-15	3/2/2021
2021	March	-20	3/3/2021
2021	March	-31	3/4/2021
2021	March	-35	3/5/2021
2021	March	-38	3/8/2021
2021	March	-38	3/9/2021
2021	March	-38	3/10/2021
2021	March	-41	3/11/2021
2021	March	-50	3/12/2021
2021	March	-48	3/15/2021
2021	March	-49	3/16/2021
2021	March	-47	3/17/2021
2021	March	-46	3/18/2021
2021	March	-49	3/19/2021
2021	March	-45	3/22/2021
2021	March	-42	3/23/2021
2021	March	-44	3/24/2021
2021	March	-46	3/25/2021
2021	March	-50	3/26/2021
2021	March	-57	3/29/2021
2021	March	-56	3/30/2021
2021	March	-56	3/31/2021
2021	April	-52	4/1/2021
2021	April		4/2/2021
2021	April	-57	4/5/2021
2021	April	-52	4/6/2021
2021	April	-55	4/7/2021
2021	April	-54	4/8/2021
2021	April	-57	4/9/2021
2021	April	-60	4/12/2021
2021	April	-57	4/13/2021
2021	April	-59	4/14/2021
2021	April	-54	4/15/2021
2021	April	-57	4/16/2021
2021	April	-60	4/19/2021
2021	April	-57	4/20/2021
2021	April	-56	4/21/2021

Letter

Year	Month	Basis points	Date
2021	April	-56	4/22/2021
2021	April	-57	4/23/2021
2021	April	-58	4/26/2021
2021	April	-63	4/27/2021
2021	April	-62	4/28/2021
2021	April	-61	4/29/2021
2021	April	-61	4/30/2021
2021	May	-59	5/3/2021
2021	May	-57	5/4/2021
2021	May	-56	5/5/2021
2021	May	-54	5/6/2021
2021	May	-58	5/7/2021
2021	May	-62	5/10/2021
2021	May	-61	5/11/2021
2021	May	-64	5/12/2021
2021	May	-60	5/13/2021
2021	May	-57	5/14/2021
2021	May	-59	5/17/2021
2021	May	-59	5/18/2021
2021	May	-63	5/19/2021
2021	May	-57	5/20/2021
2021	May	-58	5/21/2021
2021	May	-57	5/24/2021
2021	May	-53	5/25/2021
2021	May	-56	5/26/2021
2021	May	-58	5/27/2021
2021	May	-56	5/28/2021
2021	May		5/31/2021
2021	June	-59	6/1/2021
2021	June	-57	6/2/2021
2021	June	-61	6/3/2021
2021	June	-56	6/4/2021
2021	June	-59	6/7/2021
2021	June	-57	6/8/2021
2021	June	-58	6/9/2021
2021	June	-53	6/10/2021
2021	June	-55	6/11/2021

Letter

Year	Month	Basis points	Date
2021	June	-60	6/14/2021
2021	June	-60	6/15/2021
2021	June	-65	6/16/2021
2021	June	-53	6/17/2021
2021	June	-45	6/18/2021
2021	June	-51	6/21/2021
2021	June	-48	6/22/2021
2021	June	-48	6/23/2021
2021	June	-46	6/24/2021
2021	June	-51	6/25/2021
2021	June	-47	6/28/2021
2021	June	-48	6/29/2021
2021	June	-45	6/30/2021
2021	July	-46	7/1/2021
2021	July	-43	7/2/2021
2021	July	-40	7/6/2021
2021	July	-39	7/7/2021
2021	July	-40	7/8/2021
2021	July	-47	7/9/2021
2021	July	-48	7/12/2021
2021	July	-52	7/13/2021
2021	July	-47	7/14/2021
2021	July	-41	7/15/2021
2021	July	-41	7/16/2021
2021	July	-32	7/19/2021
2021	July	-37	7/20/2021
2021	July	-42	7/21/2021
2021	July	-39	7/22/2021
2021	July	-42	7/23/2021
2021	July	-42	7/26/2021
2021	July	-39	7/27/2021
2021	July	-40	7/28/2021
2021	July	-41	7/29/2021
2021	July	-37	7/30/2021
2021	August	-33	8/2/2021
2021	August	-33	8/3/2021
2021	August	-33	8/4/2021

Letter

Year	Month	Basis points	Date
2021	August	-36	8/5/2021
2021	August	-41	8/6/2021
2021	August	-43	8/9/2021
2021	August	-44	8/10/2021
2021	August	-43	8/11/2021
2021	August	-42	8/12/2021
2021	August	-35	8/13/2021
2021	August	-33	8/16/2021
2021	August	-33	8/17/2021
2021	August	-34	8/18/2021
2021	August	-30	8/19/2021
2021	August	-32	8/20/2021
2021	August	-32	8/23/2021
2021	August	-36	8/24/2021
2021	August	-41	8/25/2021
2021	August	-38	8/26/2021
2021	August	-35	8/27/2021
2021	August	-34	8/30/2021
2021	August	-35	8/31/2021
2021	September	-35	9/1/2021
2021	September	-32	9/2/2021
2021	September	-35	9/3/2021
2021	September	-41	9/7/2021
2021	September	-38	9/8/2021
2021	September	-33	9/9/2021
2021	September	-38	9/10/2021
2021	September	-37	9/13/2021
2021	September	-32	9/14/2021
2021	September	-35	9/15/2021
2021	September	-37	9/16/2021
2021	September	-39	9/17/2021
2021	September	-35	9/20/2021
2021	September	-37	9/21/2021
2021	September	-36	9/22/2021
2021	September	-41	9/23/2021
2021	September	-45	9/24/2021
2021	September	-44	9/27/2021

Letter

Year	Month	Basis points	Date
2021	September	-45	9/28/2021
2021	September	-45	9/29/2021
2021	September	-40	9/30/2021
2021	October	-36	10/1/2021
2021	October	-37	10/4/2021
2021	October	-42	10/5/2021
2021	October	-40	10/6/2021
2021	October	-44	10/7/2021
2021	October	-45	10/8/2021
2021	October	-45	10/12/2021
2021	October	-42	10/13/2021
2021	October	-37	10/14/2021
2021	October	-44	10/15/2021
2021	October	-44	10/18/2021
2021	October	-50	10/19/2021
2021	October	-49	10/20/2021
2021	October	-47	10/21/2021
2021	October	-45	10/22/2021
2021	October	-42	10/25/2021
2021	October	-41	10/26/2021
2021	October	-33	10/27/2021
2021	October	-36	10/28/2021
2021	October	-34	10/29/2021
2021	November	-37	11/1/2021
2021	November	-36	11/2/2021
2021	November	-41	11/3/2021
2021	November	-35	11/4/2021
2021	November	-30	11/5/2021
2021	November	-37	11/8/2021
2021	November	-35	11/9/2021
2021	November	-43	11/10/2021
2021	November	-45	11/12/2021
2021	November	-50	11/15/2021
2021	November	-48	11/16/2021
2021	November	-45	11/17/2021
2021	November	-43	11/18/2021
2021	November	-40	11/19/2021

Letter

Year	Month	Basis points	Date
2021	November	-49	11/22/2021
2021	November	-52	11/23/2021
2021	November	-48	11/24/2021
2021	November	-34	11/26/2021
2021	November	-39	11/29/2021
2021	November	-33	11/30/2021
2021	December	-32	12/1/2021
2021	December	-33	12/2/2021
2021	December	-24	12/3/2021
2021	December	-33	12/6/2021
2021	December	-38	12/7/2021
2021	December	-41	12/8/2021
2021	December	-37	12/9/2021
2021	December	-36	12/10/2021
2021	December	-31	12/13/2021
2021	December	-33	12/14/2021
2021	December	-36	12/15/2021
2021	December	-32	12/16/2021
2021	December	-30	12/17/2021
2021	December	-32	12/20/2021
2021	December	-37	12/21/2021
2021	December	-34	12/22/2021
2021	December	-38	12/23/2021
2021	December	-37	12/27/2021
2021	December	-39	12/28/2021
2021	December	-45	12/29/2021
2021	December	-42	12/30/2021
2021	December	-41	12/31/2021

Accessible Data for Figure 8: Spreads on Municipal Bonds, January 2019–September 2023 (2022 data)

Year	Month	Basis points	Date
2022	January	-51	1/3/2022
2022	January	-51	1/4/2022
2022	January	-55	1/5/2022
2022	January	-52	1/6/2022
2022	January	-50	1/7/2022
2022	January	-48	1/10/2022
2022	January	-44	1/11/2022
2022	January	-43	1/12/2022
2022	January	-38	1/13/2022
2022	January	-45	1/14/2022
2022	January	-52	1/18/2022
2022	January	-45	1/19/2022
2022	January	-42	1/20/2022
2022	January	-32	1/21/2022
2022	January	-30	1/24/2022
2022	January	-29	1/25/2022
2022	January	-32	1/26/2022
2022	January	-18	1/27/2022
2022	January	-6	1/28/2022
2022	January	-6	1/31/2022
2022	February	-10	2/1/2022
2022	February	-11	2/2/2022
2022	February	-16	2/3/2022
2022	February	-27	2/4/2022
2022	February	-25	2/7/2022
2022	February	-26	2/8/2022
2022	February	-23	2/9/2022
2022	February	-26	2/10/2022
2022	February	-7	2/11/2022
2022	February	-10	2/14/2022
2022	February	-11	2/15/2022
2022	February	-9	2/16/2022
2022	February	-4	2/17/2022
2022	February	-1	2/18/2022
2022	February	-4	2/22/2022

Letter

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

Letter

Year	Month	Basis points	Date
2022	April	9	4/18/2022
2022	April	12	4/19/2022
2022	April	22	4/20/2022
2022	April	20	4/21/2022
2022	April	23	4/22/2022
2022	April	31	4/25/2022
2022	April	36	4/26/2022
2022	April	32	4/27/2022
2022	April	31	4/28/2022
2022	April	29	4/29/2022
2022	May	23	5/2/2022
2022	May	26	5/3/2022
2022	May	31	5/4/2022
2022	May	23	5/5/2022
2022	May	20	5/6/2022
2022	May	30	5/9/2022
2022	May	37	5/10/2022
2022	May	47	5/11/2022
2022	May	55	5/12/2022
2022	May	50	5/13/2022
2022	May	55	5/16/2022
2022	May	50	5/17/2022
2022	May	61	5/18/2022
2022	May	63	5/19/2022
2022	May	64	5/20/2022
2022	May	52	5/23/2022
2022	May	51	5/24/2022
2022	May	41	5/25/2022
2022	May	27	5/26/2022
2022	May	20	5/27/2022
2022	May	7	5/31/2022
2022	June	-4	6/1/2022
2022	June	-2	6/2/2022
2022	June	-7	6/3/2022
2022	June	-14	6/6/2022
2022	June	-8	6/7/2022
2022	June	-11	6/8/2022

Letter

Year	Month	Basis points	Date
2022	June	-9	6/9/2022
2022	June	-14	6/10/2022
2022	June	-15	6/13/2022
2022	June	-13	6/14/2022
2022	June	4	6/15/2022
2022	June	10	6/16/2022
2022	June	13	6/17/2022
2022	June	6	6/21/2022
2022	June	17	6/22/2022
2022	June	17	6/23/2022
2022	June	12	6/24/2022
2022	June	5	6/27/2022
2022	June	6	6/28/2022
2022	June	15	6/29/2022
2022	June	23	6/30/2022
2022	July	29	7/1/2022
2022	July	28	7/5/2022
2022	July	11	7/6/2022
2022	July	2	7/7/2022
2022	July	-6	7/8/2022
2022	July	3	7/11/2022
2022	July	2	7/12/2022
2022	July	7	7/13/2022
2022	July	2	7/14/2022
2022	July	5	7/15/2022
2022	July	1	7/18/2022
2022	July	-4	7/19/2022
2022	July	-7	7/20/2022
2022	July	7	7/21/2022
2022	July	17	7/22/2022
2022	July	13	7/25/2022
2022	July	8	7/26/2022
2022	July	8	7/27/2022
2022	July	13	7/28/2022
2022	July	12	7/29/2022
2022	August	17	8/1/2022
2022	August	-2	8/2/2022

Letter

Year	Month	Basis points	Date
2022	August	3	8/3/2022
2022	August	9	8/4/2022
2022	August	1	8/5/2022
2022	August	6	8/8/2022
2022	August	4	8/9/2022
2022	August	5	8/10/2022
2022	August	-2	8/11/2022
2022	August	3	8/12/2022
2022	August	9	8/15/2022
2022	August	12	8/16/2022
2022	August	16	8/17/2022
2022	August	21	8/18/2022
2022	August	16	8/19/2022
2022	August	13	8/22/2022
2022	August	13	8/23/2022
2022	August	12	8/24/2022
2022	August	20	8/25/2022
2022	August	19	8/26/2022
2022	August	14	8/29/2022
2022	August	17	8/30/2022
2022	August	14	8/31/2022
2022	September	11	9/1/2022
2022	September	18	9/2/2022
2022	September	9	9/6/2022
2022	September	16	9/7/2022
2022	September	14	9/8/2022
2022	September	11	9/9/2022
2022	September	6	9/12/2022
2022	September	7	9/13/2022
2022	September	10	9/14/2022
2022	September	9	9/15/2022
2022	September	12	9/16/2022
2022	September	11	9/19/2022
2022	September	12	9/20/2022
2022	September	19	9/21/2022
2022	September	11	9/22/2022
2022	September	18	9/23/2022

Letter

Year	Month	Basis points	Date
2022	September	7	9/26/2022
2022	September	5	9/27/2022
2022	September	31	9/28/2022
2022	September	28	9/29/2022
2022	September	21	9/30/2022
2022	October	33	10/3/2022
2022	October	32	10/4/2022
2022	October	17	10/5/2022
2022	October	10	10/6/2022
2022	October	5	10/7/2022
2022	October	0	10/11/2022
2022	October	-1	10/12/2022
2022	October	-3	10/13/2022
2022	October	-6	10/14/2022
2022	October	-9	10/17/2022
2022	October	-10	10/18/2022
2022	October	-19	10/19/2022
2022	October	-27	10/20/2022
2022	October	-8	10/21/2022
2022	October	-8	10/24/2022
2022	October	9	10/25/2022
2022	October	18	10/26/2022
2022	October	25	10/27/2022
2022	October	20	10/28/2022
2022	October	11	10/31/2022
2022	November	10	11/1/2022
2022	November	5	11/2/2022
2022	November	3	11/3/2022
2022	November	1	11/4/2022
2022	November	-5	11/7/2022
2022	November	1	11/8/2022
2022	November	1	11/9/2022
2022	November	17	11/10/2022
2022	November		11/11/2022
2022	November	8	11/14/2022
2022	November	8	11/15/2022
2022	November	7	11/16/2022

Letter

Year	Month	Basis points	Date
2022	November	-5	11/17/2022
2022	November	-10	11/18/2022
2022	November	-13	11/21/2022
2022	November	-8	11/22/2022
2022	November	-6	11/23/2022
2022	November	-3	11/25/2022
2022	November	-8	11/28/2022
2022	November	-18	11/29/2022
2022	November	-13	11/30/2022
2022	December	-6	12/1/2022
2022	December	-4	12/2/2022
2022	December	-15	12/5/2022
2022	December	-7	12/6/2022
2022	December	-1	12/7/2022
2022	December	-7	12/8/2022
2022	December	-15	12/9/2022
2022	December	-19	12/12/2022
2022	December	-11	12/13/2022
2022	December	-9	12/14/2022
2022	December	-4	12/15/2022
2022	December	-8	12/16/2022
2022	December	-16	12/19/2022
2022	December	-21	12/20/2022
2022	December	-18	12/21/2022
2022	December	-17	12/22/2022
2022	December	-25	12/23/2022
2022	December	-31	12/27/2022
2022	December	-34	12/28/2022
2022	December	-28	12/29/2022
2022	December	-33	12/30/2022

Accessible Data for Figure 8: Spreads on Municipal Bonds, January 2019–September 2023 (2023 data)

Year	Month	Basis points	Date
2023	January	-25	1/3/2023
2023	January	-22	1/4/2023
2023	January	-25	1/5/2023
2023	January	-19	1/6/2023
2023	January	-22	1/9/2023
2023	January	-32	1/10/2023
2023	January	-29	1/11/2023
2023	January	-23	1/12/2023
2023	January	-31	1/13/2023
2023	January	-36	1/17/2023
2023	January	-29	1/18/2023
2023	January	-32	1/19/2023
2023	January	-39	1/20/2023
2023	January	-42	1/23/2023
2023	January	-36	1/24/2023
2023	January	-37	1/25/2023
2023	January	-40	1/26/2023
2023	January	-42	1/27/2023
2023	January	-46	1/30/2023
2023	January	-42	1/31/2023
2023	February	-31	2/1/2023
2023	February	-36	2/2/2023
2023	February	-44	2/3/2023
2023	February	-50	2/6/2023
2023	February	-51	2/7/2023
2023	February	-46	2/8/2023
2023	February	-49	2/9/2023
2023	February	-52	2/10/2023
2023	February	-50	2/13/2023
2023	February	-53	2/14/2023
2023	February	-47	2/15/2023
2023	February	-40	2/16/2023
2023	February	-30	2/17/2023
2023	February	-37	2/21/2023
2023	February	-34	2/22/2023

Letter

Year	Month	Basis points	Date
2023	February	-27	2/23/2023
2023	February	-33	2/24/2023
2023	February	-30	2/27/2023
2023	February	-30	2/28/2023
2023	March	-38	3/1/2023
2023	March	-41	3/2/2023
2023	March	-32	3/3/2023
2023	March	-35	3/6/2023
2023	March	-35	3/7/2023
2023	March	-37	3/8/2023
2023	March	-34	3/9/2023
2023	March	-19	3/10/2023
2023	March	-13	3/13/2023
2023	March	-22	3/14/2023
2023	March	-14	3/15/2023
2023	March	-20	3/16/2023
2023	March	-4	3/17/2023
2023	March	-13	3/20/2023
2023	March	-24	3/21/2023
2023	March	-12	3/22/2023
2023	March	-2	3/23/2023
2023	March	-10	3/24/2023
2023	March	-25	3/27/2023
2023	March	-27	3/28/2023
2023	March	-29	3/29/2023
2023	March	-28	3/30/2023
2023	March	-23	3/31/2023
2023	April	-20	4/3/2023
2023	April	-15	4/4/2023
2023	April	-16	4/5/2023
2023	April	-19	4/6/2023
2023	April		4/7/2023
2023	April	-31	4/10/2023
2023	April	-34	4/11/2023
2023	April	-35	4/12/2023
2023	April	-39	4/13/2023
2023	April	-43	4/14/2023

Letter

Year	Month	Basis points	Date
2023	April	-46	4/17/2023
2023	April	-28	4/18/2023
2023	April	-24	4/19/2023
2023	April	-17	4/20/2023
2023	April	-20	4/21/2023
2023	April	-15	4/24/2023
2023	April	-4	4/25/2023
2023	April	-8	4/26/2023
2023	April	-14	4/27/2023
2023	April	-5	4/28/2023
2023	May	-20	5/1/2023
2023	May	-6	5/2/2023
2023	May	-1	5/3/2023
2023	May	-3	5/4/2023
2023	May	-10	5/5/2023
2023	May	-18	5/8/2023
2023	May	-19	5/9/2023
2023	May	-9	5/10/2023
2023	May	-5	5/11/2023
2023	May	-11	5/12/2023
2023	May	-14	5/15/2023
2023	May	-16	5/16/2023
2023	May	-13	5/17/2023
2023	May	-12	5/18/2023
2023	May	-11	5/19/2023
2023	May	-11	5/22/2023
2023	May	-2	5/23/2023
2023	May	-4	5/24/2023
2023	May	-12	5/25/2023
2023	May	-9	5/26/2023
2023	May	-2	5/30/2023
2023	May	0	5/31/2023
2023	June	-2	6/1/2023
2023	June	-11	6/2/2023
2023	June	-11	6/5/2023
2023	June	-14	6/6/2023
2023	June	-22	6/7/2023

Letter

Year	Month	Basis points	Date
2023	June	-16	6/8/2023
2023	June	-18	6/9/2023
2023	June	-17	6/12/2023
2023	June	-28	6/13/2023
2023	June	-27	6/14/2023
2023	June	-17	6/15/2023
2023	June	-23	6/16/2023
2023	June	-23	6/20/2023
2023	June	-20	6/21/2023
2023	June	-28	6/22/2023
2023	June	-24	6/23/2023
2023	June	-23	6/26/2023
2023	June	-28	6/27/2023
2023	June	-22	6/28/2023
2023	June	-34	6/29/2023
2023	June	-29	6/30/2023
2023	July	-34	7/3/2023
2023	July	-43	7/5/2023
2023	July	-49	7/6/2023
2023	July	-48	7/7/2023
2023	July	-43	7/10/2023
2023	July	-41	7/11/2023
2023	July	-31	7/12/2023
2023	July	-25	7/13/2023
2023	July	-32	7/14/2023
2023	July	-32	7/17/2023
2023	July	-35	7/18/2023
2023	July	-33	7/19/2023
2023	July	-42	7/20/2023
2023	July	-41	7/21/2023
2023	July	-43	7/24/2023
2023	July	-48	7/25/2023
2023	July	-43	7/26/2023
2023	July	-54	7/27/2023
2023	July	-47	7/28/2023
2023	July	-47	7/31/2023
2023	August	-49	8/1/2023

Letter

Year	Month	Basis points	Date
2023	August	-45	8/2/2023
2023	August	-48	8/3/2023
2023	August	-33	8/4/2023
2023	August	-37	8/7/2023
2023	August	-35	8/8/2023
2023	August	-34	8/9/2023
2023	August	-43	8/10/2023
2023	August	-50	8/11/2023
2023	August	-52	8/14/2023
2023	August	-52	8/15/2023
2023	August	-59	8/16/2023
2023	August	-54	8/17/2023
2023	August	-50	8/18/2023
2023	August	-54	8/21/2023
2023	August	-51	8/22/2023
2023	August	-36	8/23/2023
2023	August	-39	8/24/2023
2023	August	-41	8/25/2023
2023	August	-36	8/28/2023
2023	August	-30	8/29/2023
2023	August	-32	8/30/2023
2023	August	-30	8/31/2023
2023	September	-39	9/1/2023
2023	September	-47	9/5/2023
2023	September	-48	9/6/2023
2023	September	-43	9/7/2023
2023	September	-42	9/8/2023
2023	September	-45	9/11/2023
2023	September	-43	9/12/2023
2023	September	-40	9/13/2023
2023	September	-43	9/14/2023
2023	September	-46	9/15/2023
2023	September	-45	9/18/2023
2023	September	-46	9/19/2023
2023	September	-44	9/20/2023
2023	September	-45	9/21/2023
2023	September	-38	9/22/2023

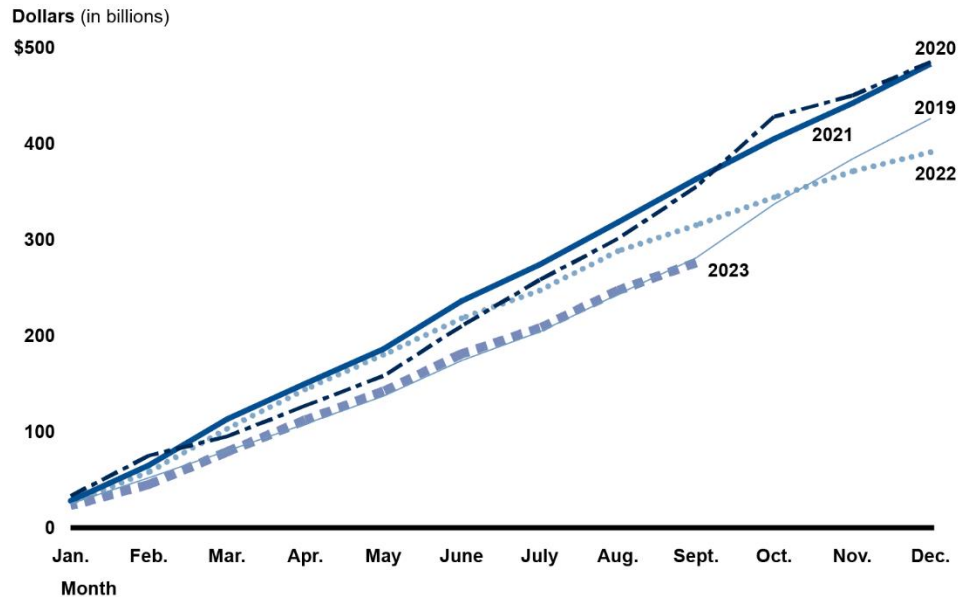
Year	Month	Basis points	Date
2023	September	-38	9/25/2023
2023	September	-33	9/26/2023
2023	September	-34	9/27/2023
2023	September	-22	9/28/2023
2023	September	-27	9/29/2023

Source: GAO analysis of Bloomberg data. | GAO-24-106482

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.

However, municipal bond issuances have generally decreased since mid-2022 and are consistent with prepandemic levels (see fig. 9). This suggests that higher interest rates may have created significant challenges for raising new debt or refinancing existing debt.

Figure 9: Annual Cumulative Issuances of Municipal Bonds, January 2019–September 2023



Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Accessible Data for Figure 9: Annual Cumulative Issuances of Municipal Bonds, January 2019–September 2023

Month	2019 (dollars in billions)	2020 (dollars in billions)	2021 (dollars in billions)	2022 (dollars in billions)	2023 (dollars in billions)
Jan.	25	33	28	26	23

Month	2019 (dollars in billions)	2020 (dollars in billions)	2021 (dollars in billions)	2022 (dollars in billions)	2023 (dollars in billions)
Feb.	52	75	65	58	45
Mar.	80	95	113	103	79
Apr.	108	127	150	144	112
May	137	158	186	180	142
June	174	210	236	218	181
July	204	258	274	247	208
Aug.	243	301	318	288	247
Sept.	281	355	363	315	276
Oct.	337	428	405	344	
Nov.	384	450	442	371	
Dec.	426	485	483	391	

Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Note: Issuances include private placements. All issuance figures are based on deals with maturity of 13 months or greater. The average final maturity at issuance was 18.2 years in 2019, 17.4 years in 2020, 17.8 years in 2021, 18.9 years in 2022, and 19 years in 2023.

Near-Term Vulnerabilities of Sectors Targeted by the Facilities Remain Low

The debt levels carried by businesses and state and local governments targeted by the facilities appear sustainable. However, this debt could leave these entities vulnerable to distress if their incomes or revenues decline, or the assets they own fall in value. Key indicators of vulnerabilities arising from debts of businesses and state and local governments appear to have remained stable since 2022. However, the effects of persistent inflation, further interest rate increases, and climate-related financial risks could make these entities more vulnerable in the near future if they lead to a broader contraction in credit.²⁷

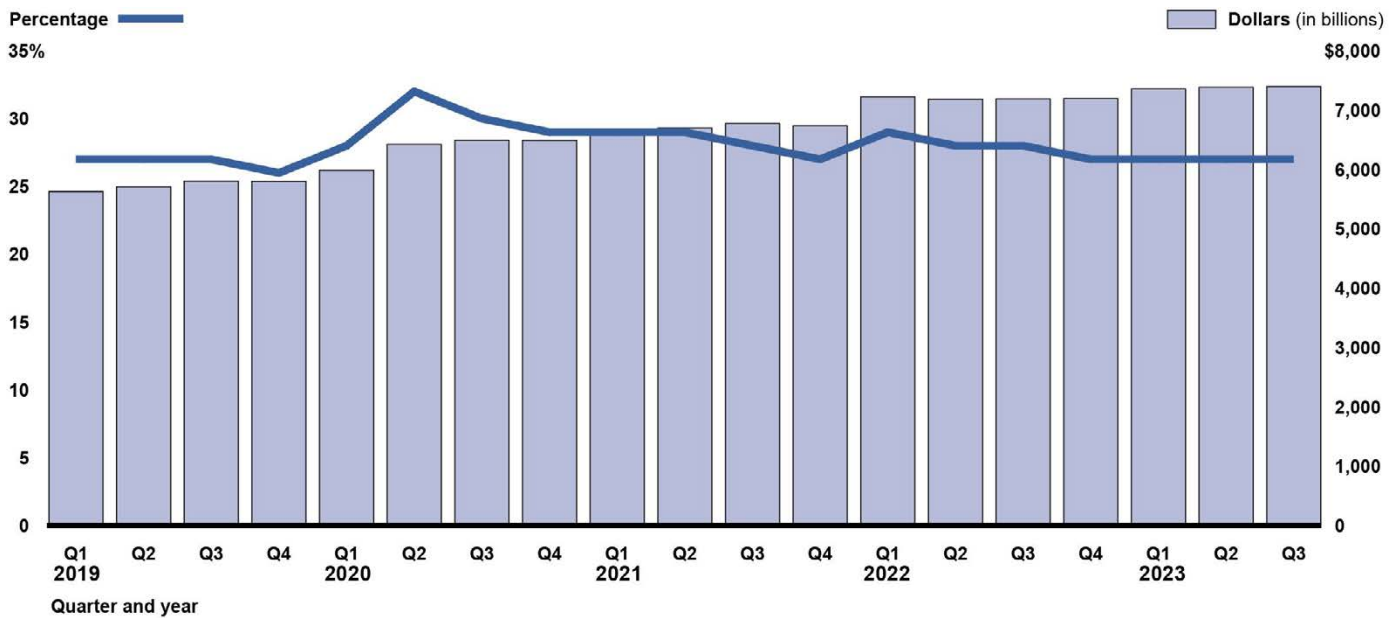
Large businesses. Corporate bonds outstanding have remained elevated since 2021, but they appear to be sustainable. The ratio of bonds to gross domestic product (GDP), which reflects sustainability of the debt, has continued to decline since 2021. This decline has resulted from the rapid increase in GDP, and the ratio is consistent with prepandemic levels (see fig. 10). A lower ratio suggests lower chances of

²⁷Climate-related financial risks concern the risk of financial losses due to rising global temperatures and accompanying environmental shifts, such as rising sea levels and more severe weather events.

default, as economic conditions create favorable conditions for debt payments.

Additionally, while bankruptcy filings have risen since February 2022, they are generally at prepandemic levels. Most of the bankruptcy filings are in the consumer discretionary sector, including industries that were adversely affected by the pandemic and higher inflation or interest rates—such as travel, restaurants, and apparel and clothing. If inflationary pressures prove to be more stubborn than anticipated by the Federal Reserve, additional interest rate increases could lead to widespread debt-servicing problems, increased defaults, and credit contraction.

Figure 10: Ratio of Nonfinancial Corporate Bonds Outstanding to Gross Domestic Product, First Quarter 2019–Third Quarter 2023



Source: GAO analysis of data from Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-24-106482

Accessible Data for Figure 10: Ratio of Nonfinancial Corporate Bonds Outstanding to Gross Domestic Product, First Quarter 2019–Third Quarter 2023

Year	Quarter	Dollars (in billions)	Percentage
2019	Q1	5628	27
2019	Q2	5708	27
2019	Q3	5801	27
2019	Q4	5800	26

Letter

Year	Quarter	Dollars (in billions)	Percentage
2020	Q1	5985	28
2020	Q2	6422	32
2020	Q3	6493	30
2020	Q4	6491	29
2021	Q1	6662	29
2021	Q2	6699	29
2021	Q3	6775	28
2021	Q4	6736	27
2022	Q1	7223	29
2022	Q2	7185	28
2022	Q3	7190	28
2022	Q4	7197	27
2023	Q1	7356	27
2023	Q2	7386	27
2023	Q3	7397	27

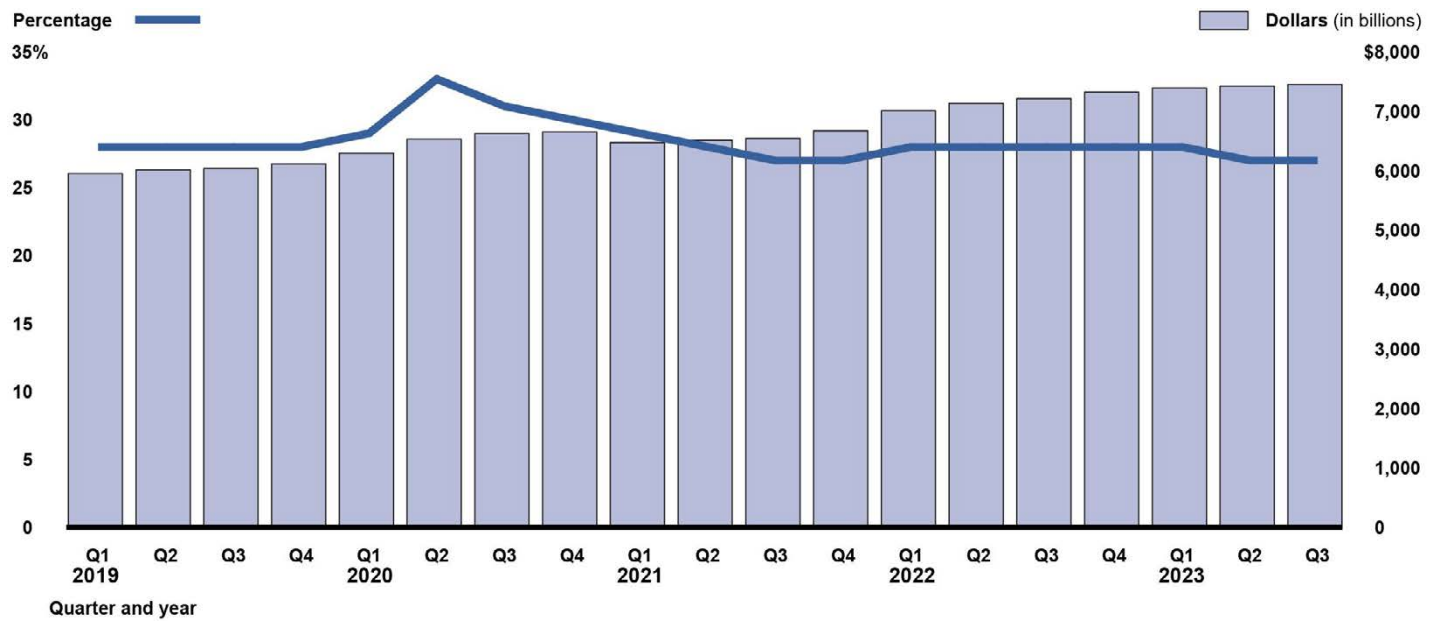
Source: GAO analysis of data from Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-24-106482

Note: The gross domestic product is seasonally adjusted.

Small businesses. Small business loans outstanding have increased since 2020. However, the sustainability of small business debt, as indicated by the ratio of loans to GDP, appears to be unchanged since the fourth quarter of 2021 and is consistent with prepandemic levels (see fig. 11). Data from Dun & Bradstreet indicate that while credit card delinquencies and trade credit delinquencies have remained stable or improved slightly, small business failures have worsened since September 2022.²⁸ Increased costs for labor, materials, and transportation could reduce small businesses' ability to repay loans, dampening the credit market for small businesses.

²⁸Dun & Bradstreet, "Small Business Health Index," September 2023. 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. Credit card delinquencies are accounts at 61 days or more past due, and trade credit delinquencies are the percentage of delinquent dollars—those at 91 days or more past due—out of all outstanding balances.

Figure 11: Ratio of Small Business Loans Outstanding to Gross Domestic Product, First Quarter 2019–Third Quarter 2023



Source: GAO analysis of data from Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-24-106482

Accessible Data for Figure 11: Ratio of Small Business Loans Outstanding to Gross Domestic Product, First Quarter 2019–Third Quarter 2023

Year	Quarter	Dollars (in billions)	Percentage
2019	Q1	5954	28
2019	Q2	6016	28
2019	Q3	6038	28
2019	Q4	6115	28
2020	Q1	6294	29
2020	Q2	6533	33
2020	Q3	6624	31
2020	Q4	6653	30
2021	Q1	6473	29
2021	Q2	6515	28
2021	Q3	6543	27
2021	Q4	6670	27
2022	Q1	7009	28
2022	Q2	7134	28
2022	Q3	7213	28
2022	Q4	7322	28

Year	Quarter	Dollars (in billions)	Percentage
2023	Q1	7392	28
2023	Q2	7422	27
2023	Q3	7452	27

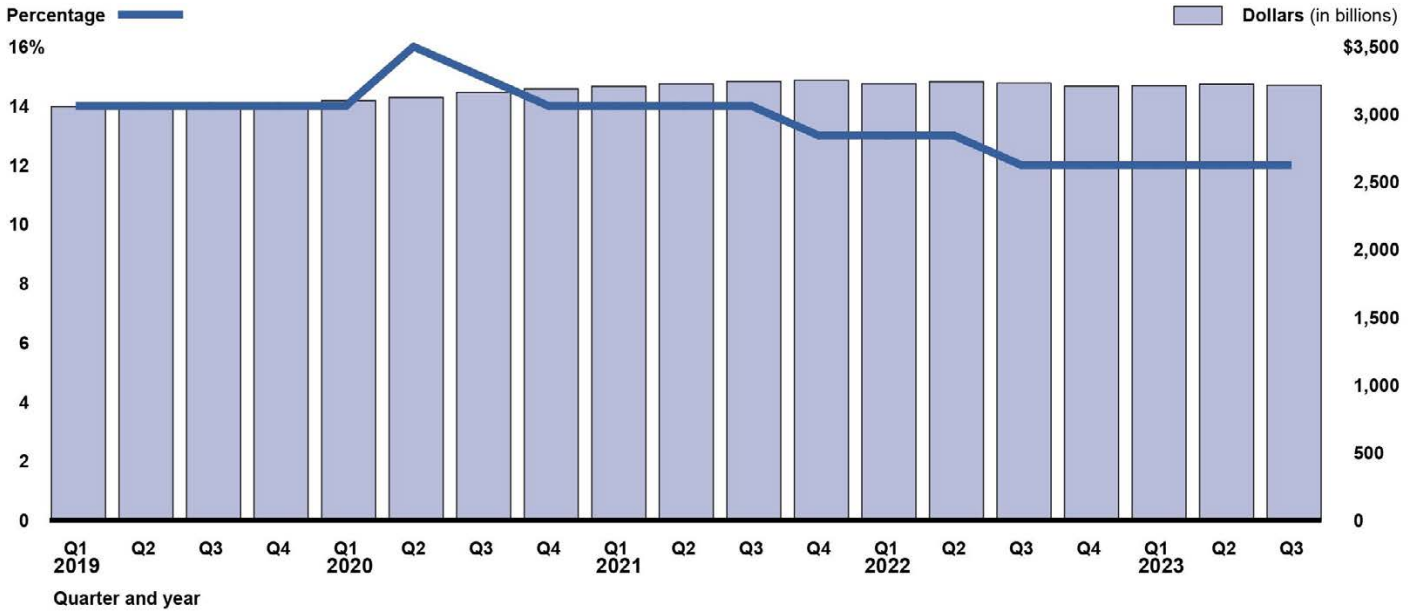
Source: GAO analysis of data from Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-24-106482

Note: 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. However, the level of state and local government bonds outstanding appears to be sustainable, as indicated by the ratio of bonds to GDP, which has been below 2019 prepandemic levels since the fourth quarter of 2021 (see fig. 12). State and local governments' ability to repay their debt remains unchanged, as revenues have generally remained steady since 2022. Property tax and sales tax revenues have increased, while individual income and corporate income taxes have decreased or remained unchanged. However, climate-related financial risk can pose physical risk, which is the destruction of or damage to physical assets, the impact on economic activity, and other losses from extreme weather events.²⁹ These events can reduce future long-term local and state tax revenues or increase expenditures, potentially making the debt unsustainable.

²⁹See Office of Financial Research, *Annual Report To Congress* (2022).

Figure 12: Ratio of State and Local Government Bonds Outstanding to Gross Domestic Product, First Quarter 2019–Third Quarter 2023



Source: GAO analysis of data from Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-24-106482

Accessible Data for Figure 12: Ratio of State and Local Government Bonds Outstanding to Gross Domestic Product, First Quarter 2019–Third Quarter 2023

Year	Quarter	Dollars (in billions)	Percentage
2019	Q1	3058	14
2019	Q2	3041	14
2019	Q3	3041	14
2019	Q4	3075	14
2020	Q1	3102	14
2020	Q2	3124	16
2020	Q3	3162	15
2020	Q4	3188	14
2021	Q1	3207	14
2021	Q2	3226	14
2021	Q3	3243	14
2021	Q4	3251	13
2022	Q1	3227	13
2022	Q2	3241	13
2022	Q3	3231	12
2022	Q4	3208	12

Year	Quarter	Dollars (in billions)	Percentage
2023	Q1	3212	12
2023	Q2	3223	12
2023	Q3	3215	12

Source: GAO analysis of data from Board of Governors of the Federal Reserve System and Bureau of Economic Analysis. | GAO-24-106482

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

Most Main Street Borrowers Continue to Make Regular Payments, but Delinquencies Are Slowly Increasing

Main Street borrowers are making regular payments and, in many cases, repaying their loans earlier than expected. As of the end of August 2023, about 33 percent of the 1,830 Main Street loans had been fully repaid, and about 2.5 percent had resulted in losses. Despite the regularity of these payments, loan delinquencies have increased since August 2021, and could remain elevated due to economic uncertainties (such as fluctuations in variable interest rates).

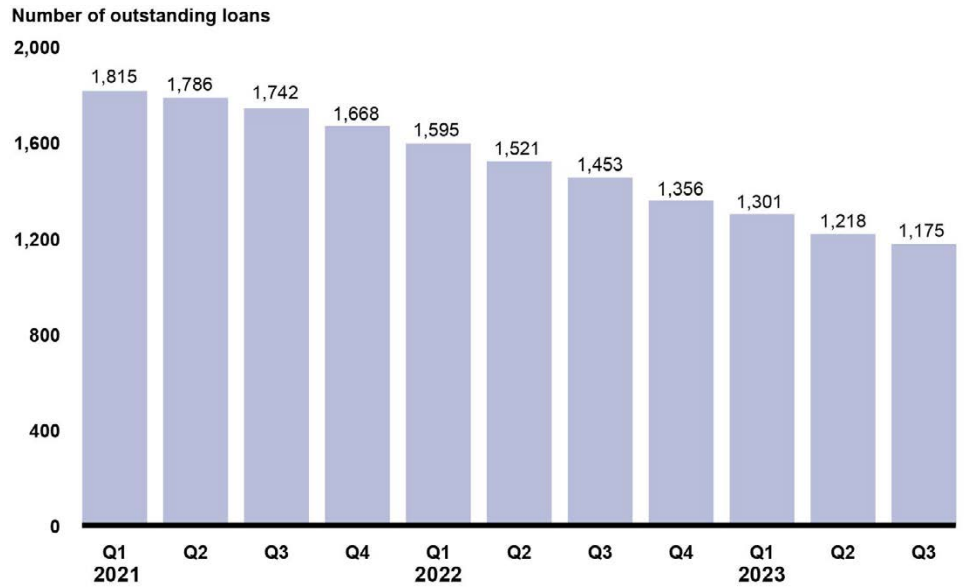
Borrowers Are Making Regular Payments and, in Many Cases, Paying More Than What Is Due

Since the Main Street Lending Program terminated in January 2021, Main Street borrowers generally have made regular and early (unscheduled) payments, resulting in fewer outstanding loans than expected at this point in the repayment process.³⁰ As of the end of August 2023, 1,175 (or about 64 percent) of the 1,830 Main Street Lending Program loans remained outstanding (see fig. 13). This accounted for about \$11.3 billion (or about 65 percent) of the total authorized loan amount.³¹

³⁰Loans issued under the Main Street Lending Program are recourse loans and have a 5-year maturity, meaning they are expected to be fully repaid in mid-to-late 2025. A recourse loan allows the lender to pursue the borrower’s assets in the event of a default.

³¹The total authorized amount is defined as the total amount eligible lenders have extended to eligible borrowers.

Figure 13: Main Street Lending Program Outstanding Loans, First Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 13: Main Street Lending Program Outstanding Loans, First Quarter 2021–Third Quarter 2023

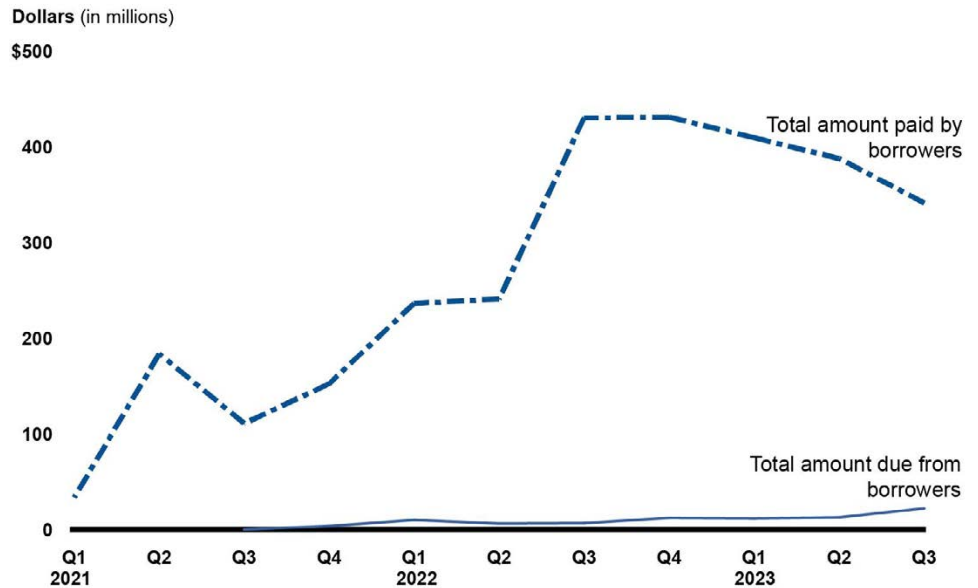
Year	Quarter	Number of outstanding loans
2021	Q1	1815
2021	Q2	1786
2021	Q3	1742
2021	Q4	1668
2022	Q1	1595
2022	Q2	1521
2022	Q3	1453
2022	Q4	1356
2023	Q1	1301
2023	Q2	1218
2023	Q3	1175

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: This figure reflects data through the end of August 2023, which only partially represents the third quarter of 2023. In addition, these counts reflect the final count of outstanding Main Street loans at the end of a given quarter.

Most borrowers have made timely regular interest payments, which began in August 2021, as we previously reported.³² Borrowers made early payments that totaled over \$200 million combined in the first and second quarters of 2021. Since scheduled repayments began, borrowers have consistently paid more than the amount due per quarter, with the amount paid peaking in the second half of 2022 (see fig. 14). However, the dollar amount of payments made fell in 2023, which may be due to the effects of continued economic pressures on borrowers.³³ As discussed previously, persistent inflation and further interest rate increases could make businesses more vulnerable, especially if they lead to reduced business earnings.

Figure 14: Main Street Lending Program Loan Payments Due and Amounts Paid by Borrowers, First Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

³²See [GAO-23-105629](#).

³³We did not calculate the total amount of interest borrowers paid or overall Main Street loan revenue as a measure of program performance when analyzing the performance of Main Street loans as of August 2023. Since the majority of borrowers' first principal payments are due in the fourth quarter of 2023, the performance of loans could fluctuate. We will continue to analyze Main Street loan performance, including borrower interest paid relative to recorded losses, in subsequent reviews of the program.

Accessible Data for Figure 14: Main Street Lending Program Loan Payments Due and Amounts Paid by Borrowers, First Quarter 2021–Third Quarter 2023

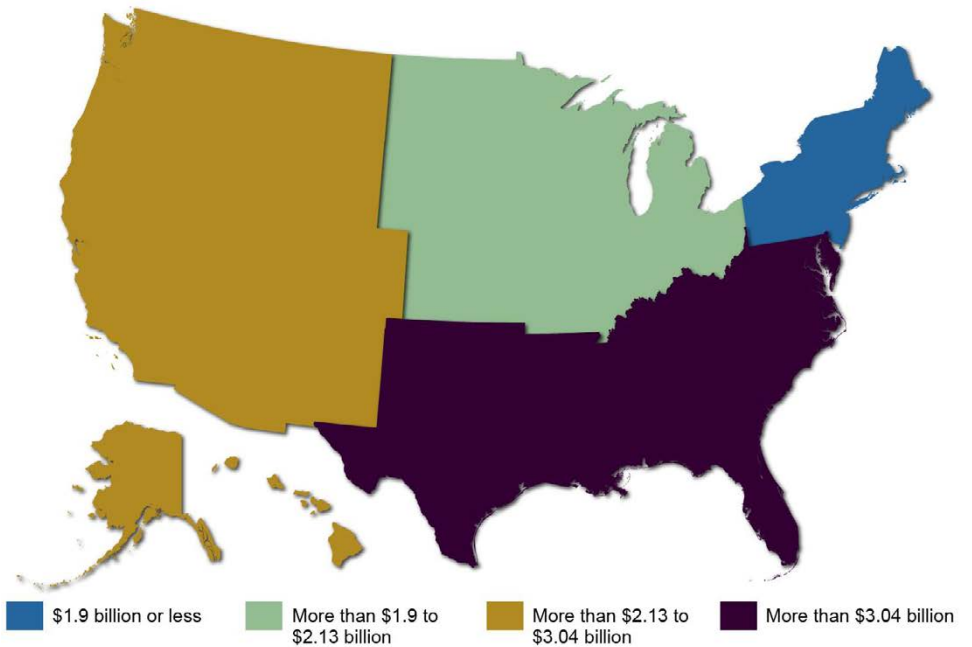
Year	Quarter	Total amount due from borrowers (dollars in millions)	Total amount paid by borrowers (dollars in millions)
2021	Q1		33.4957
2021	Q2		183.421
2021	Q3	0.120518	110.734
2021	Q4	3.62911	152.442
2022	Q1	9.93206	236.427
2022	Q2	6.22278	240.96
2022	Q3	6.66592	430.403
2022	Q4	12.1138	430.768
2023	Q1	11.4894	409.527
2023	Q2	12.768	387.664
2023	Q3	22.093	341.494

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: This figure reflects data through the end of August 2023, which only partially represents the third quarter of 2023.

Regional distribution of outstanding loans. The regional distribution of outstanding loans generally aligned with the regional distribution of Main Street loans overall. As of the end of August 2023, most of the program’s outstanding loans were in Census Region 3, followed by Census Region 4 (see fig. 15).

Figure 15: Outstanding Main Street Loans, by Census Region, as of August 2023



Census region and top states with outstanding Main Street loans	Number of outstanding loans	Dollar amount of outstanding loans (in millions)	Percent of outstanding loans	Percent of outstanding loan amount
Region 1 (Northeast)	150	\$1,390	13%	12%
New York	41	\$516	3%	5%
Pennsylvania	35	\$194	3%	2%
New Jersey	34	\$370	3%	3%
Region 2 (Midwest)	193	\$2,074	16%	18%
Minnesota	32	\$182	3%	2%
Missouri	30	\$461	3%	4%
Illinois	28	\$396	2%	4%
Region 3 (South)	611	\$5,600	52%	50%
Florida	253	\$1,305	22%	12%
Texas	157	\$2,091	13%	19%
Oklahoma	50	\$410	4%	4%
Region 4 (West)	219	\$2,186	19%	19%
California	118	\$1,060	10%	9%
Washington	22	\$176	2%	2%
Colorado	18	\$265	2%	2%

Source: GAO analysis of Federal Reserve Bank of Boston data; Map Resources (map). | GAO-24-106482

Accessible Data for Figure 15: Outstanding Main Street Loans, by Census Region, as of August 2023

Region	Census region and top states with outstanding Main Street loans	Number of outstanding loans	Dollar amount of outstanding loans (in millions)	Percent of outstanding loans	Percent of outstanding loan amount
Region 1 (Northeast)	na	150	\$1,390	13%	12%
Region 1 (Northeast)	New York	41	\$516	3%	5%
Region 1 (Northeast)	Pennsylvania	35	\$194	3%	2%
Region 1 (Northeast)	New Jersey	34	\$370	3%	3%
Region 2 (Midwest)	na	193	2,074	16%	18%
Region 2 (Midwest)	Minnesota	32	\$182	3%	2%
Region 2 (Midwest)	Missouri	30	\$461	3%	4%
Region 2 (Midwest)	Illinois	28	\$396	2%	4%
Region 3 (South)	na	611	\$5,600	52%	50%
Region 3 (South)	Florida	253	\$1,305	22%	12%
Region 3 (South)	Texas	157	\$2,091	13%	19%
Region 3 (South)	Oklahoma	50	\$410	4%	4%
Region 4 (West)	na	219	\$2186	19%	19
Region 4 (West)	California	118	\$1,060	10%	9%
Region 4 (West)	Washington	22	\$176	2%	2%
Region 4 (West)	Colorado	18	\$265	2%	2%

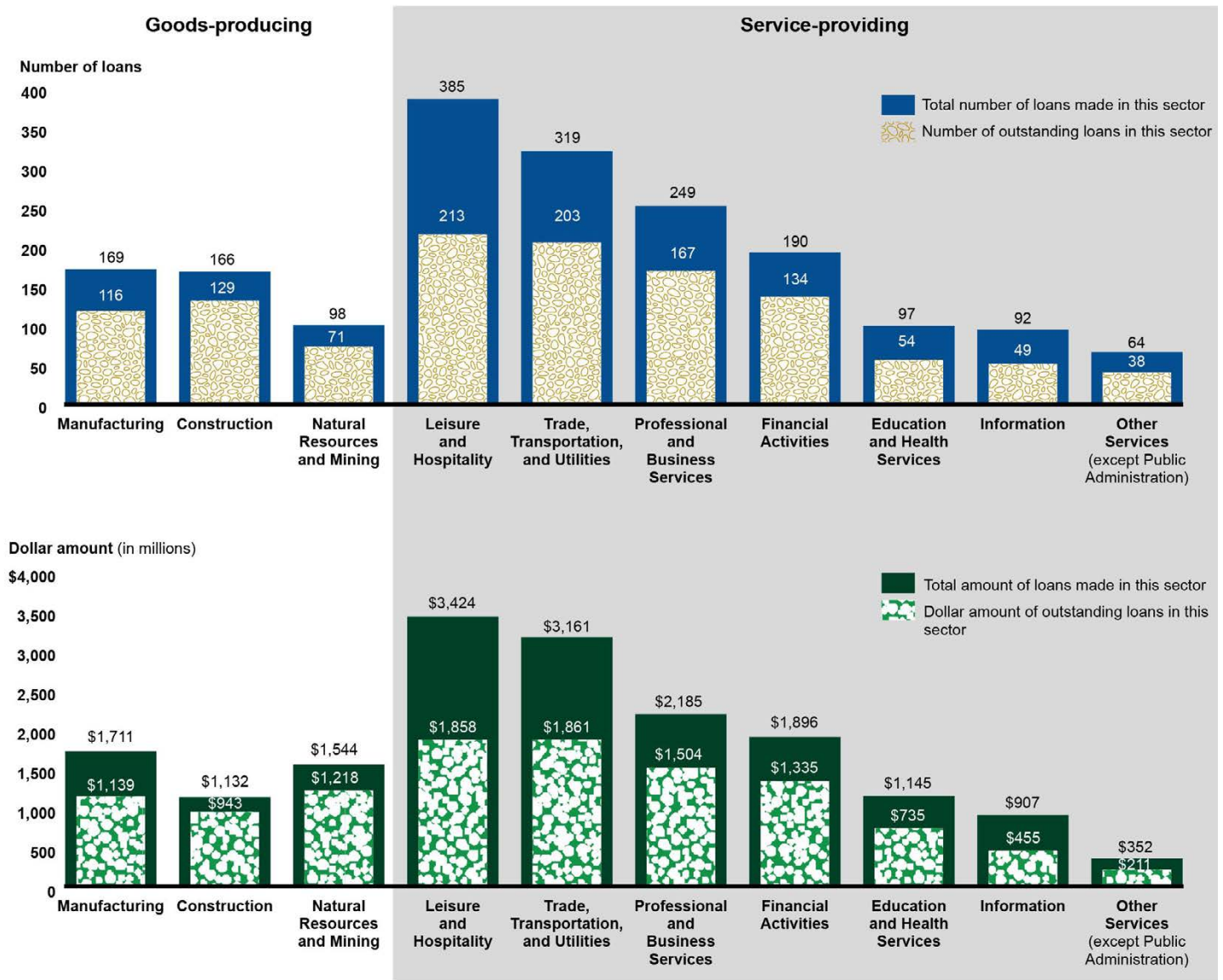
Source: GAO analysis of Federal Reserve Bank of Boston data; Map Resources (map). | GAO-24-106482

Sectoral distribution of outstanding loans. The sectoral distribution of outstanding loans also generally aligned with the sectoral distribution of Main Street loans overall. As of the end of August 2023, 858 outstanding Main Street loans (or 73 percent) were in service-providing sectors (see

fig. 16).³⁴ The top two service-providing sectors were (1) leisure and hospitality and (2) trade, transportation and utilities. The remainder of the outstanding loans, 316 (or about 27 percent), were in goods-producing sectors, which include construction, manufacturing, and natural resources and mining.

³⁴According to the Bureau of Labor Statistics, North American Industry Classification System codes can be grouped into 10 sectors (construction; education and health services; financial activities; information; leisure and hospitality; manufacturing; natural resources and mining; professional and business services; trade, transportation, and utilities; and other services) and two super-sectors (goods-producing and service-providing). We use these aggregations to describe general trends for Main Street Lending Program loans and repayments.

Figure 16: Number and Dollar Amount of Main Street Loans Made and Outstanding by Sector, as of August 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 16: Number and Dollar Amount of Main Street Loans Made and Outstanding by Sector, as of August 2023

Sector	Total number of loans made in this sector	Number of outstanding loans in this sector
Manufacturing	169	116
Construction	166	129

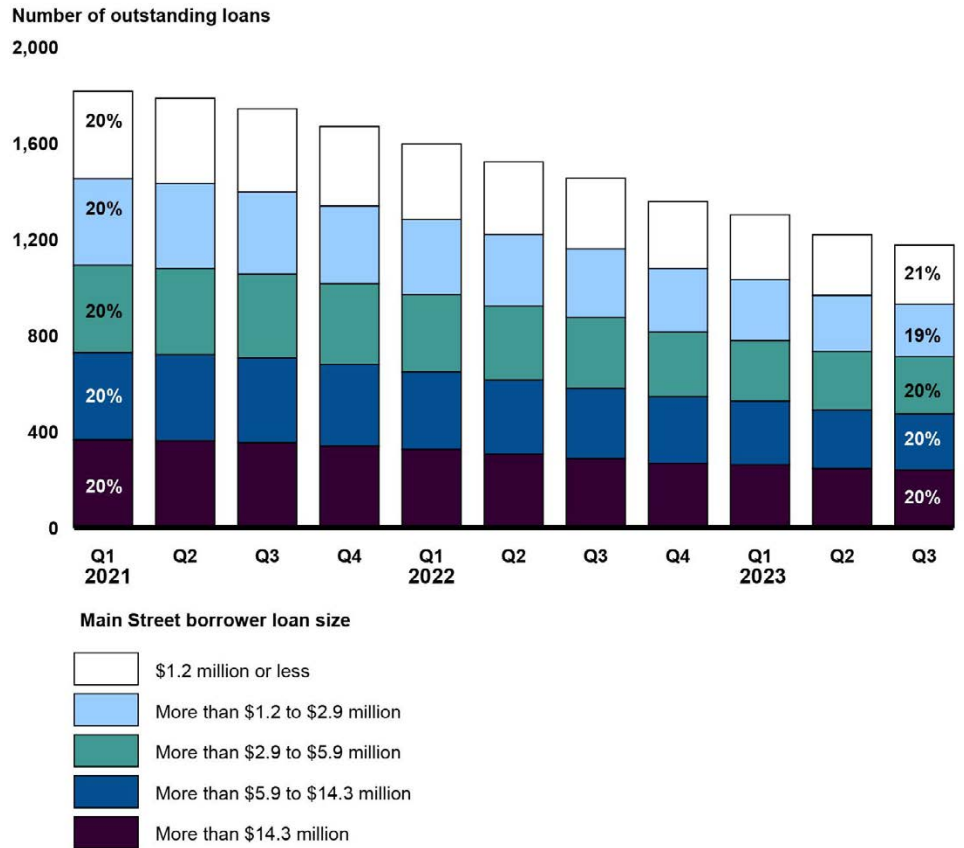
Sector	Total number of loans made in this sector	Number of outstanding loans in this sector
Natural Resources and Mining	98	71
Leisure and Hospitality	385	213
Trade, Transportation, and Utilities	319	203
Professional and Business Services	249	167
Financial Activities	190	134
Education and Health Services	97	54
Information	92	49
Other Services (except Public Administration)	64	38

Sector	Total amount of loans made in this sector (in millions)	Dollar amount of outstanding loans in this sector (in millions)
Manufacturing	1711	1139
Construction	1132	943
Natural Resources and Mining	1544	1218
Leisure and Hospitality	3424	1858
Trade, Transportation, and Utilities	3161	1861
Professional and Business Services	2185	1504
Financial Activities	1896	1335
Education and Health Services	1145	735
Information	907	455
Other Services (except Public Administration)	352	211

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Distribution of outstanding loans by loan size. As of the end of August 2023, the distribution of outstanding loans by loan size continued to generally align with the distribution of loans made, according to our analysis (see fig. 17). This distribution is similar to that of fully repaid loans but not for loans with recorded losses. (See app. III for more detail on loan-size characteristics for fully repaid loans and losses.)

Figure 17: Distribution of Outstanding Main Street Loans, by Loan Size, First Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 17: Distribution of Outstanding Main Street Loans, by Loan Size, First Quarter 2021–Third Quarter 2023

Year	Quarter	More than \$14.3 million	More than \$5.9 to \$14.3 million	More than \$2.9 to \$5.9 million	More than \$1.2 to \$2.9 million	\$1.2 million or less
2021	Q1	365	363	363	360	364
2021	Q2	361	359	358	353	355
2021	Q3	353	353	348	341	347
2021	Q4	339	340	335	323	331
2022	Q1	325	323	321	313	313
2022	Q2	305	308	308	298	302
2022	Q3	287	292	294	287	293

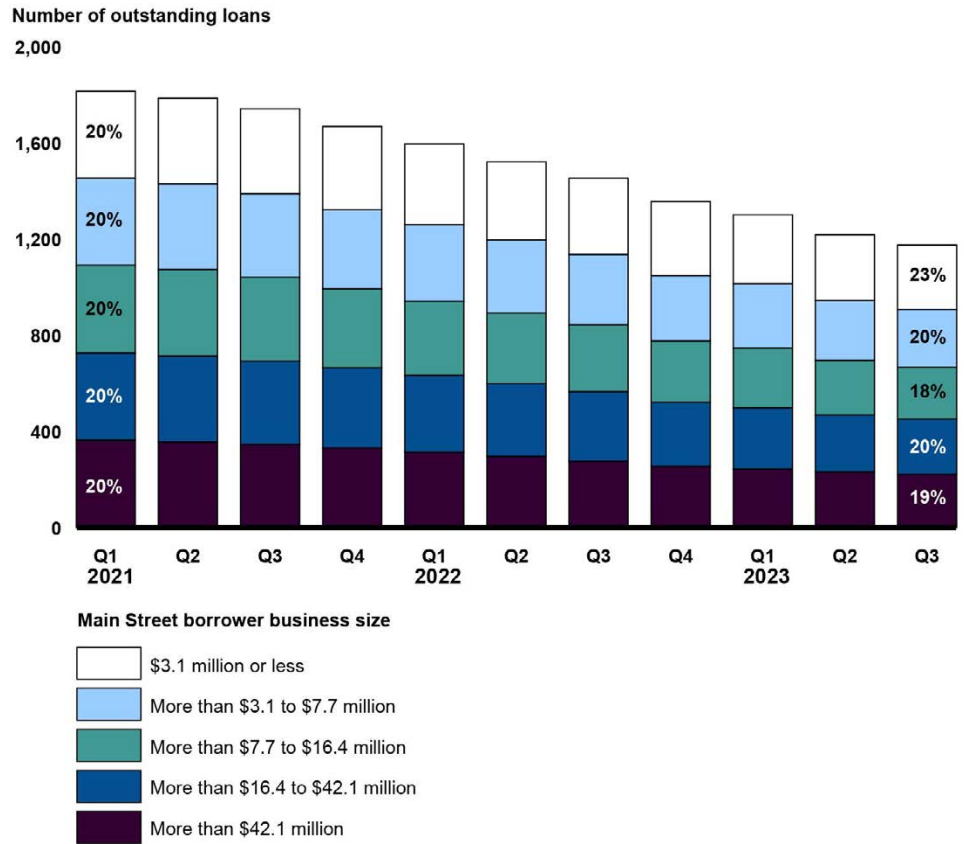
Year	Quarter	More than \$14.3 million	More than \$5.9 to \$14.3 million	More than \$2.9 to \$5.9 million	More than \$1.2 to \$2.9 million	\$1.2 million or less
2022	Q4	268	276	269	265	278
2023	Q1	261	265	252	253	270
2023	Q2	245	244	243	234	252
2023	Q3	240	233	238	219	245

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: This figure reflects data through the end of August 2023, which only partially represents the third quarter of 2023. The percentages represent the share of outstanding loans by loan-size categories in that quarter.

Distribution of outstanding loans by business size. As of the end of August 2023, the distribution of outstanding loans had shifted slightly toward smaller businesses, compared with the distribution of loans made overall (see fig. 18). The share of loans to businesses with \$7.7 million or less in 2019 gross revenue rose from 40 percent to 43 percent of outstanding loans since the program terminated in January 2021. (See app. III for information about the distribution for prepayments and losses by business size.)

Figure 18: Distribution of Outstanding Main Street Loans by Business Size, First Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 18: Distribution of Outstanding Main Street Loans by Business Size, First Quarter 2021–Third Quarter 2023

Year	Quarter	More than \$42.1 million	More than \$16.4 to \$42.1 million	More than \$7.7 to \$16.4 million	More than \$3.1 to \$7.7 million	\$3.1 million or less
2021	Q1	364	362	365	362	362
2021	Q2	356	358	360	355	357
2021	Q3	346	346	349	347	354
2021	Q4	331	333	329	329	346
2022	Q1	314	319	308	319	335
2022	Q2	296	303	293	304	325
2022	Q3	276	289	278	293	317
2022	Q4	254	267	255	272	308

Year	Quarter	More than \$42.1 million	More than \$16.4 to \$42.1 million	More than \$7.7 to \$16.4 million	More than \$3.1 to \$7.7 million	\$3.1 million or less
2023	Q1	243	255	249	267	287
2023	Q2	232	237	226	249	274
2023	Q3	221	230	217	240	267

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: This figure reflects data through the end of August 2023, which only partially represents the third quarter of 2023. The percentages represent the share of outstanding loans by business size categories, measured in 2019 gross revenue, in that quarter.

Delinquencies Have Increased as Interest Rates and Inflation Have Risen

Delinquencies have increased since regular, scheduled interest payments began in August 2021.³⁵ The rate of delinquent payments was about 7.6 percent of outstanding loans in August 2023 (the most recent data available to GAO), as compared with an average of 2.6 percent for August 2021–August 2023. During the second quarter of 2023, the average delinquency rate for Main Street loans (about 5.5 percent) was higher than that for commercial bank business loans (about 1 percent).³⁶

Regionally, most of the program’s delinquent loans were in the South (Census Region 3), as of the end of August 2023. Among states overall, Florida had the most delinquent loans (about 25 percent of the total), followed by California (about 14 percent).

Delinquency rates could remain elevated as borrowers face increased variable interest rates on their loans. When the Main Street Lending Program made loans from July 2020 through January 2021, the 1-month London Interbank Offered Rate (LIBOR) ranged from 0.12 to 0.19 percent (see fig. 19).³⁷ As of August 2023, the 1-month Secured Overnight

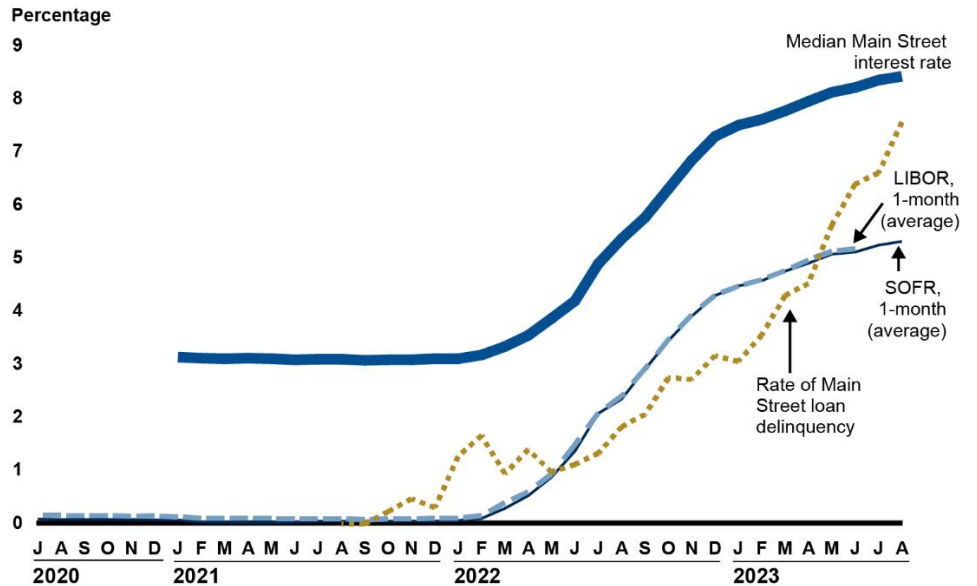
³⁵The Federal Reserve Bank of Boston defines delinquent payments as any interest or principal payment that is 30 or more days late.

³⁶While we obtained Main Street data on delinquencies through August 2023, the most recent Federal Reserve data available for commercial bank loan delinquencies were as of the second quarter of 2023. Because of this, we chose to compare delinquency rates for the second quarter of 2023.

³⁷The program originally used LIBOR to set interest rates. Borrowers agreed to take on an adjustable interest rate, calculated by adding 300 basis points (or 3 percent) to the adjustable 1-month or 3-month LIBOR, depending on a loan’s terms.

Financing Rate (SOFR)—which the program began using in place of LIBOR—was about 5.33 percent.³⁸

Figure 19: Main Street Lending Program Interest Rates and Rate of Delinquent Loan Payments, July 2020–August 2023



Acronyms
 LIBOR - London Interbank Offered Rate
 SOFR - Secured Overnight Financing Rate

Source: GAO analysis of Federal Reserve Bank of Boston and Bloomberg data. | GAO-24-106482

Accessible Data for Figure 19: Main Street Lending Program Interest Rates and Rate of Delinquent Loan Payments, July 2020–August 2023

Year	Month	Rate of Main Street loan	Median main street	LIBOR one month	SOFR one month
2020	July			0.17	0.09
2020	August			0.16	0.08
2020	September			0.15	0.08
2020	October			0.15	0.08
2020	November			0.14	0.08
2020	December			0.15	0.07

³⁸LIBOR was decommissioned on June 30, 2023. Main Street lenders were required to file a Core Rights Request form to change from a LIBOR-pegged rate to a comparable rate—generally, 1-month or 3-month SOFR. According to Federal Reserve Bank of Boston officials, 96 percent of Main Street loans have transitioned from LIBOR to SOFR. The remaining 4 percent transitioned to other comparable rates (for example, the prime rate).

Year	Month	Rate of Main Street loan	Median main street	LIBOR one month	SOFR one month
2021	January		3.14	0.13	0.07
2021	February		3.12	0.11	0.03
2021	March		3.11	0.11	0.03
2021	April		3.12	0.11	0.02
2021	May		3.11	0.1	0.02
2021	June		3.09	0.09	0.03
2021	July		3.1	0.09	0.05
2021	August	0	3.1	0.09	0.05
2021	September	0	3.08	0.08	0.05
2021	October	0.23	3.09	0.09	0.05
2021	November	0.47	3.09	0.09	0.05
2021	December	0.3	3.11	0.1	0.05
2022	January	1.27	3.11	0.11	0.06
2022	February	1.66	3.18	0.15	0.1
2022	March	0.94	3.34	0.4	0.29
2022	April	1.4	3.55	0.6	0.53
2022	May	0.97	3.87	0.94	0.88
2022	June	1.12	4.2	1.49	1.37
2022	July	1.33	4.9	2.09	2.08
2022	August	1.83	5.37	2.41	2.35
2022	September	2.06	5.77	2.92	2.91
2022	October	2.75	6.31	3.47	3.45
2022	November	2.72	6.85	3.94	3.91
2022	December	3.17	7.3	4.31	4.3
2023	January	3.06	7.51	4.48	4.48
2023	February	3.56	7.62	4.6	4.58
2023	March	4.3	7.78	4.77	4.76
2023	April	4.53	7.96	4.97	4.91
2023	May	5.63	8.13	5.13	5.08
2023	June	6.4	8.22	5.18	5.12
2023	July	6.61	8.36		5.25
2023	August	7.57	8.43		5.32

Source: GAO analysis of Federal Reserve Bank of Boston and Bloomberg data. | GAO-24-106482

Higher interest rates have increased borrowers' interest payments. As shown in table 2, the projected annual interest for a loan of \$5 million would have increased from \$157,500 to \$418,000 between December

2020 and July 2023.³⁹ The higher interest payments, coupled with required principal payments beginning in 2023, could pose financial burdens for businesses. In addition, these higher payments could increase the risk of delinquent payments over time.

³⁹We chose hypothetical loan amounts that are examples of small, medium, and large Main Street loans. For illustrative purposes, the annual interest payment calculation does not take into consideration any principal payments or adjustments (e.g., changing monthly variable rate).

Table 2: Examples of Potential Main Street Loan Interest Payments by Varying Interest Rates

Example loan amount	Base rate	Interest rate ^a	Projected annual interest payment ^b
\$1,000,000	0.15% in December 2020 ^c	3.15%	\$31,500
\$1,000,000	5.25% in July 2023 ^d	8.36%	\$83,600
\$5,000,000	0.15% in December 2020	3.15%	\$157,500
\$5,000,000	5.25% in July 2023	8.36%	\$418,000
\$50,000,000	0.15% in December 2020	3.15%	\$1,575,000
\$50,000,000	5.25% in July 2023	8.36%	\$4,180,000

Source: GAO. | GAO-24-106482

^aAt program inception, borrowers agreed to take on an adjustable interest rate, calculated by adding 300 basis points (or 3 percent) to the adjustable 1-month or 3-month London Interbank Overnight Rate (LIBOR), depending on a loan’s terms. When loans transitioned to the Secure Overnight Financing Rate (SOFR) after the LIBOR was decommissioned, loans were expected to add 311.448 basis points for those loans pegged to the 1-month SOFR and 326.161 basis points for those loans pegged to the 3-month SOFR.

^bThe projected annual interest payment is based on the example loan amount for illustrative purposes.

^cWe selected December 2020 as an example because most Main Street loans were made in this month. At that time, the LIBOR was the base rate used by the Main Street Lending Program. As such, we selected the 1-month LIBOR as our base rate.

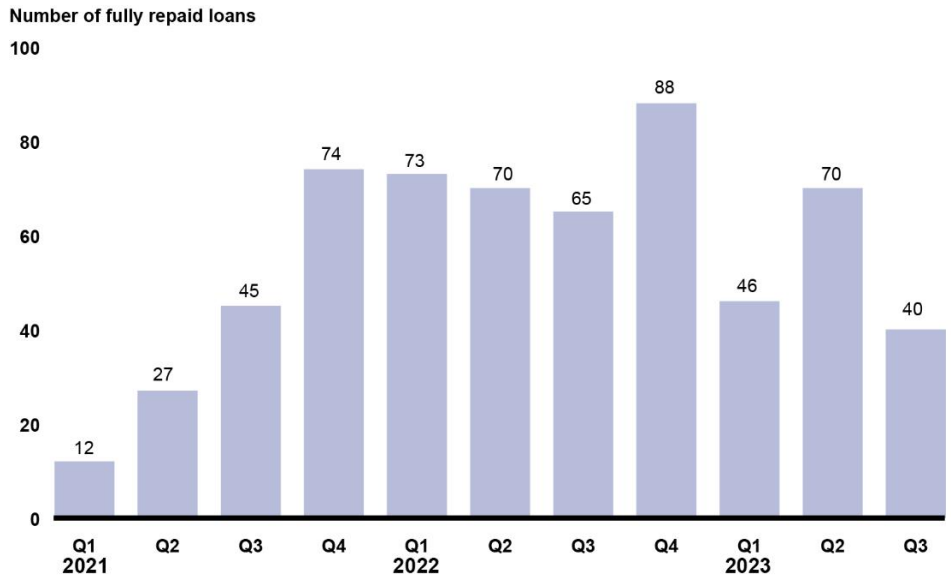
^dWe selected July 2023 as an example because this was the month when first principal payments were due for initial borrowers. Since LIBOR decommissioned on June 30, 2023, and 96 percent of Main Street loans have transitioned to a comparable term SOFR, we used the 1-month SOFR as the base rate.

Inflation may also affect borrowers’ ability to pay and result in more delinquent payments over time. As previously mentioned, increased costs could reduce the earnings of small and midsize businesses, which may dampen their ability to repay their loans. In particular, service-providing businesses face reduced earnings and higher input costs. Main Street borrowers in those sectors have experienced more delinquencies, and the number could continue to rise.

About One-Third of Loans Have Been Fully Repaid, Mostly in the Service-Providing Sectors

As of the end of August 2023, 610 Main Street loans (about 33 percent) had been fully repaid. This represented about \$6 billion (or about 34 percent) of the total authorized loan amount. The number of full repayments has varied over time and reached a high of 88 in the fourth quarter of 2022 (see fig. 20).

Figure 20: Fully Repaid Main Street Loans, First Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 20: Fully Repaid Main Street Loans, First Quarter 2021–Third Quarter 2023

Year	Quarter	Number of fully repaid loans
2021	Q1	12
2021	Q2	27
2021	Q3	45
2021	Q4	74
2022	Q1	73
2022	Q2	70
2022	Q3	65
2022	Q4	88
2023	Q1	46
2023	Q2	70
2023	Q3	40

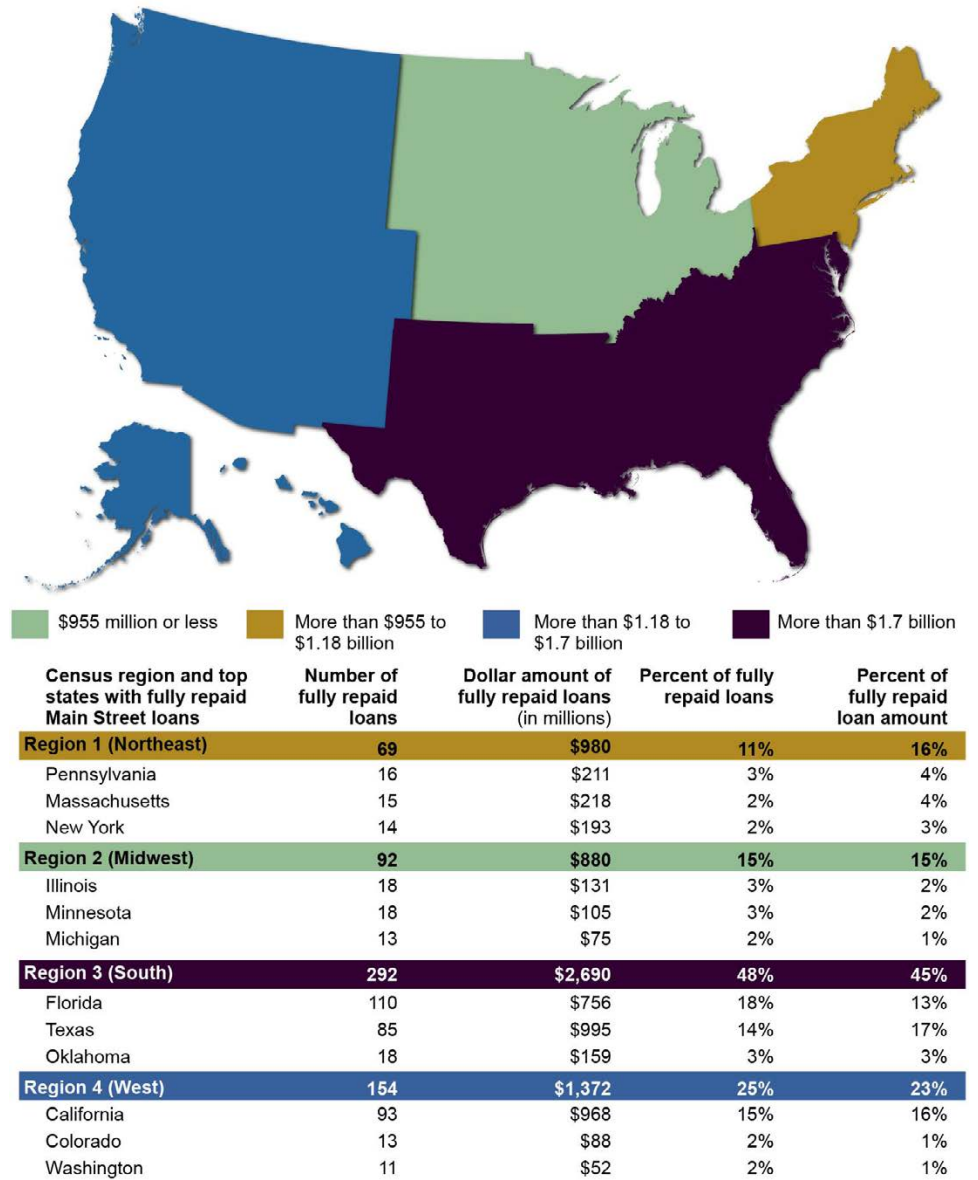
Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: This figure reflects data through the end of August 2023, which only partially represents the third quarter of 2023.

Regional distribution of fully repaid loans. As of the end of August 2023, fully repaid loans were concentrated in Census Regions 3 and 4, which aligns with the regional distribution of Main Street loans in general

(see fig. 21). The state with the highest number of repayments was Florida, followed by California.

Figure 21: Fully Repaid Main Street Loans, by Census Region, as of August 2023



Source: GAO analysis of Federal Reserve Bank of Boston data; Map Resources (map). | GAO-24-106482

Accessible Data for Figure 21: Fully Repaid Main Street Loans, by Census Region, as of August 2023

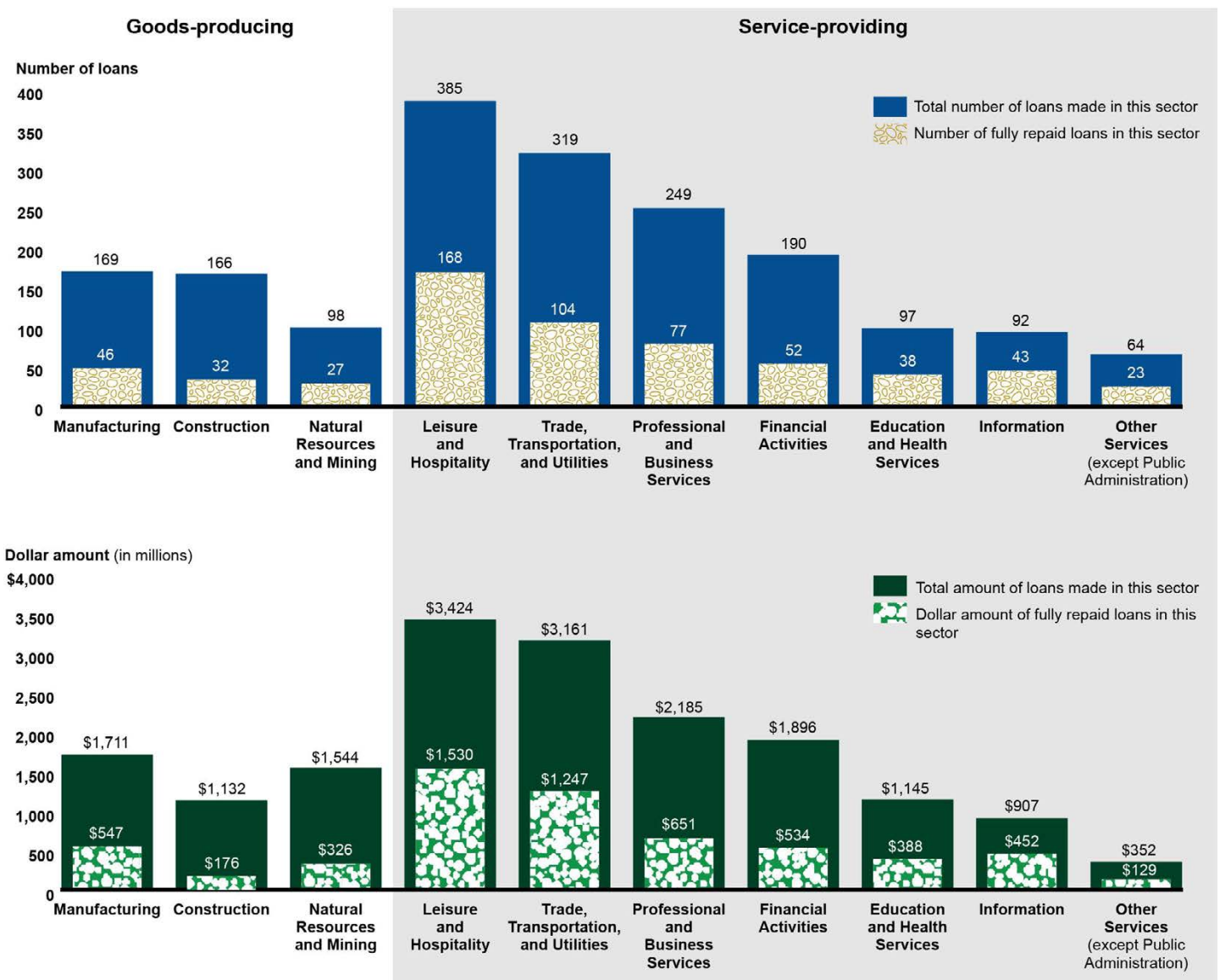
Region	Census region and top states with fully repaid Main Street loans	Number of fully repaid loans	Dollar amount of fully repaid loans (in millions)	Percent of fully repaid loans	Percent of fully repaid loan amount
Region 1 (Northeast)	na	69	\$980	11%	6%
Region 1 (Northeast)	Pennsylvania	16	\$211	3%	4%
Region 1 (Northeast)	Massachusetts	15	\$218	2%	4%
Region 1 (Northeast)	New York	14	\$193	2%	3%
Region 2 (Midwest)	na	92	\$880	15%	15%
Region 2 (Midwest)	Illinois	18	\$131	3%	2%
Region 2 (Midwest)	Minnesota	18	\$105	3%	2%
Region 2 (Midwest)	Michigan	13	\$75	2%	1%
Region 3 (South)	na	292	\$2,690	48%	45%
Region 3 (South)	Florida	110	\$756	18%	13%
Region 3 (South)	Texas	85	\$995	14%	17%
Region 3 (South)	Oklahoma	18	\$159	3%	3%
Region 4 (West)	na	154	\$1,372	25%	23%
Region 4 (West)	California	93	\$968	15%	16%
Region 4 (West)	Colorado	13	\$88	2%	1%
Region 4 (West)	Washington	11	\$52	2%	1%

Source: GAO analysis of Federal Reserve Bank of Boston data; Map Resources (map). | GAO-24-106482

Sectoral distribution of fully repaid loans. Fully repaid loans were more prevalent in service-providing sectors than in goods-producing sectors when compared to the distribution of Main Street loans in general (see fig. 22). As of the end of August 2023, about 83 percent of fully

repaid loans were in service-providing sectors, and the remaining 17 percent were in goods-producing sectors. Two service-providing sectors—(1) leisure and hospitality and (2) trade, transportation, and utilities—together accounted for about \$2.8 billion (or about 45 percent) of all fully repaid loans.

Figure 22: Number and Dollar Amount of Fully Repaid Main Street Loans, by Sector, as of August 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 22: Number and Dollar Amount of Fully Repaid Main Street Loans, by Sector, as of August 2023

Sector	Total number of loans made in this sector	Number of fully repaid loans in this sector
Manufacturing	169	46
Construction	166	32
Natural Resources and Mining	98	27
Leisure and Hospitality	385	168
Trade, Transportation, and Utilities	319	104
Professional and Business Services	249	77
Financial Activities	190	52
Education and Health Services	97	38
Information	92	43
Other Services (except Public Administration)	64	23

Sector	Total amount of loans made in this sector (in millions)	Dollar amount of fully repaid loans in this sector (in millions)
Manufacturing	1711	547
Construction	1132	176
Natural Resources and Mining	1544	326
Leisure and Hospitality	3424	1530
Trade, Transportation, and Utilities	3161	1247
Professional and Business Services	2185	651
Financial Activities	1896	534
Education and Health Services	1145	388
Information	907	452
Other Services (except Public Administration)	352	129

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

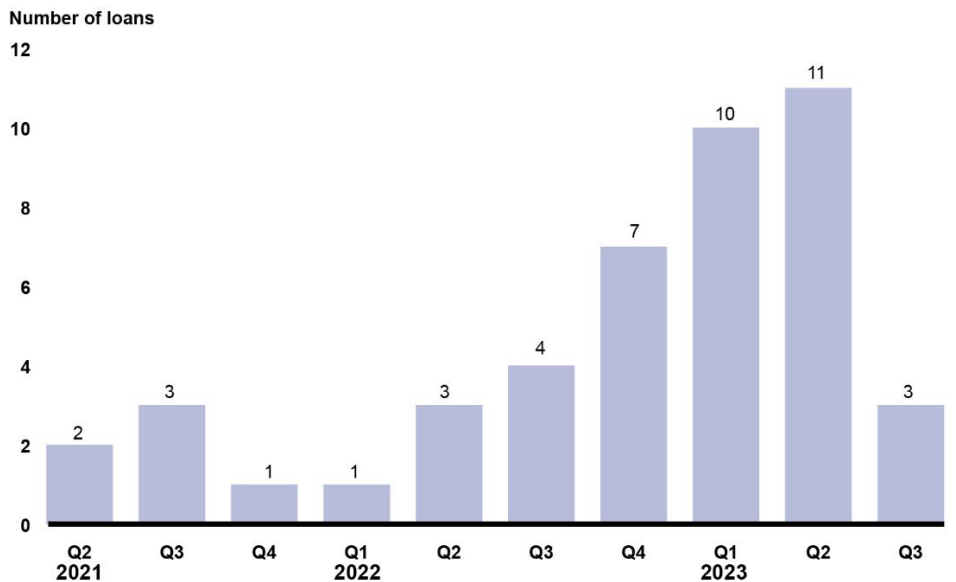
About 2.5 Percent of Main Street Loans Have Resulted in Losses

As of the end of August 2023, 45 loans (or 2.5 percent of all Main Street loans) had been partially or fully charged off, totaling about \$188 million in recorded losses.⁴⁰ Loan losses spiked during the first and second quarter of 2023, but have remained relatively low since the program’s inception

⁴⁰Federal Reserve Bank of Boston data recorded 46 transactions, as one loan was counted twice—once when it was partially charged off and again when it was fully charged off.

(see fig. 23). The largest number of charged-off loans occurred in the second quarter of 2023 and resulted in about \$38 million in recorded losses. In its periodic reports to Congress, the Federal Reserve has stated that it continues to expect it will not incur any losses from the Main Street Lending Program. Any loan losses experienced by the program are covered by Treasury’s equity investments.⁴¹

Figure 23: Number of Main Street Loans with Losses, Second Quarter 2021–Third Quarter 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 23: Number of Main Street Loans with Losses, Second Quarter 2021–Third Quarter 2023

Year	Quarter	Number of loans
2021	Q2	2
2021	Q3	3
2021	Q4	1
2022	Q1	1
2022	Q2	3
2022	Q3	4

⁴¹When the CARES Act was enacted, it made available at least \$454 billion to Treasury to support the Federal Reserve in establishing emergency lending facilities. Thus, any losses incurred by the emergency lending programs are covered by taxpayer dollars.

Year	Quarter	Number of loans
2022	Q4	7
2023	Q1	10
2023	Q2	11
2023	Q3	3

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Note: This figure reflects data through the end of August 2023, which only partially represents the third quarter of 2023. The figure includes both partial and full charge-offs experienced by Main Street Lending Program loans.

The rate of Main Street loan losses has generally been higher than that of business loans provided by commercial banks. During the second quarter of 2023, for example, the charge-off rate for business loans across all commercial lenders was about 0.3 percent, compared with about 0.9 percent for Main Street loans.

Main Street loan losses have mostly occurred in Census Region 3 and have been concentrated in service-related industries. As of the end of August 2023, Census Region 3 had 25 loans that experienced losses; Florida accounted for the most loan losses both within this region and overall. Other regions of the United States had fewer than 10 loans with losses per region. This trend generally aligns with the distribution of Main Street loans made, as Region 3 had the most loans authorized at program termination.

Loan losses were concentrated in service-providing sectors, which represented about 69 percent of the number of losses as of August 2023 (compared with about 76 percent of loans made). Overall, losses in service-providing sectors accounted for about \$121 million while losses in goods-producing sectors accounted for about \$66 million. The sector with the highest number of losses was trade, transportation, and utilities.

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. 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 IV.



Michael E. Clements
Director, Financial Markets and Community Investment

List of Committees

The Honorable Patty Murray
Chair

The Honorable Susan Collins
Ranking Member
Committee on Appropriations
United States Senate

The Honorable Sherrod Brown
Chairman

The Honorable Tim Scott
Ranking Member
Committee on Banking, Housing, and Urban Affairs
United States Senate

The Honorable Sheldon Whitehouse
Chairman

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United States Senate

The Honorable Maria Cantwell
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The Honorable Ted Cruz
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Kyrsten Sinema
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The Honorable James Lankford
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Subcommittee on Government Operations and Border Management
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Committee on Financial Services
House of Representatives

The Honorable Sam Graves
Chairman
The Honorable Rick Larsen
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 Federal Reserve's oversight and monitoring of the CARES Act facilities, (2) what available evidence suggests about trends in credit markets that CARES Act 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. We also obtained written responses from Federal Reserve officials on RBOPS's framework and approach for ongoing monitoring of the facilities and results of RBOPS's oversight reviews.

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.¹ 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, and we interviewed RBOPS officials.

To address the second objective, we analyzed indicators of the performance of credit markets affected by the facilities and the near-term vulnerabilities of these markets. We reviewed research from academics, the Federal Reserve, the Department of the Treasury's Office of Financial Research, the Financial Stability Oversight Council, and industry experts. We also analyzed data from January 2019 through September 2023 on indicators of the performance of credit markets supported by the facilities. We used 2019 as our starting point to provide a benchmark prior to the pandemic, and we used September 2023 as our end point because the most recently available data were as of that date. We selected indicators

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

previously identified in prior GAO work on the Federal Reserve lending programs, which was based on several sources, including 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.²

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, the Federal Reserve Bank of New York's Corporate Market Distress Index database, the Office of Financial Research's Financial Stress Index, the 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 information on lenders from the Federal Reserve's Senior Loan Officer Opinion Survey (for businesses with annual sales of less than \$50 million). The municipal credit market indicators we analyzed included 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 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 reviewed research from the Federal Reserve, Treasury's Office of Financial Research, the Financial Stability Oversight Council, and industry experts on economic conditions that could adversely affect the credit markets.

²See GAO, *Federal Reserve Lending Programs: Risks Remain Low in Related Credit Markets, and Main Street Loans Have Generally Performed Well*, [GAO-23-105629](#) (Washington, D.C.: Dec. 19, 2022); *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).

We took a number of steps to assess the reliability of these data sources and indicators. These steps 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 conducted on-site reviews of Main Street Lending Program data at the Federal Reserve Bank of Boston. To assess the status, characteristics, and trends in the performance of Main Street Lending Program loans, we retrieved information from two data sources: (1) a compendium from the Reserve Bank of borrower information collected in the lender registration and participation review processes and (2) Main Street accounting records that are generated by a third-party contractor. The compendium included borrower information at loan origination, as well as borrower-reported payment information. The accounting records included information on loan positions, loan transactions from inception, and loan delinquencies. We reviewed and analyzed participation data and loan-level payment data as of the end of August 2023, the most recent data available.

We analyzed data from the program's inception through August 2023 to determine

- the regularity of Main Street loan repayments, including payments due and made;
- the number and dollar amount of outstanding, fully repaid, and charged-off loans;
- the distribution of outstanding, fully repaid, and charged-off loans by their loan and business sizes; and
- the rate of delinquent Main Street loan repayments per month.

In addition, we analyzed geographic and sectoral information for outstanding, fully repaid, delinquent, and charged-off loans. For our geographic analysis, we used Main Street program data to match loan payment information as of the end of August 2023 to geographic identifiers collected from borrowers at intake. To avoid potentially revealing borrower-specific information in our analysis, we aggregated geographic data to the census region level, and we reported counts for each type of loan status listed above. We also analyzed and reported

dollar amounts for outstanding, fully repaid, and charged-off loans.³ For our sectoral analysis, we used program data to match loan payment information to North American Industry Classification System (NAICS) codes collected from borrowers at intake. To avoid revealing borrower-specific information in our analysis, we aggregated Main Street borrowers' designated NAICS codes into sectors defined by the Bureau of Labor Statistics.⁴ We then reported the count for each type of loan status listed above. We also analyzed and reported dollar amounts for outstanding, fully repaid, and charged-off loans.

To determine if Main Street loans were affected by shifts in their variable loan interest rates, we retrieved daily term-rate information on Main Street base rates—the rates to which Main Street loans were fixed—from the Bloomberg Terminal.⁵ This included information for (1) the 1-month London Interbank Offered Rate (LIBOR) from July 2020 through its decommissioning on June 30, 2023, and (2) the 1-month Term Secure Overnight Financing Rate (SOFR) from July 2020 through August 2023.⁶ We then compared the monthly averages of the term rates to the rate of monthly Main Street delinquencies and the median interest rate for each month from July 2020 to August 2023.

We assessed the reliability of the Main Street data we used by reviewing agency documentation, including a data dictionary and relational diagrams, and conducting electronic testing on-site for outliers, missing

³The Census Bureau divides the United States into a variety of geographies for analytical purposes. Regions are the largest geographic unit, dividing the country into four major areas, with U.S. territories (other than the District of Columbia) not represented in a formal region. Region 1 represents the Northeast, Region 2 the Midwest, Region 3 the South, and Region 4 the West.

⁴According to the Bureau of Labor Statistics, NAICS codes can be grouped into 10 sectors: construction; education and health services; financial activities; information; leisure and hospitality; manufacturing; natural resources and mining; professional and business services; trade, transportation, and utilities; and other services.

⁵At program inception, borrowers agreed to take on an adjustable interest rate, calculated by adding 300 basis points (or 3 percent) to the adjustable 1-month or 3-month London Interbank Offered Rate, depending on a loan's terms.

⁶Due to the decommissioning of LIBOR on June 30, 2023, Main Street borrowers were allowed to file a Core Rights Request form to change from a LIBOR-pegged rate to a comparable rate—generally, the SOFR. According to officials of the Federal Reserve Bank of Boston, 96 percent of Main Street loans have transitioned from LIBOR to SOFR. The remaining 4 percent transitioned to other comparable rates (e.g., the prime rate). Basis point adjustments also differed from the standard 300-point LIBOR adjustment depending on the term rate (e.g., 1-month SOFR-pegged loans were required to add 311.448 basis points to their base rate).

data, and erroneous values. We also interviewed officials of the Federal Reserve Bank of Boston to discuss the interpretation and reliability of various data fields and how data are collected, stored, and maintained. We determined the data were sufficiently reliable for describing selected characteristics of Main Street loans and payment performance.

We conducted this performance audit from December 2022 to December 2023 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.

Appendix II: Facilities Not Funded by the CARES Act That Supported Short-Term Credit Markets

The Federal Reserve established three lending facilities in March and April 2020 to support the functioning of short-term credit markets. These facilities—the Primary Dealer Credit Facility, Money Market Mutual Fund Liquidity Facility, and Commercial Paper Funding Facility—did not receive CARES Act-appropriated funds. They were terminated on March 31, 2021. Since the termination of the facilities, risks in the markets they supported have continued to remain generally low.

Market metrics that measure the level of systemic financial stress suggest that risks, including short-term risks, have remained below pandemic levels. Specifically, the Office of Financial Research’s Financial Stress Index provides a snapshot of disruptions to the normal functioning of financial markets. The index is positive when stress levels are above average and negative when stress levels are below average.¹ The index suggests that risks have generally eased since March 2021, when the facilities supporting the functioning of short-term credit markets were terminated (see fig. 24). However, there were brief spikes in 2022 and 2023:

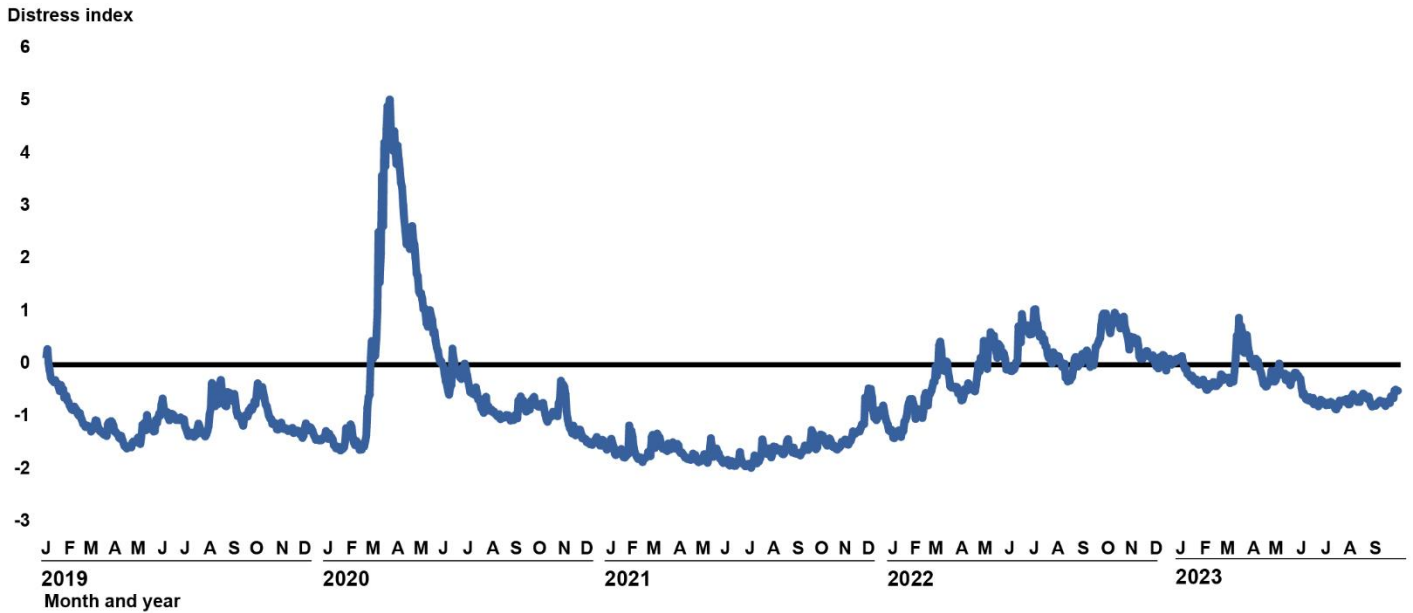
- A spike in March 2022 was likely due to the effects of inflation and the Russia-Ukraine war.
- Another spike from June through November 2022 was likely due to increased interest rates.

¹The index incorporates five categories of indicators: credit, equity valuation, funding, safe assets, and volatility. The forward rate agreement-overnight indexed swap spread, which provides a snapshot of how the market views short-term credit conditions, generally showed a trend similar to that of the Office of Financial Research’s Financial Stress Index. The forward rate agreement-overnight indexed swap spread was discontinued in June 2023.

Appendix II: Facilities Not Funded by the CARES Act That Supported Short-Term Credit Markets

- A third spike in March 2023 was likely related to the failures of Silicon Valley Bank and Signature Bank during that month.²

Figure 24: Financial Stress Index, January 2019–September 2023



Source: GAO analysis of Office of Financial Research data. | GAO-24-106482

Accessible Data for Figure 24: Financial Stress Index, January 2019–September 2023 (2019 data)

Year	Month	Distress index
2019	January	0.074
2019	January	0.248
2019	January	-0.02
2019	January	-0.157
2019	January	-0.292
2019	January	-0.338
2019	January	-0.358
2019	January	-0.384
2019	January	-0.343
2019	January	-0.394
2019	January	-0.407

²On March 12, 2023, the Federal Reserve created the Bank Term Funding Program after the failure of Silicon Valley Bank 2 days earlier. The program provides eligible banks with additional liquidity by allowing the 12 Reserve Banks to provide loans of up to 1 year.

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	January	-0.475
2019	January	-0.549
2019	January	-0.437
2019	January	-0.52
2019	January	-0.515
2019	January	-0.676
2019	January	-0.64
2019	January	-0.643
2019	January	-0.741
2019	January	-0.764
2019	February	-0.83
2019	February	-0.875
2019	February	-0.905
2019	February	-0.912
2019	February	-0.845
2019	February	-0.881
2019	February	-0.908
2019	February	-0.985
2019	February	-1.015
2019	February	-0.97
2019	February	-1.058
2019	February	-1.114
2019	February	-1.176
2019	February	-1.18
2019	February	-1.232
2019	February	-1.216
2019	February	-1.211
2019	February	-1.23
2019	February	-1.235
2019	March	-1.317
2019	March	-1.287
2019	March	-1.271
2019	March	-1.209
2019	March	-1.106
2019	March	-1.115
2019	March	-1.224
2019	March	-1.264

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	March	-1.313
2019	March	-1.312
2019	March	-1.345
2019	March	-1.367
2019	March	-1.384
2019	March	-1.355
2019	March	-1.402
2019	March	-1.184
2019	March	-1.143
2019	March	-1.229
2019	March	-1.122
2019	March	-1.15
2019	March	-1.21
2019	April	-1.318
2019	April	-1.326
2019	April	-1.359
2019	April	-1.378
2019	April	-1.436
2019	April	-1.454
2019	April	-1.403
2019	April	-1.482
2019	April	-1.545
2019	April	-1.599
2019	April	-1.595
2019	April	-1.641
2019	April	-1.608
2019	April	-1.597
2019	April	-1.617
2019	April	-1.619
2019	April	-1.529
2019	April	-1.507
2019	April	-1.51
2019	April	-1.522
2019	April	-1.502
2019	May	-1.434
2019	May	-1.463
2019	May	-1.555

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	May	-1.407
2019	May	-1.19
2019	May	-1.204
2019	May	-1.152
2019	May	-1.295
2019	May	-1.007
2019	May	-1.139
2019	May	-1.184
2019	May	-1.273
2019	May	-1.232
2019	May	-1.213
2019	May	-1.317
2019	May	-1.31
2019	May	-1.097
2019	May	-1.154
2019	May	-1.05
2019	May	-0.976
2019	May	-1.014
2019	May	-0.803
2019	June	-0.694
2019	June	-0.888
2019	June	-0.921
2019	June	-0.952
2019	June	-0.951
2019	June	-1.051
2019	June	-1.105
2019	June	-1.012
2019	June	-0.981
2019	June	-0.994
2019	June	-1.015
2019	June	-1.047
2019	June	-1.098
2019	June	-1.087
2019	June	-1.097
2019	June	-1.1
2019	June	-1.053
2019	June	-1.108

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	June	-1.083
2019	June	-1.088
2019	July	-1.225
2019	June	-1.27
2019	June	-1.344
2019	June	-1.403
2019	June	-1.392
2019	June	-1.376
2019	June	-1.339
2019	June	-1.362
2019	June	-1.42
2019	June	-1.372
2019	June	-1.381
2019	June	-1.274
2019	June	-1.17
2019	June	-1.227
2019	June	-1.319
2019	June	-1.339
2019	June	-1.364
2019	June	-1.369
2019	June	-1.412
2019	June	-1.379
2019	June	-1.31
2019	June	-1.23
2019	August	-0.987
2019	August	-0.883
2019	August	-0.396
2019	August	-0.685
2019	August	-0.657
2019	August	-0.836
2019	August	-0.773
2019	August	-0.552
2019	August	-0.791
2019	August	-0.412
2019	August	-0.34
2019	August	-0.532
2019	August	-0.714

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	August	-0.65
2019	August	-0.83
2019	August	-0.838
2019	August	-0.57
2019	August	-0.626
2019	August	-0.588
2019	August	-0.653
2019	August	-0.736
2019	August	-0.672
2019	September	-0.605
2019	September	-0.757
2019	September	-0.934
2019	September	-1.024
2019	September	-1.004
2019	September	-1.035
2019	September	-1.078
2019	September	-1.154
2019	September	-1.209
2019	September	-1.046
2019	September	-1.01
2019	September	-1.041
2019	September	-1.033
2019	September	-0.915
2019	September	-0.939
2019	September	-0.858
2019	September	-0.905
2019	September	-0.838
2019	September	-0.744
2019	September	-0.8
2019	October	-0.609
2019	October	-0.405
2019	October	-0.457
2019	October	-0.604
2019	October	-0.634
2019	October	-0.475
2019	October	-0.585
2019	October	-0.693

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	October	-0.801
2019	October	-0.839
2019	October	-0.927
2019	October	-1.022
2019	October	-1.069
2019	October	-1.083
2019	October	-1.174
2019	October	-1.144
2019	October	-1.153
2019	October	-1.189
2019	October	-1.273
2019	October	-1.282
2019	October	-1.25
2019	October	-1.256
2019	October	-1.151
2019	November	-1.236
2019	November	-1.267
2019	November	-1.249
2019	November	-1.271
2019	November	-1.27
2019	November	-1.307
2019	November	-1.277
2019	November	-1.294
2019	November	-1.268
2019	November	-1.251
2019	November	-1.347
2019	November	-1.339
2019	November	-1.331
2019	November	-1.301
2019	November	-1.306
2019	November	-1.332
2019	November	-1.377
2019	November	-1.391
2019	November	-1.439
2019	November	-1.392
2019	December	-1.256
2019	December	-1.166

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2019	December	-1.232
2019	December	-1.254
2019	December	-1.299
2019	December	-1.238
2019	December	-1.267
2019	December	-1.308
2019	December	-1.379
2019	December	-1.425
2019	December	-1.478
2019	December	-1.46
2019	December	-1.464
2019	December	-1.486
2019	December	-1.475
2019	December	-1.482
2019	December	-1.443
2019	December	-1.443
2019	December	-1.397
2019	December	-1.311
2019	December	-1.387

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Accessible Data for Figure 24: Financial Stress Index, January 2019–September 2023 (2020 data)

Year	Month	Distress index
2020	January	-1.46
2020	January	-1.362
2020	January	-1.432
2020	January	-1.433
2020	January	-1.473
2020	January	-1.58
2020	January	-1.582
2020	January	-1.639
2020	January	-1.638
2020	January	-1.611
2020	January	-1.653
2020	January	-1.68
2020	January	-1.65
2020	January	-1.65
2020	January	-1.625
2020	January	-1.516
2020	January	-1.256
2020	January	-1.413
2020	January	-1.404
2020	January	-1.39
2020	January	-1.185
2020	February	-1.247
2020	February	-1.441
2020	February	-1.534
2020	February	-1.578
2020	February	-1.498
2020	February	-1.523
2020	February	-1.584
2020	February	-1.665
2020	February	-1.649
2020	February	-1.661
2020	February	-1.592
2020	February	-1.607
2020	February	-1.507
2020	February	-1.403

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2020	February	-0.866
2020	February	-0.671
2020	February	-0.621
2020	February	0.082
2020	February	0.4
2020	March	0.065
2020	March	0.402
2020	March	0.12
2020	March	0.455
2020	March	0.969
2020	March	2.473
2020	March	1.515
2020	March	2.054
2020	March	3.542
2020	March	2.581
2020	March	4.168
2020	March	3.72
2020	March	4.426
2020	March	4.863
2020	March	4.844
2020	March	4.988
2020	March	4.467
2020	March	4.316
2020	March	4.017
2020	March	4.388
2020	March	3.991
2020	March	3.763
2020	April	4.114
2020	April	3.85
2020	April	3.662
2020	April	3.409
2020	April	3.324
2020	April	2.982
2020	April	2.674
2020	April	2.481
2020	April	2.238
2020	April	2.399

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2020	April	2.326
2020	April	2.15
2020	April	2.316
2020	April	2.585
2020	April	2.313
2020	April	2.238
2020	April	1.971
2020	April	1.681
2020	April	1.634
2020	April	1.351
2020	April	1.296
2020	May	1.307
2020	May	1.197
2020	May	1.015
2020	May	1.024
2020	May	0.915
2020	May	0.727
2020	May	0.673
2020	May	0.864
2020	May	0.985
2020	May	0.863
2020	May	0.803
2020	May	0.543
2020	May	0.582
2020	May	0.402
2020	May	0.277
2020	May	0.216
2020	May	0.09
2020	May	0.006
2020	May	0.011
2020	May	-0.052
2020	June	-0.088
2020	June	-0.216
2020	June	-0.363
2020	June	-0.415
2020	June	-0.548
2020	June	-0.618

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2020	June	-0.49
2020	June	-0.439
2020	June	0.255
2020	June	0.068
2020	June	-0.047
2020	June	-0.232
2020	June	-0.229
2020	June	-0.21
2020	June	-0.15
2020	June	-0.294
2020	June	-0.319
2020	June	-0.108
2020	June	-0.195
2020	June	-0.029
2020	June	-0.119
2020	June	-0.243
2020	July	-0.363
2020	July	-0.461
2020	July	-0.572
2020	July	-0.511
2020	July	-0.6
2020	July	-0.511
2020	July	-0.622
2020	July	-0.482
2020	July	-0.595
2020	July	-0.712
2020	July	-0.696
2020	July	-0.786
2020	July	-0.883
2020	July	-0.915
2020	July	-0.963
2020	July	-0.867
2020	July	-0.661
2020	July	-0.909
2020	July	-0.838
2020	July	-0.92
2020	July	-0.893

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2020	July	-0.906
2020	August	-0.95
2020	August	-0.937
2020	August	-0.979
2020	August	-0.996
2020	August	-1.026
2020	August	-1.041
2020	August	-0.992
2020	August	-1.084
2020	August	-1.054
2020	August	-1.044
2020	August	-1.054
2020	August	-1.043
2020	August	-1.008
2020	August	-1.017
2020	August	-1.012
2020	August	-1.069
2020	August	-1.111
2020	August	-1.08
2020	August	-1.05
2020	August	-1.098
2020	August	-1.008
2020	September	-1.051
2020	September	-1.07
2020	September	-0.728
2020	September	-0.809
2020	September	-0.653
2020	September	-0.799
2020	September	-0.725
2020	September	-0.833
2020	September	-0.903
2020	September	-0.941
2020	September	-0.917
2020	September	-0.903
2020	September	-0.905
2020	September	-0.741
2020	September	-0.81

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2020	September	-0.69
2020	September	-0.661
2020	September	-0.76
2020	September	-0.821
2020	September	-0.804
2020	September	-0.848
2020	October	-0.847
2020	October	-0.795
2020	October	-0.857
2020	October	-0.777
2020	October	-0.895
2020	October	-0.995
2020	October	-1.086
2020	October	-1.133
2020	October	-1.075
2020	October	-1.052
2020	October	-1.009
2020	October	-1.027
2020	October	-0.942
2020	October	-0.956
2020	October	-0.962
2020	October	-1.008
2020	October	-1.028
2020	October	-0.783
2020	October	-0.722
2020	October	-0.356
2020	October	-0.456
2020	October	-0.43
2020	November	-0.47
2020	November	-0.604
2020	November	-0.939
2020	November	-1.08
2020	November	-1.188
2020	November	-1.257
2020	November	-1.29
2020	November	-1.353
2020	November	-1.207

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2020	November	-1.316
2020	November	-1.389
2020	November	-1.358
2020	November	-1.283
2020	November	-1.293
2020	November	-1.284
2020	November	-1.348
2020	November	-1.446
2020	November	-1.431
2020	November	-1.454
2020	November	-1.463
2020	December	-1.521
2020	December	-1.508
2020	December	-1.512
2020	December	-1.561
2020	December	-1.531
2020	December	-1.571
2020	December	-1.533
2020	December	-1.526
2020	December	-1.466
2020	December	-1.423
2020	December	-1.521
2020	December	-1.535
2020	December	-1.585
2020	December	-1.588
2020	December	-1.478
2020	December	-1.492
2020	December	-1.54
2020	December	-1.612
2020	December	-1.662
2020	December	-1.628
2020	December	-1.611
2020	December	-1.635

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Accessible Data for Figure 24: Financial Stress Index, January 2019–September 2023 (2021 data)

Year	Month	Distress index
2021	January	-1.457
2021	January	-1.539
2021	January	-1.606
2021	January	-1.734
2021	January	-1.767
2021	January	-1.675
2021	January	-1.694
2021	January	-1.74
2021	January	-1.707
2021	January	-1.654
2021	January	-1.708
2021	January	-1.809
2021	January	-1.815
2021	January	-1.791
2021	January	-1.729
2021	January	-1.747
2021	January	-1.205
2021	January	-1.454
2021	January	-1.308
2021	February	-1.428
2021	February	-1.617
2021	February	-1.716
2021	February	-1.762
2021	February	-1.807
2021	February	-1.84
2021	February	-1.837
2021	February	-1.811
2021	February	-1.848
2021	February	-1.9
2021	February	-1.84
2021	February	-1.83
2021	February	-1.81
2021	February	-1.797
2021	February	-1.706
2021	February	-1.709
2021	February	-1.785
2021	February	-1.429
2021	February	-1.383
2021	March	-1.616
2021	March	-1.631
2021	March	-1.505
2021	March	-1.359
2021	March	-1.503

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2021	March	-1.426
2021	March	-1.508
2021	March	-1.594
2021	March	-1.646
2021	March	-1.64
2021	March	-1.659
2021	March	-1.671
2021	March	-1.689
2021	March	-1.547
2021	March	-1.568
2021	March	-1.655
2021	March	-1.585
2021	March	-1.526
2021	March	-1.571
2021	March	-1.642
2021	March	-1.556
2021	March	-1.555
2021	March	-1.585
2021	April	-1.698
2021	April	-1.729
2021	April	-1.716
2021	April	-1.746
2021	April	-1.777
2021	April	-1.816
2021	April	-1.823
2021	April	-1.84
2021	April	-1.819
2021	April	-1.85
2021	April	-1.858
2021	April	-1.834
2021	April	-1.741
2021	April	-1.805
2021	April	-1.764
2021	April	-1.86
2021	April	-1.876
2021	April	-1.902
2021	April	-1.885
2021	April	-1.881
2021	April	-1.823
2021	May	-1.83
2021	May	-1.752
2021	May	-1.766
2021	May	-1.812
2021	May	-1.913
2021	May	-1.809

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2021	May	-1.689
2021	May	-1.447
2021	May	-1.617
2021	May	-1.8
2021	May	-1.781
2021	May	-1.706
2021	May	-1.643
2021	May	-1.713
2021	May	-1.733
2021	May	-1.831
2021	May	-1.825
2021	May	-1.889
2021	May	-1.915
2021	May	-1.909
2021	June	-1.878
2021	June	-1.898
2021	June	-1.859
2021	June	-1.948
2021	June	-1.964
2021	June	-1.944
2021	June	-1.885
2021	June	-1.955
2021	June	-1.972
2021	June	-1.97
2021	June	-1.944
2021	June	-1.914
2021	June	-1.855
2021	June	-1.709
2021	June	-1.843
2021	June	-1.899
2021	June	-1.941
2021	June	-1.953
2021	June	-1.982
2021	June	-1.958
2021	June	-1.936
2021	June	-1.936
2021	July	-1.932
2021	July	-2.008
2021	July	-1.919
2021	July	-1.904
2021	July	-1.775
2021	July	-1.916
2021	July	-1.925
2021	July	-1.869
2021	July	-1.886

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2021	July	-1.83
2021	July	-1.753
2021	July	-1.468
2021	July	-1.588
2021	July	-1.689
2021	July	-1.692
2021	July	-1.743
2021	July	-1.716
2021	July	-1.642
2021	July	-1.685
2021	July	-1.811
2021	July	-1.746
2021	August	-1.605
2021	August	-1.644
2021	August	-1.617
2021	August	-1.649
2021	August	-1.683
2021	August	-1.653
2021	August	-1.654
2021	August	-1.705
2021	August	-1.746
2021	August	-1.749
2021	August	-1.719
2021	August	-1.632
2021	August	-1.508
2021	August	-1.464
2021	August	-1.6
2021	August	-1.664
2021	August	-1.669
2021	August	-1.717
2021	August	-1.625
2021	August	-1.733
2021	August	-1.736
2021	August	-1.72
2021	September	-1.745
2021	September	-1.756
2021	September	-1.773
2021	September	-1.714
2021	September	-1.702
2021	September	-1.664
2021	September	-1.585
2021	September	-1.64
2021	September	-1.618
2021	September	-1.668
2021	September	-1.633

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2021	September	-1.529
2021	September	-1.293
2021	September	-1.341
2021	September	-1.501
2021	September	-1.628
2021	September	-1.655
2021	September	-1.624
2021	September	-1.441
2021	September	-1.457
2021	September	-1.377
2021	October	-1.484
2021	October	-1.396
2021	October	-1.488
2021	October	-1.481
2021	October	-1.558
2021	October	-1.587
2021	October	-1.516
2021	October	-1.451
2021	October	-1.486
2021	October	-1.584
2021	October	-1.611
2021	October	-1.583
2021	October	-1.618
2021	October	-1.651
2021	October	-1.66
2021	October	-1.624
2021	October	-1.622
2021	October	-1.594
2021	October	-1.517
2021	October	-1.55
2021	October	-1.496
2021	November	-1.472
2021	November	-1.506
2021	November	-1.564
2021	November	-1.566
2021	November	-1.51
2021	November	-1.498
2021	November	-1.425
2021	November	-1.317
2021	November	-1.334
2021	November	-1.36
2021	November	-1.333
2021	November	-1.324
2021	November	-1.302
2021	November	-1.316

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2021	November	-1.252
2021	November	-1.182
2021	November	-1.177
2021	November	-1.178
2021	November	-0.672
2021	November	-0.875
2021	November	-0.65
2021	December	-0.499
2021	December	-0.64
2021	December	-0.51
2021	December	-0.665
2021	December	-0.94
2021	December	-1.056
2021	December	-0.959
2021	December	-1.102
2021	December	-1.023
2021	December	-0.92
2021	December	-1.027
2021	December	-0.976
2021	December	-0.896
2021	December	-0.827
2021	December	-0.939
2021	December	-1.053
2021	December	-1.133
2021	December	-1.177
2021	December	-1.295
2021	December	-1.311
2021	December	-1.281
2021	December	-1.303

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Accessible Data for Figure 24: Financial Stress Index, January 2019–September 2023 (2022 data)

Year	Month	Distress index
2022	January	-1.43691
2022	January	-1.44302
2022	January	-1.32842
2022	January	-1.3231
2022	January	-1.3386
2022	January	-1.29775
2022	January	-1.34743
2022	January	-1.4221
2022	January	-1.28758
2022	January	-1.31246
2022	January	-1.1269
2022	January	-1.10623
2022	January	-1.03604
2022	January	-0.853952
2022	January	-0.775835
2022	January	-0.704678
2022	January	-0.726329
2022	January	-0.702913
2022	January	-0.793199
2022	January	-0.89727
2022	February	-1.0791
2022	February	-1.03895
2022	February	-0.89179
2022	February	-0.928966
2022	February	-0.917185
2022	February	-0.965664
2022	February	-1.06102
2022	February	-0.939713
2022	February	-0.664224
2022	February	-0.586621
2022	February	-0.790685
2022	February	-0.823146
2022	February	-0.592329
2022	February	-0.60104
2022	February	-0.552481

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2022	February	-0.464083
2022	February	-0.372771
2022	February	-0.372658
2022	March	-0.0833414
2022	March	-0.266471
2022	March	-0.168589
2022	March	0.32451
2022	March	0.3878
2022	March	0.217032
2022	March	-0.0722123
2022	March	-0.158069
2022	March	-0.171103
2022	March	0.0160273
2022	March	0.00543292
2022	March	-0.194233
2022	March	-0.290523
2022	March	-0.464493
2022	March	-0.482478
2022	March	-0.455665
2022	March	-0.469602
2022	March	-0.498541
2022	March	-0.46752
2022	March	-0.476624
2022	March	-0.593152
2022	March	-0.609638
2022	March	-0.588865
2022	April	-0.728334
2022	April	-0.7165
2022	April	-0.641372
2022	April	-0.511957
2022	April	-0.535986
2022	April	-0.540336
2022	April	-0.402402
2022	April	-0.487309
2022	April	-0.517771
2022	April	-0.50576
2022	April	-0.499646

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2022	April	-0.537298
2022	April	-0.556375
2022	April	-0.435749
2022	April	-0.26962
2022	April	-0.0379588
2022	April	-0.183931
2022	April	0.0790129
2022	April	0.0909087
2022	April	0.051979
2022	April	0.404249
2022	May	0.391285
2022	May	0.174023
2022	May	-0.128537
2022	May	0.307934
2022	May	0.286314
2022	May	0.566652
2022	May	0.508589
2022	May	0.430859
2022	May	0.50163
2022	May	0.289947
2022	May	0.203376
2022	May	0.0814871
2022	May	0.344123
2022	May	0.318389
2022	May	0.284481
2022	May	0.110947
2022	May	0.188157
2022	May	0.157849
2022	May	0.0584628
2022	May	-0.138148
2022	May	-0.127195
2022	May	-0.0736634
2022	June	-0.104551
2022	June	-0.167907
2022	June	-0.171623
2022	June	-0.14007
2022	June	-0.13943

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2022	June	-0.0915575
2022	June	0.00400667
2022	June	0.00838624
2022	June	0.680673
2022	June	0.549266
2022	June	0.373787
2022	June	0.911656
2022	June	0.723442
2022	June	0.704116
2022	June	0.655076
2022	June	0.661383
2022	June	0.696856
2022	June	0.565695
2022	June	0.523832
2022	June	0.571448
2022	June	0.534114
2022	June	0.726675
2022	July	0.995448
2022	July	1.00514
2022	July	0.771907
2022	July	0.719713
2022	July	0.563896
2022	July	0.481764
2022	July	0.543608
2022	July	0.525618
2022	July	0.389794
2022	July	0.437003
2022	July	0.300202
2022	July	0.290448
2022	July	0.144481
2022	July	0.0810236
2022	July	0.13583
2022	July	0.156177
2022	July	-0.0274971
2022	July	0.187671
2022	July	0.108228
2022	July	0.136555

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2022	July	0.0224004
2022	August	0.043219
2022	August	0.109297
2022	August	0.0240368
2022	August	-0.00427298
2022	August	-0.0914497
2022	August	-0.0470394
2022	August	-0.0290675
2022	August	-0.296961
2022	August	-0.226786
2022	August	-0.366416
2022	August	-0.2899
2022	August	-0.34939
2022	August	-0.305818
2022	August	-0.27489
2022	August	-0.103168
2022	August	0.0561832
2022	August	0.0965086
2022	August	-0.0509521
2022	August	-0.0841861
2022	August	-0.0374746
2022	August	0.0957887
2022	August	-0.0268537
2022	August	0.155318
2022	September	0.0280303
2022	September	0.0897813
2022	September	0.118392
2022	September	0.219973
2022	September	0.140816
2022	September	0.133376
2022	September	-0.0909366
2022	September	-0.0113227
2022	September	-0.00654261
2022	September	-0.0609765
2022	September	0.11006
2022	September	0.291693
2022	September	0.313431

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2022	September	0.357971
2022	September	0.424716
2022	September	0.451895
2022	September	0.71265
2022	September	0.879437
2022	September	0.923815
2022	September	0.847504
2022	September	0.922704
2022	September	0.857747
2022	October	0.767742
2022	October	0.635423
2022	October	0.549032
2022	October	0.675494
2022	October	0.735382
2022	October	0.788974
2022	October	0.937137
2022	October	0.88946
2022	October	0.866032
2022	October	0.731263
2022	October	0.763016
2022	October	0.642779
2022	October	0.768188
2022	October	0.80205
2022	October	0.861459
2022	October	0.679652
2022	October	0.596591
2022	October	0.51366
2022	October	0.428444
2022	October	0.239294
2022	October	0.484769
2022	November	0.445739
2022	November	0.424516
2022	November	0.465825
2022	November	0.355206
2022	November	0.380846
2022	November	0.434502
2022	November	0.317972

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2022	November	0.105531
2022	November	0.0655468
2022	November	0.101937
2022	November	0.0657276
2022	November	0.124569
2022	November	0.160558
2022	November	0.204348
2022	November	0.205856
2022	November	0.130964
2022	November	0.106113
2022	November	0.118578
2022	November	0.0620081
2022	November	0.128006
2022	November	0.0877638
2022	November	-0.0159294
2022	December	-0.0778364
2022	December	-0.0945533
2022	December	-0.120739
2022	December	0.0893235
2022	December	0.101124
2022	December	0.0413863
2022	December	0.133895
2022	December	0.121676
2022	December	-0.0669572
2022	December	-0.160515
2022	December	0.00337875
2022	December	0.0449038
2022	December	0.0637951
2022	December	0.044082
2022	December	-0.0451443
2022	December	0.0358698
2022	December	-0.00386477
2022	December	-0.0013926
2022	December	0.06058
2022	December	0.0658185
2022	December	0.0421265
2022	December	0.0817791

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Accessible Data for Figure 24: Financial Stress Index, January 2019–September 2023 (2023 data)

Year	Month	Distress index
2023	January	0.0872697
2023	January	0.113468
2023	January	-0.00399906
2023	January	-0.0896834
2023	January	-0.133639
2023	January	-0.124522
2023	January	-0.226363
2023	January	-0.231311
2023	January	-0.265579
2023	January	-0.296229
2023	January	-0.257972
2023	January	-0.294321
2023	January	-0.361334
2023	January	-0.360493
2023	January	-0.330378
2023	January	-0.400329
2023	January	-0.428275
2023	January	-0.423748
2023	January	-0.385256
2023	January	-0.421021
2023	January	-0.333823
2023	January	-0.395368
2023	February	-0.476609
2023	February	-0.523779
2023	February	-0.523657
2023	February	-0.416325
2023	February	-0.478766
2023	February	-0.463915
2023	February	-0.412136
2023	February	-0.379395
2023	February	-0.38079
2023	February	-0.454323
2023	February	-0.453735
2023	February	-0.423094
2023	February	-0.409787

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2023	February	-0.367045
2023	February	-0.233212
2023	February	-0.252146
2023	February	-0.339862
2023	February	-0.292156
2023	February	-0.298856
2023	February	-0.313909
2023	March	-0.314649
2023	March	-0.293097
2023	March	-0.398307
2023	March	-0.38116
2023	March	-0.368815
2023	March	-0.371324
2023	March	-0.181826
2023	March	0.0480538
2023	March	0.498308
2023	March	0.307024
2023	March	0.841033
2023	March	0.404704
2023	March	0.681623
2023	March	0.560387
2023	March	0.193959
2023	March	0.174833
2023	March	0.409093
2023	March	0.512079
2023	March	0.314757
2023	March	0.184058
2023	March	0.0758898
2023	March	0.0643224
2023	March	0.0182139
2023	April	-0.0482316
2023	April	-0.0861758
2023	April	0.0639559
2023	April	0.0349103
2023	April	0.0135357
2023	April	-0.0783946
2023	April	-0.160182

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2023	April	-0.228809
2023	April	-0.316424
2023	April	-0.419858
2023	April	-0.41719
2023	April	-0.465641
2023	April	-0.456413
2023	April	-0.370173
2023	April	-0.380904
2023	April	-0.336407
2023	April	-0.169421
2023	April	-0.188842
2023	April	-0.366506
2023	April	-0.368304
2023	May	-0.339817
2023	May	-0.190903
2023	May	-0.145371
2023	May	-0.0277546
2023	May	-0.241164
2023	May	-0.224831
2023	May	-0.229443
2023	May	-0.246935
2023	May	-0.220105
2023	May	-0.342178
2023	May	-0.276847
2023	May	-0.254585
2023	May	-0.376159
2023	May	-0.437565
2023	May	-0.330458
2023	May	-0.316872
2023	May	-0.279648
2023	May	-0.200623
2023	May	-0.204809
2023	May	-0.243878
2023	May	-0.260115
2023	May	-0.299142
2023	May	-0.320931
2023	June	-0.481557

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2023	June	-0.625579
2023	June	-0.590506
2023	June	-0.659832
2023	June	-0.705568
2023	June	-0.702902
2023	June	-0.727945
2023	June	-0.66729
2023	June	-0.714454
2023	June	-0.753605
2023	June	-0.677966
2023	June	-0.799807
2023	June	-0.764663
2023	June	-0.768709
2023	June	-0.753606
2023	June	-0.838944
2023	June	-0.796266
2023	June	-0.716
2023	June	-0.741
2023	June	-0.747
2023	June	-0.768
2023	June	-0.786
2023	July	-0.82
2023	July	-0.773
2023	July	-0.818
2023	July	-0.767
2023	July	-0.757
2023	July	-0.775
2023	July	-0.787
2023	July	-0.837
2023	July	-0.883
2023	July	-0.9
2023	July	-0.809
2023	July	-0.833
2023	July	-0.732
2023	July	-0.755
2023	July	-0.747
2023	July	-0.749

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2023	July	-0.72
2023	July	-0.745
2023	July	-0.704
2023	July	-0.783
2023	July	-0.804
2023	August	-0.798
2023	August	-0.678
2023	August	-0.653
2023	August	-0.612
2023	August	-0.676
2023	August	-0.664
2023	August	-0.738
2023	August	-0.756
2023	August	-0.745
2023	August	-0.757
2023	August	-0.652
2023	August	-0.667
2023	August	-0.598
2023	August	-0.614
2023	August	-0.641
2023	August	-0.677
2023	August	-0.703
2023	August	-0.658
2023	August	-0.732
2023	August	-0.813
2023	August	-0.844
2023	August	-0.821
2023	August	-0.815
2023	September	-0.83
2023	September	-0.809
2023	September	-0.777
2023	September	-0.753
2023	September	-0.733
2023	September	-0.768
2023	September	-0.777
2023	September	-0.753
2023	September	-0.792

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Distress index
2023	September	-0.833
2023	September	-0.756
2023	September	-0.749
2023	September	-0.755
2023	September	-0.776
2023	September	-0.65
2023	September	-0.675
2023	September	-0.687
2023	September	-0.543
2023	September	-0.526
2023	September	-0.538
2023	September	-0.545

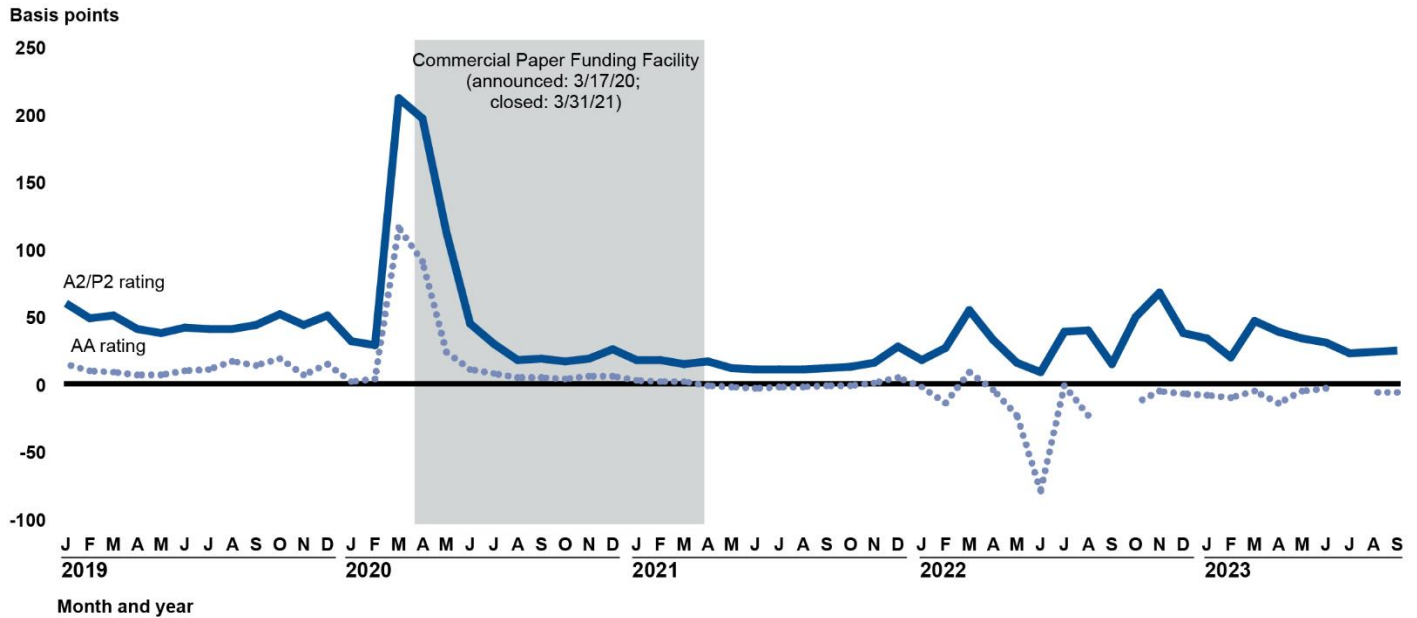
Source: GAO analysis of Office of Financial Research data. | GAO-24-106482

Note: The source of the index is Office of Financial Research's Financial Stress Index; see <https://www.financialresearch.gov/financial-stress-index/> (accessed Oct. 25, 2023). The Financial Stress Index is a daily market-based snapshot of stress in global financial markets. It is constructed from 33 financial market variables, such as yield spreads, valuation measures, and interest rates. The index is positive when stress levels are above average and negative when stress levels are below average. The index incorporates five categories of indicators: credit, equity valuation, funding, safe assets, and volatility. The index shown is for the United States.

Spreads on 90-day commercial paper, a source of short-term credit for large nonfinancial businesses, have remained low and have generally been close to prepandemic levels since March 2021 (see fig. 25).

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Figure 25: Spreads on 90-Day Commercial Paper for Large Nonfinancial Businesses, January 2019–September 2023



Source: GAO analysis of Bloomberg and Board of Governors of the Federal Reserve System data. | GAO-24-106482

Accessible Data for Figure 25: Spreads on 90-Day Commercial Paper for Large Nonfinancial Businesses, January 2019–September 2023

Year	Month	A2/P2	AA
2019	January	59	14
2019	February	48	9
2019	March	50	8
2019	April	40	6
2019	May	37	6
2019	June	41	9
2019	July	40	10
2019	August	40	16
2019	September	43	13
2019	October	51	18
2019	November	43	6
2019	December	50	14
2020	January	31	1
2020	February	28	3
2020	March	211	115
2020	April	196	90

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	A2/P2	AA
2020	May	112	23
2020	June	44	10
2020	July	29	7
2020	August	17	4
2020	September	18	4
2020	October	16	3
2020	November	18	5
2020	December	25	5
2021	January	17	2
2021	February	17	1
2021	March	14	1
2021	April	16	-2
2021	May	11	-3
2021	June	10	-4
2021	July	10	-3
2021	August	10	-3
2021	September	11	-2
2021	October	12	-2
2021	November	15	0
2021	December	27	4
2022	January	17	-3
2022	February	26	-15
2022	March	54	8
2022	April	32	-5
2022	May	15	-24
2022	June	8	-80
2022	July	38	-2
2022	August	39	-24
2022	September	14	
2022	October	49	-15
2022	November	67	-6
2022	December	37	-8
2023	January	33	-9
2023	February	19	-11
2023	March	46	-6
2023	April	38	-15
2023	May	33	-6

Appendix II: Facilities Not Funded by the CARES Act That Supported Short-Term Credit Markets

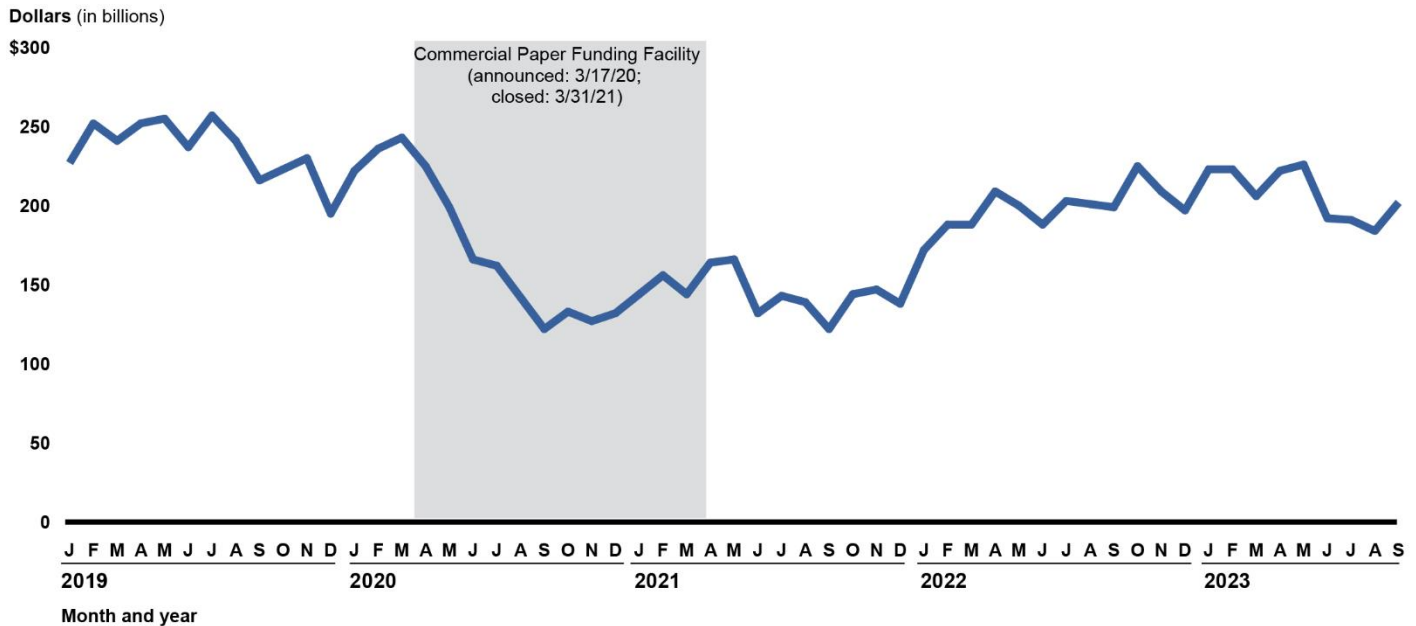
Year	Month	A2/P2	AA
2023	June	30	-4
2023	July	22	
2023	August	23	-7
2023	September	24	-7

Source: GAO analysis of Bloomberg and Board of Governors of the Federal Reserve System data. | GAO-24-106482

Note: The figure shows the monthly average of the daily rates because the rates were not reported for some days. A rating of AA is for issuers with at least one “1” or “1+” rating, but no ratings other than “1,” according to the rating agencies Moody’s or Standard & Poor’s. An A2/P2 rating is for issuers with at least one “2” rating, but no ratings other than “2.” Maturities are 270 days or less. A line is broken if there are no data for the category on that date. A basis point is 1/100th of a percentage point. The spread is the difference between the commercial paper rate and the overnight indexed swap of the same maturity.

Outstanding balances on commercial paper for funding large nonfinancial businesses have increased since September 2021 and have almost reached prepandemic levels, indicating improved investor confidence (see fig. 26).

Figure 26: Commercial Paper Outstanding for Large Nonfinancial Businesses, January 2019–September 2023



Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-24-106482

Accessible Data for Figure 26: Commercial Paper Outstanding for Large Nonfinancial Businesses, January 2019–September 2023

Year	Month	Dollars (in billions)
2019	January	227

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Dollars (in billions)
2019	February	252
2019	March	241
2019	April	252
2019	May	255
2019	June	237
2019	July	257
2019	August	241
2019	September	216
2019	October	223
2019	November	230
2019	December	195
2020	January	222
2020	February	236
2020	March	243
2020	April	225
2020	May	199
2020	June	166
2020	July	162
2020	August	142
2020	September	122
2020	October	133
2020	November	127
2020	December	132
2021	January	144
2021	February	156
2021	March	144
2021	April	164
2021	May	166
2021	June	132
2021	July	143
2021	August	139
2021	September	122
2021	October	144
2021	November	147
2021	December	138
2022	January	172
2022	February	188

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Dollars (in billions)
2022	March	188
2022	April	209
2022	May	200
2022	June	188
2022	July	203
2022	August	201
2022	September	199
2022	October	225
2022	November	209
2022	December	197
2023	January	223
2023	February	223
2023	March	206
2023	April	222
2023	May	226
2023	June	192
2023	July	191
2023	August	184
2023	September	202

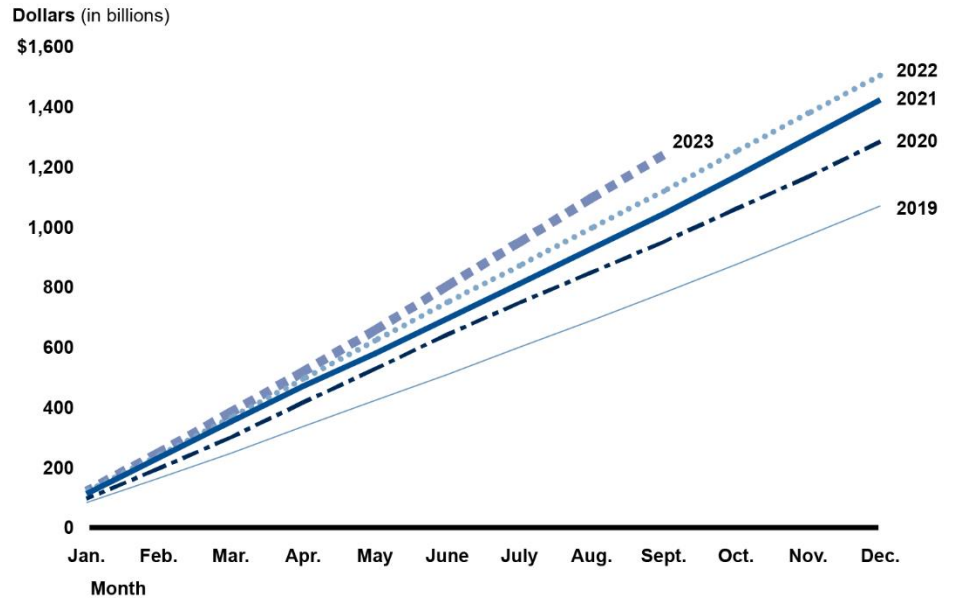
Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GA0-24-106482

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

Triparty repurchase agreements financing corporate bond collateral have continued to increase in volume since March 2021, providing access to short-term funding (see fig. 27). 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.

Appendix II: Facilities Not Funded by the CARES Act That Supported Short-Term Credit Markets

Figure 27: Annual Cumulative Triparty Repurchase Agreements of Corporate Securities, January 2019–September 2023



Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Accessible Data for Figure 27: Annual Cumulative Triparty Repurchase Agreements of Corporate Securities, January 2019–September 2023

Month	2019 (dollars in billions)	2020 (dollars in billions)	2021 (dollars in billions)	2022 (dollars in billions)	2023 (dollars in billions)
Jan.	83	96	112	120	121
Feb.	164	196	232	239	249
Mar.	247	300	352	365	383
Apr.	336	416	470	494	518
May	423	528	579	622	657
June	509	642	695	749	804
July	600	748	811	871	950
Aug.	689	849	928	997	1096
Sept.	781	951	1044	1119	1240
Oct.	875	1060	1168	1251	
Nov.	972	1167	1296	1378	
Dec.	1070	1284	1423	1504	

Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

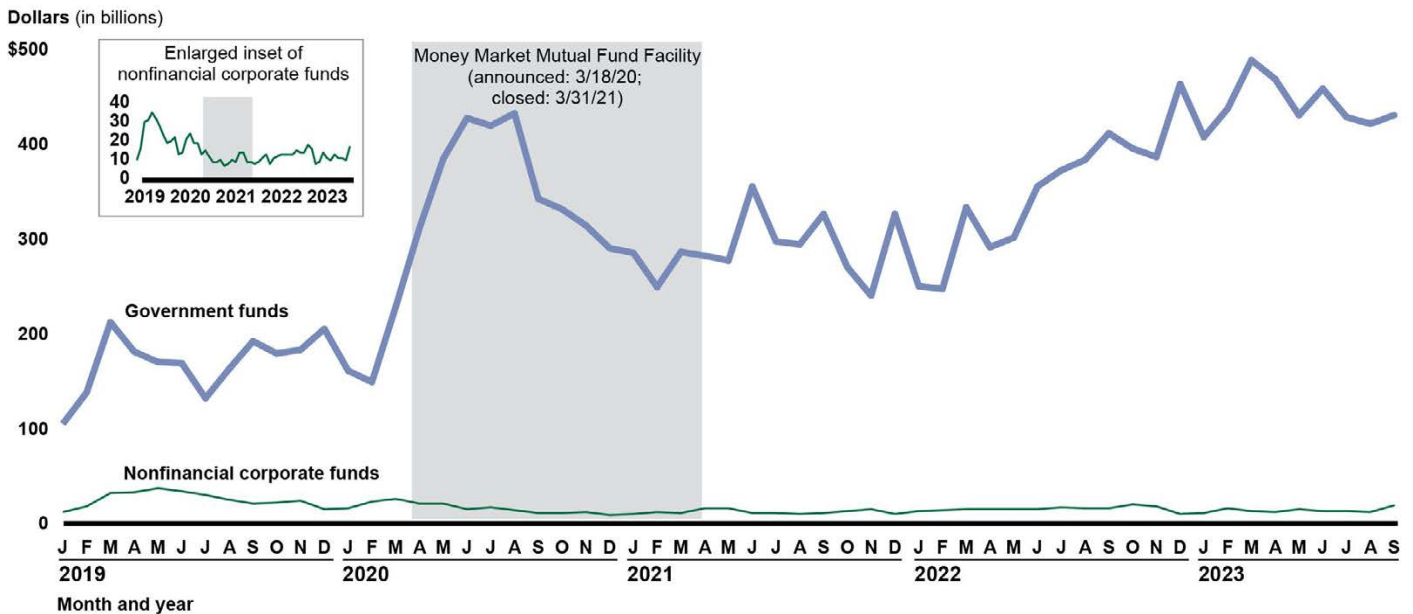
Note: The values in this figure are collateral values of Fedwire-eligible and Fedwire non-eligible triparty repurchase agreements and reverse repurchase agreements of investment-grade and non-

Appendix II: Facilities Not Funded by the CARES Act That Supported Short-Term Credit Markets

investment-grade corporate securities. In a triparty repurchase agreement, market clearing banks facilitate the settlement, unlike bilateral repurchase agreement markets, where the parties directly exchange money and securities. Fedwire is an electronic funds transfer system used by banks, businesses, and government agencies for large, same-day transactions.

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 the levels at the onset of the pandemic (see fig. 28). This trend suggests that large businesses are having difficulty obtaining credit in the short-term funding markets. In contrast, investments in government funds, which are perceived to be less risky, have increased.

Figure 28: Prime Money Market Fund Investments, January 2019–September 2023



Source: GAO analysis of Office of Financial Research data. | GAO-24-106482

Accessible Data for Figure 28: Prime Money Market Fund Investments, January 2019–September 2023

Year	Month	Nonfinancial corporate funds (dollars in billions)	Government funds (dollars in billions)
2019	January	12	105
2019	February	18	138
2019	March	32	212
2019	April	33	181
2019	May	37	170
2019	June	34	169

**Appendix II: Facilities Not Funded by the
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Year	Month	Nonfinancial corporate funds (dollars in billions)	Government funds (dollars in billions)
2019	July	30	132
2019	August	25	163
2019	September	21	192
2019	October	22	179
2019	November	24	183
2019	December	15	205
2020	January	16	161
2020	February	23	149
2020	March	26	228
2020	April	21	311
2020	May	21	384
2020	June	15	427
2020	July	17	419
2020	August	14	432
2020	September	11	342
2020	October	11	331
2020	November	12	314
2020	December	9	290
2021	January	10	285
2021	February	12	249
2021	March	11	286
2021	April	16	282
2021	May	16	277
2021	June	11	355
2021	July	11	297
2021	August	10	294
2021	September	11	326
2021	October	13	270
2021	November	15	240
2021	December	10	326
2022	January	13	250
2022	February	14	247
2022	March	15	333
2022	April	15	291
2022	May	15	301
2022	June	15	355

**Appendix II: Facilities Not Funded by the
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Year	Month	Nonfinancial corporate funds (dollars in billions)	Government funds (dollars in billions)
2022	July	17	372
2022	August	16	383
2022	September	16	411
2022	October	20	395
2022	November	18	386
2022	December	10	463
2023	January	11	407
2023	February	16	437
2023	March	13	488
2023	April	12	468
2023	May	15	430
2023	June	13	458
2023	July	13	428
2023	August	12	421
2023	September	19	430

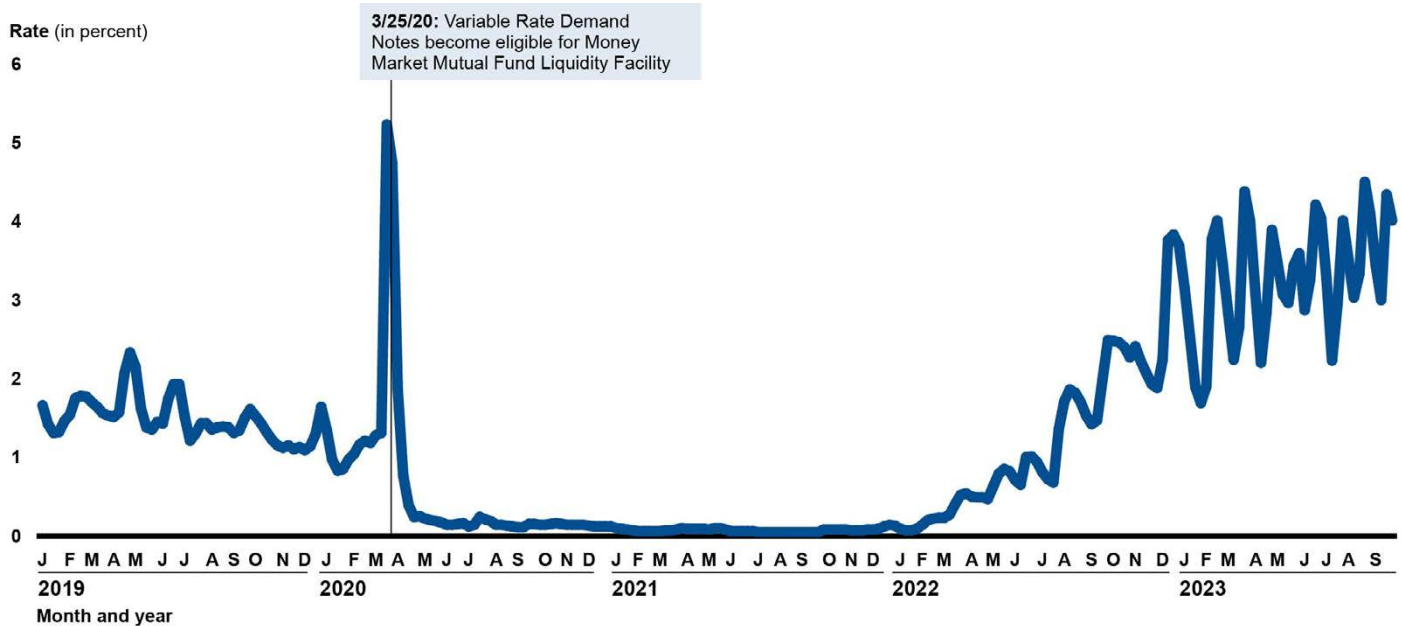
Source: GAO analysis of Office of Financial Research data. | GAO-24-106482

Note: The prime money market funds reported in this figure are investments in government, financial institution, nonfinancial corporate, and municipal entities and other entities in the United States.

The rates on variable demand rate notes, the most commonly held type of asset in municipal money market funds, have increased since 2022 (see fig. 29). This is partly due to the Federal Reserve raising interest rates, as the rates are based on the prevailing money market rate.

Appendix II: Facilities Not Funded by the CARES Act That Supported Short-Term Credit Markets

Figure 29: Municipal Swap Index of Rates on Tax-Exempt Variable Rate Demand Notes, January 2019–September 2023



Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Accessible Data for Figure 29: Municipal Swap Index of Rates on Tax-Exempt Variable Rate Demand Notes, January 2019–September 2023

Year	Month	Rate (in percent)
2019	January	1.63
2019	January	1.39
2019	January	1.28
2019	January	1.29
2019	January	1.43
2019	February	1.51
2019	February	1.72
2019	February	1.75
2019	February	1.74
2019	March	1.67
2019	March	1.61
2019	March	1.53
2019	March	1.5
2019	April	1.48
2019	April	1.54
2019	April	2.04

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
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Year	Month	Rate (in percent)
2019	April	2.3
2019	May	2.12
2019	May	1.59
2019	May	1.35
2019	May	1.32
2019	May	1.42
2019	June	1.4
2019	June	1.71
2019	June	1.9
2019	June	1.9
2019	July	1.49
2019	July	1.18
2019	July	1.27
2019	July	1.4
2019	July	1.4
2019	August	1.32
2019	August	1.35
2019	August	1.36
2019	August	1.35
2019	September	1.28
2019	September	1.31
2019	September	1.47
2019	September	1.58
2019	October	1.49
2019	October	1.4
2019	October	1.29
2019	October	1.19
2019	October	1.12
2019	November	1.09
2019	November	1.12
2019	November	1.07
2019	November	1.1
2019	December	1.06
2019	December	1.11
2019	December	1.27
2019	December	1.61
2020	January	1.32

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Year	Month	Rate (in percent)
2020	January	0.94
2020	January	0.8
2020	January	0.82
2020	January	0.94
2020	February	1.01
2020	February	1.13
2020	February	1.18
2020	February	1.15
2020	March	1.25
2020	March	1.28
2020	March	5.2
2020	March	4.71
2020	April	1.83
2020	April	0.74
2020	April	0.36
2020	April	0.21
2020	April	0.22
2020	May	0.19
2020	May	0.17
2020	May	0.16
2020	May	0.14
2020	June	0.11
2020	June	0.11
2020	June	0.12
2020	June	0.13
2020	July	0.09
2020	July	0.11
2020	July	0.21
2020	July	0.18
2020	July	0.16
2020	August	0.11
2020	August	0.11
2020	August	0.1
2020	August	0.09
2020	September	0.08
2020	September	0.08
2020	September	0.12

**Appendix II: Facilities Not Funded by the
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Year	Month	Rate (in percent)
2020	September	0.12
2020	September	0.11
2020	October	0.11
2020	October	0.12
2020	October	0.13
2020	October	0.12
2020	November	0.11
2020	November	0.11
2020	November	0.11
2020	November	0.11
2020	December	0.1
2020	December	0.09
2020	December	0.09
2020	December	0.09
2020	December	0.09
2021	January	0.07
2021	January	0.06
2021	January	0.05
2021	January	0.04
2021	February	0.03
2021	February	0.03
2021	February	0.03
2021	February	0.03
2021	March	0.03
2021	March	0.04
2021	March	0.04
2021	March	0.05
2021	March	0.07
2021	April	0.06
2021	April	0.06
2021	April	0.06
2021	April	0.06
2021	May	0.05
2021	May	0.07
2021	May	0.07
2021	May	0.05
2021	June	0.03

**Appendix II: Facilities Not Funded by the
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Year	Month	Rate (in percent)
2021	June	0.03
2021	June	0.03
2021	June	0.03
2021	June	0.03
2021	July	0.02
2021	July	0.02
2021	July	0.02
2021	July	0.02
2021	August	0.02
2021	August	0.02
2021	August	0.02
2021	August	0.02
2021	September	0.02
2021	September	0.02
2021	September	0.02
2021	September	0.02
2021	September	0.05
2021	October	0.05
2021	October	0.05
2021	October	0.05
2021	October	0.05
2021	November	0.04
2021	November	0.04
2021	November	0.04
2021	November	0.05
2021	December	0.05
2021	December	0.06
2021	December	0.09
2021	December	0.11
2021	December	0.1
2022	January	0.06
2022	January	0.04
2022	January	0.04
2022	January	0.06
2022	February	0.11
2022	February	0.17
2022	February	0.19

**Appendix II: Facilities Not Funded by the
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Year	Month	Rate (in percent)
2022	February	0.2
2022	March	0.2
2022	March	0.24
2022	March	0.37
2022	March	0.49
2022	March	0.51
2022	April	0.47
2022	April	0.46
2022	April	0.46
2022	April	0.44
2022	May	0.6
2022	May	0.76
2022	May	0.82
2022	May	0.79
2022	June	0.68
2022	June	0.62
2022	June	0.97
2022	June	0.98
2022	June	0.91
2022	July	0.78
2022	July	0.69
2022	July	0.65
2022	July	1.33
2022	August	1.68
2022	August	1.83
2022	August	1.79
2022	August	1.67
2022	August	1.5
2022	September	1.39
2022	September	1.44
2022	September	1.96
2022	September	2.46
2022	October	2.45
2022	October	2.43
2022	October	2.37
2022	October	2.24
2022	November	2.38

**Appendix II: Facilities Not Funded by the
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Year	Month	Rate (in percent)
2022	November	2.19
2022	November	2.04
2022	November	1.9
2022	November	1.85
2022	December	2.21
2022	December	3.73
2022	December	3.8
2022	December	3.66
2023	January	3.13
2023	January	2.5
2023	January	1.86
2023	January	1.66
2023	February	1.87
2023	February	3.74
2023	February	3.98
2023	February	3.42
2023	March	2.8
2023	March	2.21
2023	March	2.62
2023	March	4.35
2023	March	3.97
2023	April	3.04
2023	April	2.17
2023	April	2.81
2023	April	3.86
2023	May	3.45
2023	May	3.04
2023	May	2.93
2023	May	3.41
2023	May	3.56
2023	June	2.84
2023	June	3.23
2023	June	4.18
2023	June	4.01
2023	July	3.23
2023	July	2.2
2023	July	2.91

**Appendix II: Facilities Not Funded by the
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Year	Month	Rate (in percent)
2023	July	3.98
2023	August	3.49
2023	August	3
2023	August	3.3
2023	August	4.47
2023	August	4.06
2023	September	3.41
2023	September	2.97
2023	September	4.31
2023	September	3.98

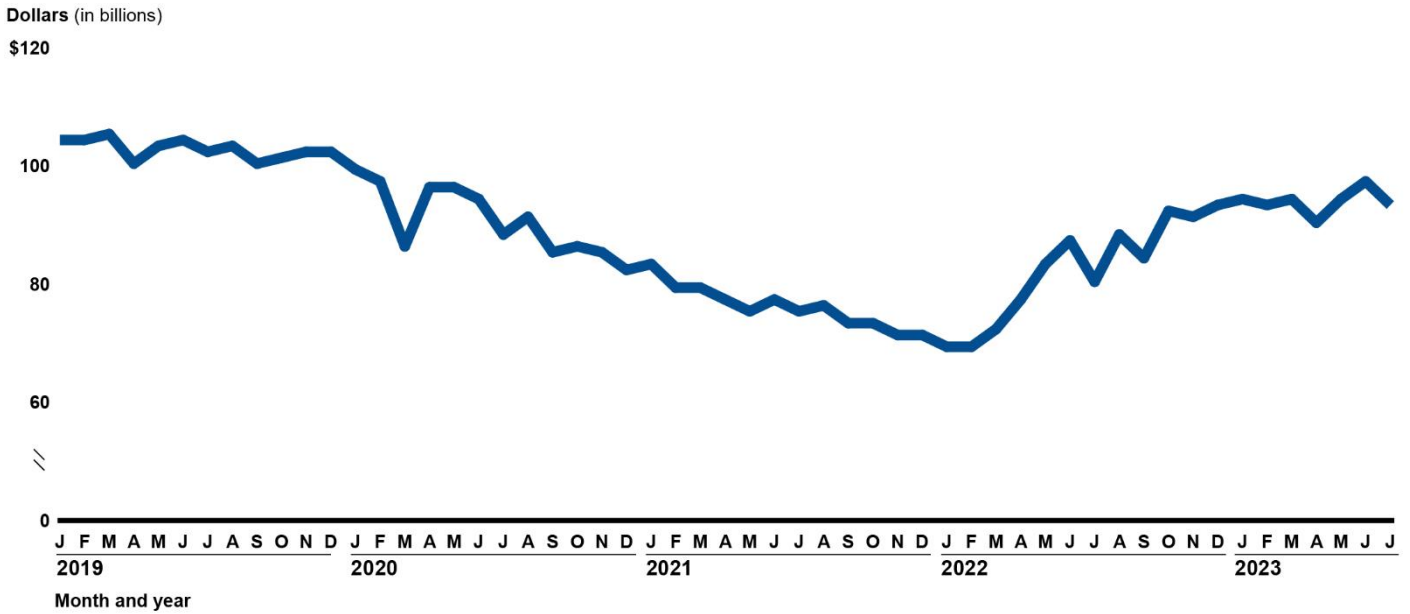
Source: GAO analysis of Securities Industry and Financial Markets Association data. | GAO-24-106482

Note: The index is a weekly nonweighted average of the reset rates of high-grade tax-exempt variable rate demand notes.

However, outstanding balances of variable rate demand notes have generally increased since 2022 and are close to prepandemic levels (see fig. 30). While this trend suggests improved confidence in the municipal credit market, this increase occurred after a long period of decline. The increase in the outstanding balances of variable rate demand notes is likely due to increased demand as prevailing interest rates are higher and to issuances by borrowers seeking variable rates to avoid locking in higher rates in the long term.

**Appendix II: Facilities Not Funded by the
CARES Act That Supported Short-Term Credit
Markets**

Figure 30: Variable Rate Demand Notes Outstanding, January 2019–July 2023



Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-24-106482

Accessible Data for Figure 30: Variable Rate Demand Notes Outstanding, January 2019–July 2023

Year	Month	Dollars (in billions)
2019	January	104
2019	February	104
2019	March	105
2019	April	100
2019	May	103
2019	June	104
2019	July	102
2019	August	103
2019	September	100
2019	October	101
2019	November	102
2019	December	102
2020	January	99
2020	February	97
2020	March	86
2020	April	96
2020	May	96

**Appendix II: Facilities Not Funded by the
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Year	Month	Dollars (in billions)
2020	June	94
2020	July	88
2020	August	91
2020	September	85
2020	October	86
2020	November	85
2020	December	82
2021	January	83
2021	February	79
2021	March	79
2021	April	77
2021	May	75
2021	June	77
2021	July	75
2021	August	76
2021	September	73
2021	October	73
2021	November	71
2021	December	71
2022	January	69
2022	February	69
2022	March	72
2022	April	77
2022	May	83
2022	June	87
2022	July	80
2022	August	88
2022	September	84
2022	October	92
2022	November	91
2022	December	93
2023	January	94
2023	February	93
2023	March	94
2023	April	90
2023	May	94
2023	June	97

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Year	Month	Dollars (in billions)
2023	July	93

Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-24-106482

Appendix III: Main Street Loan Performance by Loan Size and Business Size for Fully Repaid and Charged-Off Loans

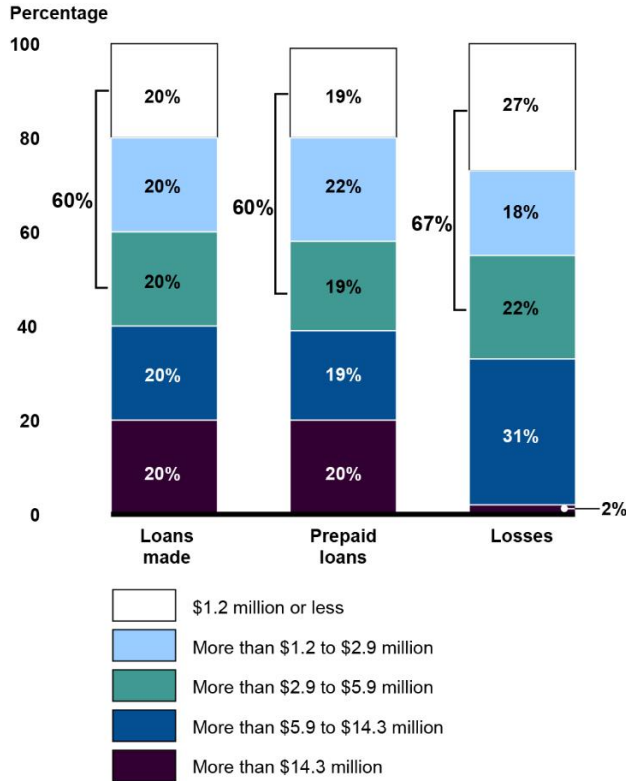
According to our analysis of the Federal Reserve Bank of Boston's Main Street Lending Program data, the distribution of fully repaid loans aligned more closely with the distribution of Main Street loans made by loan size and by business size than did loans with recorded losses, as of August 2023.

Loan size. More than half of Main Street loans made were for less than \$5.9 million, which is generally consistent with the distribution of both fully repaid loans and loans with recorded losses. Specifically, 60 percent of fully repaid loans were loans of less than \$5.9 million, as of August 2023. Similarly, 67 percent of loans with recorded losses were also loans less than \$5.9 million.

In addition, loans of \$1.2 million to less than \$2.9 million generally represented a greater share of fully repaid loans compared with their share of loans made. However, loans of the same size represented a slightly smaller share of loans with losses compared with their share of loans made. Loans of more than \$5.9 million to less than \$14.3 million incurred losses at a disproportionately higher rate than the distribution for the category. (See fig. 31.)

Appendix III: Main Street Loan Performance by Loan Size and Business Size for Fully Repaid and Charged-Off Loans

Figure 31: Distribution of Main Street Loans Made, Loans Fully Repaid, and Loans with Losses, by Loan Size, as of August 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 31: Distribution of Main Street Loans Made, Loans Fully Repaid, and Loans with Losses, by Loan Size, as of August 2023

Category	More than \$14.3 million	More than \$5.9 to \$14.3 million	More than \$2.9 to \$5.9 million	More than \$1.2 to \$2.9 million	\$1.2 million or less
Loans made	20	20	20	20	20
Prepaid loans	20	19	19	22	19
Losses	2	31	22	18	27

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

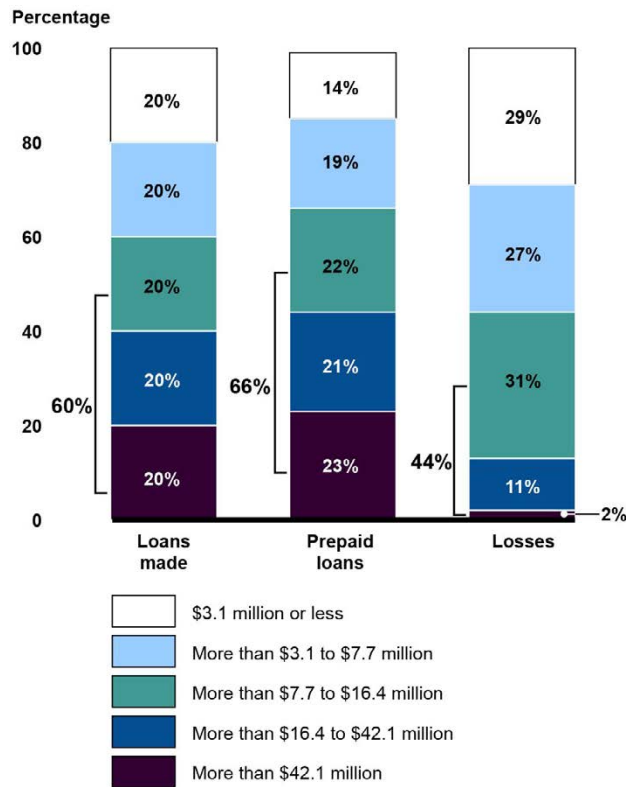
Note: Prepaid loans do not sum to 100 percent because of rounding.

Business size. Fully repaid loans were proportionally higher for larger businesses, while loans with recorded losses were proportionally higher for smaller businesses. For example, businesses that had 2019 gross revenue of \$7.7 million or more accounted for the majority of fully repaid loans, as of August 2023. This is generally consistent with the distribution

Appendix III: Main Street Loan Performance by Loan Size and Business Size for Fully Repaid and Charged-Off Loans

of all loans made through the Main Street program. In contrast, 44 percent of loans to these larger businesses resulted in losses. In other words, more of the loans with recorded losses were made to smaller businesses. (See fig. 32.)

Figure 32: Distribution of Main Street Loans Made, Loans Fully Repaid, and Loans with Losses, by Business Size, as of August 2023



Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

Accessible Data for Figure 32: Distribution of Main Street Loans Made, Loans Fully Repaid, and Loans with Losses, by Business Size, as of August 2023

Category	More than \$42.1 million	More than \$16.4 to \$42.1 million	More than \$7.7 to \$16.4 million	More than \$3.1 to \$7.7 million	\$3.1 million or less
Loans made	20	20	20	20	20
Prepaid loans	23	21	22	19	14
Losses	2	11	31	27	29

Source: GAO analysis of Federal Reserve Bank of Boston data. | GAO-24-106482

**Appendix III: Main Street Loan Performance by
Loan Size and Business Size for Fully Repaid
and Charged-Off Loans**

Note: Prepaid loans do not sum to 100 percent because of rounding. Business size is measured in 2019 gross revenue.

Appendix IV: GAO Contacts and Staff Acknowledgments

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

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