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Report to Agency Officials

December 2020

FINANCIAL STABILITY

Agencies Have Not Found Leveraged Lending to Significantly Threaten Stability but Remain Cautious Amid Pandemic

GAO-21-167

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GAO Highlights

Highlights of GAO-21-167, a report to agency officials

Why GAO Did This Study

The market for institutional leveraged loans grew from an estimated $0.5 trillion in 2010 to $1.2 trillion in 2019, fueled largely by investor demand for CLO securities. Some observers and regulators have drawn comparisons to the pre-2008 subprime mortgage market, noting that loan origination and securitization may similarly spread risks to the financial system. These fears are being tested by the COVID-19 pandemic, which has significantly affected leveraged businesses.

This report examines assessments by regulators, FSOC, and others—both before and after the COVID-19 shock to the economy—of the potential risks to financial stability stemming from leveraged lending activities, and the extent to which FSOC monitors and responds to risks from broad-based activities like leveraged lending, among other objectives.

GAO examined agency and private data on market size and investor exposures; reviewed agency, industry, and international reports; and interviewed federal financial regulators and industry participants.

What GAO Recommends

GAO recommends that the Secretary of the Treasury, as Chairperson of FSOC, conduct scenario-based exercises intended to evaluate capabilities for responding to crises. GAO also reiterates its 2016 recommendation (GAO-16-175) that Congress consider legislative changes to align FSOC's authorities with its mission. FSOC neither agreed nor disagreed with the recommendation, but said that it would take further actions if it determined necessary.

View GAO-21-167. For more information, contact Michael E. Clements at (202) 512-8678 or ClementsM@gao.gov.

What GAO Found

In the years before the economic shock from the COVID-19 pandemic, the Financial Stability Oversight Council (FSOC) and others assessed the potential risks to financial stability that leveraged loans and collateralized loan obligation (CLO) securities may pose. Generally, leveraged loans are those made to businesses with poor credit and high debt, and CLO securities are backed by these loans. FSOC and others found that riskier borrower profiles and looser underwriting standards left leveraged lending market participants vulnerable to losses in the event of a downturn. After the COVID-19 shock in March 2020, loans suffered record downgrades and increased defaults, but the highest-rated CLO securities remained resilient. Although regulators monitoring the effects of the pandemic remain cautious, as of September 2020, they had not found that leveraged lending presented significant threats to financial stability.

- Based on regulators' assessments, leveraged lending activities had not contributed significantly to the distress of any large financial entity whose failure could threaten financial stability. Large banks' strong capital positions have allowed them to manage their leveraged lending exposures, and the exposure of insurers and other investors also appeared manageable.
- Mutual funds experienced redemptions by investors but were able to meet them in part by selling leveraged loan holdings. While this may have put downward pressure on already-distressed loan prices, based on regulators' assessments, distressed leveraged loan prices did not pose a potential threat to financial stability.
- Present-day CLO securities appear to pose less of a risk to financial stability than did similar securities during the 2007–2009 financial crisis, according to regulators and market participants. For example, CLO securities have better investor protections, are more insulated from market swings, and are not widely tied to other risky, complex instruments.

FSOC monitors leveraged-lending-related risks primarily through its monthly Systemic Risk Committee meetings, but opportunities exist to enhance FSOC's abilities to respond to financial stability threats. FSOC identified leveraged lending activities as a source of potential risk to financial stability before the COVID-19 shock and recommended continued monitoring and analysis. However, FSOC does not conduct tabletop or similar scenario-based exercises where participants discuss roles and responses to hypothetical emergency scenarios. As a result, FSOC is missing an opportunity to enhance preparedness and test members' coordinated response to financial stability risks. Further, as GAO reported in 2016, FSOC does not generally have clear authority to address broader risks that are not specific to a particular financial entity, such as risks from leveraged lending. GAO recommended that Congress consider better aligning FSOC's authorities with its mission to respond to systemic risks, but Congress had not done so as of September 2020. GAO maintains that changes such as broader designation authority would help FSOC respond to risks from activities that involve many regulators, such as leveraged lending.

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Abbreviations

CDO	collateralized debt obligation
CDS	credit default swaps
CLO	collateralized loan obligation
COVID-19	Coronavirus Disease 2019
DHS	Department of Homeland Security
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
EBITDA	earnings before interest, taxes, depreciation, and amortization
FDIC	Federal Deposit Insurance Corporation
Federal Reserve	Board of Governors of the Federal Reserve System
FSB	Financial Stability Board
FSOC	Financial Stability Oversight Council
GDP	gross domestic product
LCD	Leveraged Commentary & Data
LIBOR	London Inter-Bank Offered Rate
MBS	mortgage-backed securities
NAIC	National Association of Insurance Commissioners
NRSRO	Nationally Recognized Statistical Rating Organization
OCC	Office of the Comptroller of the Currency
OFR	Office of Financial Research
PCS	payment, clearing, and settlement
SEC	Securities and Exchange Commission
SNC	Shared National Credit
S&P	Standard & Poor's
TIC	Treasury International Capital

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Agency Officials

The market for institutional leveraged loans—corporate loans made to businesses that typically have high levels of debt—approximately doubled from 2010 to 2019, with one estimate indicating growth from $0.5 trillion to $1.2 trillion.[1] These businesses use such loans to fund mergers and acquisitions, business recapitalizations and refinancing, leveraged buyouts, and business expansions. Leveraged loans may be attractive to borrowers because they can provide more suitable credit arrangements in contrast to other financing products. Further, leveraged loans generally offer higher returns to lenders and investors compared to less risky investments. Institutional leveraged loans are generally originated by a group of lenders that typically includes large banks and may include nonbank financial institutions (nonbanks).[2] These loans are subsequently sold to institutional investors, including insurance companies, mutual funds, and collateralized loan obligations (CLO)—securitization vehicles that pool loans to create CLO securities sold to other institutional investors. In recent years, nonbank lenders have increasingly entered the market, making loans directly to leveraged businesses as part of their long-term investment strategies.

Prior to the economic shock associated with Coronavirus Disease 2019 (COVID-19), demand for leveraged loans had steadily increased, shifting the negotiating power in borrowers' favor and resulting in weaker investment protections for lenders. These developments had raised concerns that an economic downturn could set the stage for increased leveraged loan default rates and that stress in the leveraged loan markets could disrupt other markets. Some market observers and regulators have compared the leveraged lending market to the pre-2008 subprime mortgage market, noting that in both markets, loan originators and

[1]This estimate was developed by Leveraged Commentary & Data (LCD), an offering of S&P Global Market Intelligence. This estimate represents institutional leveraged loans outstanding and generally excludes lines of credit and term loans primarily held by banks and not sold to institutional investors. Similarly, certain leveraged loans issued by nonbank lenders are not included in this estimate. We discuss these estimates of leveraged lending activity later in the report.

[2]For purposes of this report, we refer to bank holding companies and their depository institutions as banks. We refer to bank holding companies with $50 billion or more in consolidated assets as large banks.

securitizers may pass the risk of weaker underwriting to investors, spreading the risk of default throughout the financial system. The economic contraction from the COVID-19 pandemic has put these concerns to the test, as leveraged businesses—particularly in industries disproportionately affected by the pandemic—have experienced significant distress.

Multiple federal and state financial regulators oversee the leveraged lending market and key participants, including federal banking and securities regulators and state insurance regulators. Additionally, in the aftermath of the 2007–2009 financial crisis, Congress created the Financial Stability Oversight Council (FSOC)—a council comprising the heads of the federal financial regulatory agencies, among others—to monitor the stability of the U.S. financial system and take actions to mitigate risks that might destabilize the system, including those that might arise from leveraged lending.[3] Congress also created the Office of Financial Research (OFR) to support FSOC in its mission, and in the aftermath of the crisis, the Board of Governors of the Federal Reserve System (Federal Reserve) expanded its strategic goals and activities around financial stability monitoring.

We prepared this report under the authority of the Comptroller General to conduct work to assist Congress with its oversight responsibilities. This report examines (1) the extent to which financial institutions are exposed to leveraged lending activities; (2) financial regulators', FSOC's, OFR's, and others' assessments of the potential risks to financial stability stemming from leveraged lending activities before and after the COVID-19 shock; and (3) the extent to which FSOC has established approaches for identifying, monitoring, and mitigating potential risks to financial

[3]Pub. L. No. 111-203, §§ 111-23, 124 Stat. 1376, 1392-1412 (2010) (codified as amended at 12 U.S.C. §§ 5321-33). FSOC comprises 10 voting members—the heads of nine federal agencies and an independent insurance expert—and five nonvoting members, who serve in an advisory capacity. The federal agencies represented are the Department of the Treasury, Consumer Financial Protection Bureau, Commodity Futures Trading Commission, Federal Deposit Insurance Corporation, Board of Governors of the Federal Reserve System, Federal Housing Finance Agency, Federal Insurance Office (nonvoting), National Credit Union Administration, Office of the Comptroller of the Currency, Office of Financial Research (nonvoting), and Securities and Exchange Commission. The other members are a state banking supervisor (nonvoting), a state insurance commissioner (non-voting), a state securities commissioner (nonvoting), and an independent member with insurance expertise.

stability arising from broad-based market activities such as leveraged lending.[4]

For the first objective, we obtained data on the size of the leveraged lending market from private sources that provide these data to the industry. We obtained data on leveraged lending exposure for banks and other investors from the Federal Reserve, and for other regulated entities from the Securities and Exchange Commission (SEC) and the National Association of Insurance Commissioners (NAIC), which is the organization of insurance regulators from the 50 states, the District of Columbia, and the five U.S. territories. To assess the reliability of the data, we reviewed related documentation and interviewed knowledgeable private sector and regulatory officials. We concluded that all applicable data were sufficiently reliable for the purposes of identifying key market participants' exposures to leveraged loans and CLO securities.

For the second objective, we reviewed and analyzed reports and studies from U.S. and international entities concerned with financial stability, including FSOC, OFR, the Federal Reserve, and the Financial Stability Board; academics; market experts; industry associations; and three large credit rating agencies.[5] We also analyzed regulators' and NAIC's reports on the resilience of their regulated entities to leveraged lending exposures. We interviewed staff from FSOC, OFR, the Federal Reserve, SEC, the Commodity Futures Trading Commission, NAIC, the three large credit rating agencies, and industry associations. We obtained updated views from credit rating agencies and regulators on these issues after the COVID-19 shock to the U.S. economy.

For the third objective, we analyzed FSOC annual reports, other FSOC public documents, and internal presentations related to leveraged lending from monthly FSOC Systemic Risk Committee meetings held between January 2015 and June 2020. We also reviewed relevant statutes, regulations, FSOC interpretive guidance, and GAO reports. In addition, we interviewed staff from FSOC, OFR, banking regulatory agencies, and

[4]In this report, we use "leveraged lending activities" as a general term referring to activities by market participants involved in the leveraged lending market and CLO security market.

[5]A credit rating is an assessment of the creditworthiness of an obligor as an entity or in relation to specific securities or money market instruments. *See eg.* 15 U.S.C. § 78c(a)(60). Credit rating agencies designate credit ratings to issuers or securities. The three large credit rating agencies are Standard & Poor's (S&P) Global Ratings, Moody's Investors Service, and FitchRatings.

SEC about their participation in FSOC's monitoring activities. We evaluated FSOC's actions against criteria for evaluating governmental and nongovernmental efforts in preparing and responding to crises. These criteria include principles for conducting stress tests developed by the Bank for International Settlements and principles for conducting scenario-based emergency preparedness exercises from the Department of Homeland Security.[6] We used the stress testing principles because they provide insights about the benefits of using scenarios to analyze the financial system's response to economic shocks. We used the principles for conducting scenario-based emergency preparedness exercises because they offer insights that can help multiple governmental entities better prepare and respond to risks when shocks or emergencies arise. Appendix I provides more information on our scope and methodology.

We conducted this performance audit from August 2019 to December 2020 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

Leveraged Loans

Market participants use various criteria to define a leveraged loan. According to credit rating agencies we interviewed, a leveraged loan generally refers to a loan made to a nonfinancial business with a lower credit rating or no rating and high debt relative to earnings (i.e., high leverage).[7] A borrower in this market, or the loan itself, generally has a

[6]Stress tests are hypothetical exercises that assess the potential impact of economic, financial, or other scenarios on the financial performance of a company.

[7]A nonfinancial business is one whose principal activity is the production of market goods or nonfinancial services.

speculative-grade credit rating.[8] In contrast, an investment-grade rating is one for which a credit rating agency deems the company to have at least adequate capacity to meet its obligations. Other characteristics may also help define a leveraged loan, such as a high spread relative to a reference interest rate such as the London Inter-Bank Offered Rate (LIBOR).[9] U.S. banking regulators have not mandated a leveraged loan definition for oversight purposes, but they previously recommended that banks that make leveraged loans develop their own definition that clearly describes the financial characteristics common in leveraged loan transactions.[10]

Leveraged loans can be used for specific purposes, including leveraged buy-outs, mergers and acquisitions, recapitalizations, payment of dividends, refinancing of debt, or general corporate purposes.[11] Businesses across a wide range of industries obtain financing through leveraged loans, including businesses in the health care, electronics, telecommunications, retail, travel and leisure, business equipment, oil and gas, food service, and automotive industries. These businesses may find

[8]A credit rating is an assessment of the creditworthiness of an obligor as an entity or in relation to specific securities or money market instruments.15 U.S.C. § 78c(a)(60). Credit rating agencies have different credit rating methodologies, rating scales, and definitions. However, generally, credit rating agencies designate issuers or securities considered investment-grade, or exhibiting lower credit risk, with higher letter ratings, and issuers or securities considered speculative-grade, or exhibiting higher credit risk, with lower letter ratings. For example, S&P Global Ratings and FitchRatings designate investment-grade long-term debt with ratings of AAA, AA, A, and BBB, and speculative-grade long-term debt with ratings of BB, B, CCC, CC, and C. The rating scale employed by Moody's Investors Service uses Aaa, Aa, A, and Baa for investment-grade long-term debt, and Ba, B, Caa, Ca, and C for speculative-grade long-term debt.

[9]For example, one credit rating agency considers an investment-grade loan to be a leveraged loan if it has a spread above 125 basis points over LIBOR, among other factors.

[10]See 78 Fed. Reg. 17,766, 17,771-72 (Mar. 22, 2013). While a specific definition has not been mandated, according to Office of the Comptroller of the Currency officials, regulators provided a broad set of parameters that each bank interprets and applies to its bank and circumstances. For a compilation of terms defined by various sources, see Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations* (Basel, Switzerland: 2019).

[11]General corporate purposes include supporting the company's day-to-day operations or providing for the purchase of new property, plant, and equipment.

suitable credit arrangements by obtaining leveraged loans or by issuing high-yield corporate bonds and selling them to investors.[12]

Broadly Syndicated Leveraged Lending Markets

Broadly syndicated leveraged loans are loans originated by a group of lenders, referred to as a syndicate, and sold to institutional investors. The syndicate typically includes large banks and, to a lesser extent, some nonbank lenders. The syndication process allows lenders to share risk across the syndicate, and to originate larger loans than could be arranged by a single lender. The lender that arranges the syndicated loan is referred to as the "lead arranger." The lead arranger finds other potential lenders and arranges the terms of the loan on behalf of the lending group. Borrowers pay arrangers various fees for their services.

As shown in figure 1, broadly syndicated leveraged loans generally have two components—(1) pro-rata debt, generally held by banks, and (2) institutional debt, generally sold to a variety of institutional investors:

- **Pro-rata debt** includes a revolving credit facility which may be packaged together with an amortizing term loan. This debt is generally syndicated by a group of banks, and corporate borrowers may use the credit facility for temporary or seasonal expenses, for example.[13] Pro-rata debt generally has priority in the borrower's capital structure as senior secured debt, which means that it generally must be repaid before other obligations. Additionally, the pro-rata debt's loan agreement may include restrictions, called covenants, that stipulate certain conditions for the borrower to fulfill or that limit certain borrower actions.[14]
- **Institutional debt** includes term loans structured specifically for sale to institutional investors, including banks. The term loans are funded

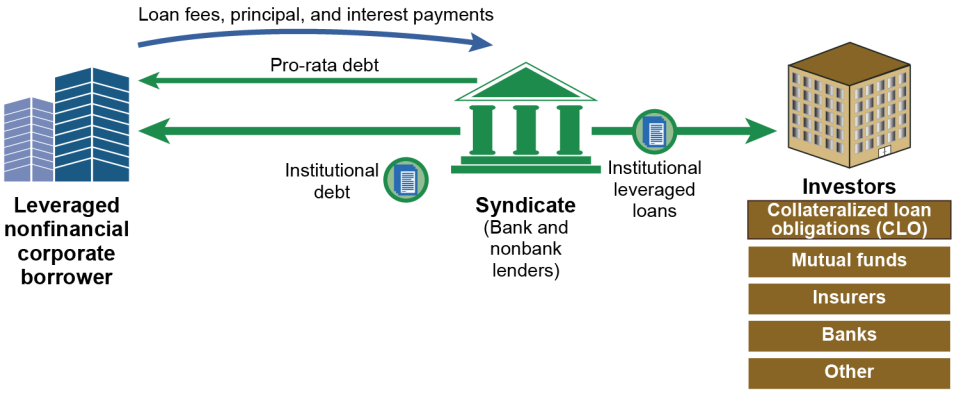
[12]Nonfinancial corporate debt to leveraged firms consists generally of high-yield corporate bonds and leveraged loans. A high-yield corporate bond offers a higher rate of interest because it tends to have a higher default rate. Companies with greater estimated default risk typically issue bonds with higher interest rates to entice investors and compensate them for this higher risk. High-yield bond issuers can include companies that are highly leveraged, are experiencing financial difficulties, or are smaller or emerging companies with unproven operation histories.

[13]Historically, the debt, referred to as pro-rata debt, was distributed on a proportional basis to banks and finance companies.

[14]Types of covenants include affirmative, negative, and financial. For example, covenants may impose reporting requirements, place limits on the borrower's total debt, restrict management changes, or restrict asset sales. If a borrower violates a covenant, a lender can take actions that may include acceleration of the loan repayment or restructuring the loan with stricter terms or additional restrictions.

by the syndicate and may be sold to multiple institutional investors as institutional leveraged loans. In contrast to unsecured debt obligations such as high-yield bonds, leveraged loans are typically secured by a borrower's assets as collateral. The institutional term loans are senior debt obligations in a borrower's capital structure, although a portion may be issued as second-lien loans, which have a security interest in the borrower's assets that is subordinate to the senior secured loans and pro-rata debt in case of default. Institutional debt may include loan covenants.

Figure 1: Illustrative Example of a Broadly Syndicated Leveraged Loan Transaction



Source: GAO. | GAO-21-167

Note: Pro-rata debt is the portion of a syndicated loan that includes a revolving credit facility and amortizing term loan, which are packaged together.

In the broadly syndicated loan market, banks serve a key role in arranging and underwriting loans on behalf of borrowers and then distributing those loans to institutional investors. The syndicate loan "pipeline" refers to loans that have been originated but not yet syndicated and distributed. Broadly syndicated loan distributions can be "best effort" arrangements or "underwritten" arrangements. In a best effort arrangement, the lending banks generally are not responsible for funding any unsold portions of the institutional debt. In contrast, in an underwritten arrangement, the underwriting banks generally provide commitments to the borrowers that they will make up for any shortfall in funds if not all the term loans have been sold to institutional investors by the time they are originated. Lastly, the arranging bank also helps distribute the loans to institutional investors, such as CLOs, mutual funds, insurance companies, and hedge funds. While banks may hold leveraged loans on their books, they have increasingly focused on an originate-to-distribute business model (where the originator of a loan sells it to third parties).

Non–Broadly Syndicated Leveraged Lending Markets

Leveraged businesses also obtain loans directly from nonbank lenders. According to OFR, unlike banks in the broadly syndicated market, such nonbank lenders generally hold the loans to maturity in their portfolios. Historically, nonbank lenders have provided leveraged loans to small and mid-sized businesses that are below investment-grade or not rated. Currently, nonbank lenders serving leveraged borrowers include private debt funds and business development companies. Private debt funds engage in leveraged lending as an investment strategy. Business development companies are companies regulated under the Investment Company Act that offer credit to small and mid-sized businesses.[15] These nonbank lenders are funded by investors, but may obtain funding from banks.

Collateralized Loan Obligations

CLOs invest in institutional leveraged loans. CLOs pool and securitize leveraged loans to create and sell CLO securities to other institutional investors, including insurance companies, mutual funds, hedge funds, banks, and pension funds. CLO securities are attractive to investors in part because investors can select their level of credit risk by investing in tranches with different interest rate and risk profiles. Additionally, investors receive diversified cash flows from many loans, so they are not exposed to the prepayment and default risks of a single loan.

Figure 2 illustrates a hypothetical CLO's assets, liabilities, and capital structure. A CLO manager acquires a portfolio of leveraged loans, which are placed in a CLO special purpose vehicle.[16] These leveraged loans are the CLO's assets. Their purchase is financed through the issuance and sale of CLO securities to investors, and these securities are the CLO's liabilities.[17] The securities are split into different classes, or tranches, by risk or other characteristics. The rated tranches are referred to as debt tranches, and the corresponding securities are generally rated AAA through B, with higher letter ratings indicating higher credit quality (or less credit risk). CLO securities in the senior tranches have the highest credit

[15]Congress amended the Investment Company Act of 1940 in 1980 to authorize the establishment of business development companies. *See* Pub. L. No. 96-477, 94 Stat. 2275 (1980).

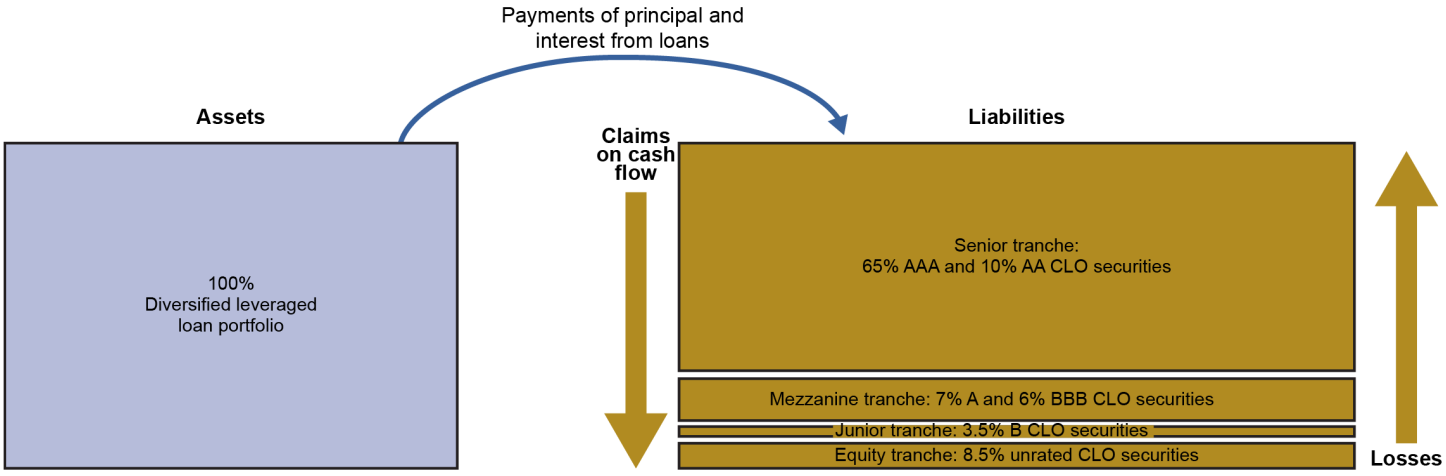
[16]A special purpose vehicle is a separate legal entity, with its own assets and liabilities, created by an organization, such as an investment bank. Usually, it is created for a specific objective, including to securitize debt, as is the case with CLOs. The vehicle's legal status as a separate company is designed to make its obligations secure even if the parent company goes bankrupt.

[17]Although CLOs can be backed by a pool of any type of business loan, in practice, U.S. CLOs are primarily backed by leveraged loans, according to the Federal Reserve.

quality and generally are rated AAA and AA. CLO securities in the mezzanine tranches have more credit risk than those in the senior tranches and are generally rated A and BBB. In turn, securities in the junior tranches have more credit risk than those in the mezzanine tranches and can be rated BB or lower. Securities rated BBB and above are referred to as "investment grade." The riskiest tranche is referred to as the equity tranche, and corresponding securities are unrated.

As figure 2 also shows, CLOs are structured so that senior tranches receive priority access to cash flows over subordinate tranches, or tranches with lower credit quality. When the underlying collateral generates cash income (i.e., principal and interest from the portfolio of leveraged loans), the CLO pays the senior-most liabilities first (that is, the highest-rated tranches). Remaining cash is used to pay lower-rated liabilities, and any residual cash is paid to holders of the equity tranches or reinvested. This order of payments to investors according to the seniority of their CLO securities is referred to as the CLO payment waterfall. Under the CLO payment waterfall, principal is generally paid sequentially—no principal payments are made on a tranche unless all tranches senior to it have been paid in full. Investors with a higher tolerance for risk of loss tend to invest in the lower, riskier tranches and are compensated with a higher rate of return. Conversely, investors with a lower risk tolerance tend to invest in higher-rated tranches and correspondingly earn a lower rate of return relative to riskier tranches.

Figure 2: Balance Sheet and Capital Structure of a Hypothetical Collateralized Loan Obligation (CLO)



Source: GAO. | GAO-21-167

The lifecycle of a CLO typically starts with a warehouse period of about 6 to 12 months, when the CLO manager begins purchasing loans using temporary warehouse financing, primarily provided by banks.[18] During this period, the investors in the CLO securities commit to an investment amount and specified interest rate on their investments, the transaction's terms are agreed upon, and the contracted credit rating agencies assign preliminary ratings to the various CLO tranches. This is followed by a ramp-up period, which starts after the CLO transaction is finalized or closed and during which the CLO manager finishes assembling the portfolio of leveraged loans that make up the CLO's assets.

CLOs typically have a legal maturity of 8 to 12 years, but according to an industry trade group, can mature much earlier. Once the CLO's securities are fully purchased by investors, there is typically a 2-year non-call period, which may run concurrently with a 4- to 5-year reinvestment period, during which the CLO manager can actively manage the assets of the CLO subject to the conditions of the CLO contract or indenture.[19] Lastly, there is an amortization period when CLO securities holders are paid. A successful CLO transaction fully repays all investors, who receive the regular, promised interest payments in a timely manner, as well as their full initial investment, with equity holders receiving any residual claims.

According to credit rating agency officials, CLO securities in the AAA and AA tranches can be considered in default for a number of reasons, including if investors fail to receive promised payments in a timely manner as indicated in the indenture. Payments to investors in CLO securities in the other rated tranches may be deferred without necessarily causing default. In the case that cash flows are not sufficient to pay these investors, payments are deferred, and the securities are considered in default only if investors do not receive promised payments by the end of the CLO's life. Lastly, equity tranche CLO securities do not technically default. Equity investors agree to be the last in line to receive payments according to the CLO payment waterfall. They receive payments only if

[18]A warehouse line of credit finances the CLO manager's acquisition of leveraged loans for the CLO. The warehouse loan is expected to be paid off with the proceeds from the CLO's issuance of CLO securities.

[19]When a CLO security is non-callable for a period of time, it cannot be redeemed or refinanced by the CLO issuer (which typically occurs at the direction of the equity investors or the CLO manager) during that time. According to officials from one credit rating agency, the length of the non-call and reinvestment periods can vary depending on market conditions.

CLO cash flows are sufficient to satisfy promised payments to investors in all the other CLO tranches.

Risks Associated with Leveraged Loans and CLO Securities

Bank and nonbank lenders that originate leveraged loans and investors that hold leveraged loans and CLO securities are exposed primarily to credit risk, but also may be exposed to liquidity risk and market risk:

- **Credit risk** is the risk that the borrower will default on the loan, such as by failing to make timely payments. For a holder of CLO securities, credit risk is the risk that the underlying portfolio of the CLO will not be able to generate sufficient cash flow to pay the holder on a full and timely basis when such payments are due. In addition, any financing or guarantees provided to others in the lending or securitizing process—such as revolving credit facilities and CLO warehouse financing—increase credit risk for the provider, which can be a bank.
- **Market risk** is the risk of loss that could result from movements in market prices, such as changes in the general level of interest rates, credit spreads, equity prices, foreign exchange rates, or commodity prices. Additionally, banks may incur losses on unsold loans held on their balance sheets. In their role as providers of CLO warehouse financing, banks may also face delays in repayment from the CLO and may be forced to absorb the loans pledged as collateral. Further, in situations such as declining markets, entities may need to recognize losses in their financial statements for loans valued at fair value.[20]
- **Liquidity risk** is the potential that a financial institution will be unable to meet its obligations. For example, the revolving credit facilities that are part of the pro-rata debt expose banks to liquidity risk, as banks might face larger-than-expected drawdowns when the borrower is under stressed financial conditions.

Market participants may have indirect exposures to credit, market, liquidity, and other risks from leveraged loans and CLO securities even if they do not hold these assets themselves. Participants may be interconnected with entities that are also exposed to leveraged loans or CLOs and whose instability may transmit losses.

[20]Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Federal and State Regulators with Oversight Responsibilities over Leveraged Lending Activities

Oversight of the leveraged lending market and key participants is spread among a number of regulators at the federal and state levels, including federal banking regulators, SEC, and state insurance regulators.[21]

Federal Banking Regulators

The Federal Reserve, the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) oversee banks, including syndicated leveraged loan bank lenders, for safety and soundness purposes.[22] Safety and soundness refer to a broad range of issues that relate to the health of a bank, including capital requirements, risk management, the quality and diversification of a bank's portfolio, liquidity and funds management, and adequate internal control procedures. In addition, the Federal Reserve provides consolidated supervision of bank holding companies, which encompasses supervision of the parent company of a bank and certain subsidiaries.

Federal banking regulators oversee banks' leveraged lending activities primarily through three mechanisms: examinations, interagency assessments of risk in the largest loans shared by regulated financial institutions, and analysis of data reported by bank holding companies. Several other regulatory requirements and supervisory activities, such as minimum capital and leverage and liquidity requirements and supervisory and company-run stress tests, are designed to increase banks' resiliency and mitigate credit and liquidity risks from lending activities, including leveraged lending.

Securities and Exchange Commission

SEC's mission is to protect investors; maintain fair, orderly, and efficient markets; and facilitate capital formation. According to SEC staff, CLO securities are generally exempt from registration. SEC's oversight of investment funds' leveraged lending activities is largely focused on

[21]See app. II for more details on federal banking regulators, SEC, and state insurance regulators' oversight of leveraged lending activities.

[22]OCC charters and supervises national banks, federal thrifts, and federally chartered branches and agencies of foreign banks. The Federal Reserve oversees state-chartered banks that opt to be members of the Federal Reserve System. FDIC supervises state-chartered banks that are not members of the Federal Reserve System, as well as state savings banks and thrifts. State banking regulators also oversee state-chartered banks in their jurisdiction. This report focuses on federal banking regulators and their oversight of banks' leveraged lending activity.

registered funds. SEC has registration and reporting requirements for these entities and conducts risk-based examinations for compliance with these requirements and other federal securities laws, as applicable.[23] SEC lacks the power to directly supervise funds' investment decisions or activities or judge the merits of the funds' investments.

According to SEC officials, SEC has greater insight into the leveraged lending activities of registered funds, such as mutual funds, than it does into those of investment funds that are exempt from SEC registration, such as private funds (including hedge funds, private equity funds, and private debt funds). However, SEC has some insight into certain private funds' exposures to leveraged lending via SEC-registered advisers' required reporting on Form PF.[24] SEC also oversees credit rating agencies and reviews credit rating agencies' internal controls, among other things, as required by statute, but is prohibited from regulating rating methodologies.[25]

State Insurance Regulators

State insurance regulators oversee insurers for financial solvency and policyholder protection, among other things. According to NAIC staff, state insurance regulators' general supervisory activities and regulatory requirements may help mitigate risks to insurers from leveraged loan and CLO exposures.[26] NAIC staff noted that state statutes require insurers to meet certain minimum capital and financial reporting requirements, and they may authorize regulators to examine insurers, perform stress tests,

[23]The Investment Company Act of 1940 requires investment companies or funds engaging in interstate commerce to register with SEC and disclose information about the funds and their investment objectives, as well as about their structure and operations, unless they are provided an exemption. The investment portfolios of registered funds are managed by investment advisers that are generally registered with SEC.

[24]SEC adopted Form PF in 2011 in part to obtain, on behalf of FSOC, data that FSOC can use to monitor systemic risk in the U.S. financial markets. As required by statute, Form PF was designed by SEC in consultation with FSOC and provides SEC and FSOC with information about the operations and investment allocations of registered investment advisers.

[25]Credit rating agencies that are registered with SEC as Nationally Recognized Statistical Rating Organizations (NRSRO) are subject to oversight. Section 15E(c)(2) of the Securities Exchange Act of 1934 provides that SEC may not "regulate the substance of credit ratings or the procedures and methodologies by which any [NRSRO] determines credit ratings." 15 U.S.C. § 78o-7.

[26]According to NAIC officials, while NAIC does not regulate insurers, it does provide services to the insurance regulators, including providing data to help regulators analyze insurance sales and practices and coordinating regulatory efforts by providing guidance, model laws and regulations, and information-sharing tools, among other things.

and take other actions to protect policyholders against excessive risk of insurer insolvency.

Macroprudential Policy and U.S. Financial Stability

Macroprudential policy aims to maintain financial stability through mechanisms—including, but not limited to, laws and regulations—to assess and mitigate potential systemic risks. Systemic risk is the risk that an event will substantially disrupt the provision of one or more financial system activities, resulting in significant adverse effects on the real economy. In the United States, FSOC, OFR, and the Federal Reserve are the three federal entities that explicitly monitor and conduct broad-based assessments of financial stability. Internationally, the Financial Stability Board (FSB) promotes global financial stability, including through assessing potential systemic risks from leveraged lending activities. In this report, we refer to FSOC, OFR, Federal Reserve, and FSB as financial stability entities.

Financial Stability Oversight Council and Office of Financial Research

The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) created FSOC and OFR, which helped to establish a macroprudential policy framework that assigned financial stability oversight responsibilities to a collective group of regulators. FSOC staff and FSOC members monitor financial activities, including leveraged lending, as part of FSOC's mission to identify, monitor, and respond to potential threats to the financial stability of the United States. The Secretary of the Treasury chairs FSOC, and its members include the heads of nine federal agencies, including the banking regulators, the Commodity Futures Trading Commission, SEC, and OFR, and representatives from the state insurance regulators. The Dodd-Frank Act also created OFR to support the activities of FSOC. The Dodd-Frank Act did not give OFR policy-making authority; rather, OFR supports FSOC by, among other things, developing data and conducting research related to financial stability. Both FSOC and OFR produce annual reports presenting their analysis of potential financial stability risks, including views on potential risks from leveraged lending activities.

Federal Reserve

After the 2007–2009 financial crisis, the Federal Reserve expanded its strategic goals and activities around systemic risk monitoring. The Dodd-Frank Act gave the Federal Reserve oversight responsibilities over certain nonbank financial companies, as well as the authority to develop analytic techniques needed to identify, measure, and monitor systemic risks as part of its requirement to conduct supervisory stress tests of

certain financial companies.[27] The Federal Reserve has since developed systematic financial stability monitoring capabilities to support its monetary policy and supervision roles. The agency states that it views promoting financial stability as a key element in meeting its dual mandate for monetary policy regarding full employment and stable prices, and as an important element supporting its regulatory and supervisory activities that promote the safety and soundness of bank and some nonbank institutions.[28] The Federal Reserve publicly reports its assessment of financial stability semiannually in its financial stability reports, which have included assessments of risks posed by leveraged lending activities.

Financial Stability Board

FSB is an international body that coordinates the work of national financial authorities and international standard-setting bodies to develop and promote the implementation of financial stability reforms agreed upon by international leaders after the 2007–2009 financial crisis. FSB was created in 2009, and U.S. members include the Federal Reserve, SEC, and the Department of the Treasury. One of FSB's goals is to assess vulnerabilities affecting the global financial system as well as to identify and review, on a timely and ongoing basis within a macroprudential perspective, the regulatory, supervisory, and related actions needed to address these vulnerabilities and their outcomes. In December 2019, FSB issued a report summarizing its assessment of potential risks to financial stability posed by leveraged lending activities.[29]

[27]The Dodd-Frank Act, as amended by the Economic Growth, Regulatory Relief, and Consumer Protection Act, requires the Federal Reserve to conduct an annual stress test (known as a supervisory stress test) of bank holding companies with total consolidated assets of $250 billion or more.

[28]The Federal Reserve's two goals of price stability and maximum sustainable employment are known collectively as the "dual mandate." In 1977, Congress amended the Federal Reserve Act, directing the Federal Reserve to "maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates." Pub. L. No. 95-188, § 202, 91 Stat. 1387 (1977) (codified as amended at 12 U.S.C. § 225a).

[29]Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations*.

The Leveraged Lending Market Grew to an Estimated $2.6 Trillion in 2018, Fueled by CLOs' and Other Investors' Demand

The Leveraged Lending Market Was Estimated at $2.6 Trillion at Year-End 2018

Based on available data from multiple sources, we estimate that the size of the leveraged lending market was approximately $2.6 trillion as of December 31, 2018. This consisted of an estimated

- $548 billion in leveraged loans issued outside of the broadly syndicated loan market by private debt funds and business development companies, which generally hold their loans to maturity, according to OFR;
- $871 billion in debt held by banks to support the syndication of leveraged loans or the securitization of loans into CLO securities; and
- $1.147 trillion in institutional leveraged loans (generally held by institutional investors other than banks).[30]

Non–Broadly Syndicated Leveraged Loan Exposures

Leveraged loans made by nonbanks outside of the broadly syndicated market were an estimated $548 billion as of December 2018, and increased to $620 billion as of December 2019. Private debt funds' assets under management grew from an estimated $254 billion in 2010 to $490 billion in December 2018 and to $546 billion in December 2019.[31]

[30]We present an estimate of the entire leveraged lending market as of December 31, 2018, because the most complete estimates of bank leveraged lending exposures and other investors' holdings of institutional leveraged loans and CLO securities are generally available as of that date. We discuss the sources for the components of these estimates later on in the report.

[31]See Preqin, *Quarterly Update: Private Debt Q2 2020*. Preqin estimates include assets under management used for direct lending, which are senior loans made primarily to mid-market leveraged companies. Because private debt funds may also invest in other types of debt, private debt funds' assets under management likely overestimate the amount of outstanding leveraged loans originated by the funds. However, the measure provides a useful approximation.

Business development companies' holdings of non-broadly syndicated loans grew from an estimated $24 billion at the end of 2013 to $58 billion in December 2018 and to $73 billion in December 2019.[32]

Bank Exposures

Table 1 provides the breakdown of the estimated $871 billion in bank debt related to leveraged lending held by 20 large bank holding companies as of the fourth quarter of 2018, according to Federal Reserve estimates.[33] These exposures included pro-rata debt (term loans and revolving lines of credit associated with leveraged loan syndications), other term leveraged loans, and guarantees or financing provided to borrowers during the leveraged loan syndication process or to CLO managers during the securitization process. Over half of these exposures—approximately $550 billion—were revolving lines of credit, of which about 60 percent were drawn down as of December 31, 2018.

Table 1: Federal Reserve Estimates of 20 Large Bank Holding Companies' Exposures to Leveraged Lending Activities, as of December 31, 2018

Type of exposure	Dollars in billions
Pro-rata debt[a]—term loans	39
Pro-rata debt[a]—syndicated leveraged loan revolving lines of credit	547 (approximately 340 drawn)
Other term loans	199
Leveraged loan pipeline loans	65
Collateralized loan obligations warehouse loans	21
Total	**871**

Source: Board of Governors of the Federal Reserve System (Federal Reserve). | GAO-21-167

Note: Federal Reserve estimates include the 20 bank holding companies that filed form FR Y-14—generally those with $50 billion or more in consolidated assets—and had leveraged loans with a committed balance of at least $1 million.

[32]Estimate by LCD, an offering of S&P Global Market Intelligence, which tracks the portfolio holdings of 69 publicly traded and private business development companies.

[33]Federal Reserve estimates include bank holding companies that file form FR Y-14 and had leveraged loans with a committed balance of at least $1 million, which resulted in 20 bank holding companies. FR Y-14, the Federal Reserve's Capital Assessments and Stress Testing information collection, collects data from bank holding companies and U.S. intermediate holding companies on their various asset holdings, including loans and securities such as CLOs, among other things. FR Y-14 data are used to assess the capital adequacy of large companies (generally those with $50 billion or more in assets) to support supervisory stress test models, and in continuous monitoring efforts. The estimates are as of December 31, 2018. The leveraged lending exposure estimates for these banks are not part of LCD's estimate of outstanding institutional leveraged loans as of year-end 2018 that was cited earlier.

[a]Pro-rata debt is the portion of a syndicated loan that consists of a revolving credit facility and amortizing term loan, which are packaged together.

According to FSB, these bank holding companies' exposures to leveraged loans and CLOs, on a fully drawn basis, are significant relative to their capital. In our own analysis, we found similar results. On a fully drawn basis, the median exposure was about 68.5 percent of total capital, with the maximum exposure as a percentage of capital as high as 188.5 percent.[34] The OCC Comptroller's Handbook identifies bank commitments above 25 percent of tier 1 capital (a bank's highest quality capital) and its reserve for estimated credit losses to be a concentration of credit, although steps can be taken to help mitigate the risk.[35] Federal Reserve staff said that most of large banks' exposures to leveraged loans—about 60 percent of committed credit lines and about 70 percent of term loans—benefit from some protection from collateral. They said that the most common forms of collateral posted include accounts receivable, inventory, and cash; fixed assets; and blanket liens. Banks also have indirect exposures to risks from leveraged lending and CLO securities, primarily from committed lines of credit to nonbank participants in the leveraged loan market. The Federal Reserve estimated that in 2018, banks provided revolving lines of credit totaling approximately $60 billion to certain institutional nonbank investors, including private debt funds and business development companies, and these commitments decreased to $55 billion by the end of 2019.[36]

Institutional Leveraged Loan Exposures

The total amount of institutional leveraged loans outstanding increased from an estimated $500 billion in 2010 to $1.147 trillion on December 31, 2018, and then to $1.193 trillion in December 2019, according to Leveraged Commentary & Data (LCD), an offering of S&P Global Market

[34]These ratios are based on our calculations using exposures at the bank holding company level for revolving lines of credit and other term loans for 20 large bank holding companies provided to us by the Federal Reserve, as well as publicly available information. Data at the individual bank level were not available for bank holdings of pro-rata debt, warehouse lines of credit, and pipeline loans. As such, these calculations do not include these exposures.

[35]See Office of the Comptroller of the Currency, *Comptroller's Handbook: Concentrations of Credit*, version 2.0 (October 2020).

[36]See Board of Governors of the Federal Reserve System, *Financial Stability Report May 2020* (Washington, D.C.: May 2020).

Intelligence.[37] Institutional leveraged loans comprised nearly 11 percent of the approximately $10.6 trillion in nonfinancial corporate debt outstanding at the end of 2019.[38] According to FSB, institutional leveraged loans provide investors with exposure to higher yields in a low interest rate environment, which has contributed to rapid growth in the market since 2014. CLOs hold more than half of all institutional leveraged loans and have been an important source of growth in the leveraged lending market. CLO securities generally offer higher returns for comparable credit risk, making them attractive options for investors.

CLOs and Other Investors Were Exposed to Leveraged Lending Activities as of Year-End 2018

As shown in table 2, as of year-end 2018—prior to the COVID-19 economic shock—CLOs accounted for an estimated 53.3 percent of institutional leveraged loan holdings, U.S. registered funds accounted for 16.7 percent, and U.S. insurers accounted for 3.7 percent. We obtained these estimates from various regulatory sources, and we show them relative to the estimated $1.147 trillion in institutional leveraged loans outstanding.[39] Other investors in institutional leveraged loans include foreign banks, hedge funds, private equity funds, business development

[37]LCD, an offering of S&P Global Market Intelligence, tracks institutional leveraged loans outstanding. Its estimate generally excludes lines of credit and related term loans (or pro-rata debt) primarily held by banks and not sold to institutional investors. The loans must be senior secured, have a minimum initial term of 1 year, be denominated in U.S. dollars, have a minimum initial spread of 125 basis points over LIBOR (reference rate), and have a minimum initial amount of $50 million. The estimate of institutional leveraged loans outstanding could be larger depending on the source of data and definition of leveraged loans used.

[38]Nonfinancial corporate debt relative to gross domestic product (GDP) also has grown and reached historic highs in recent years: From the second quarter of 2010 to the second quarter of 2020, nonfinancial corporate debt as a percentage of GDP increased from 40.7 percent to an all-time high of 56.3 percent. Nonfinancial corporate debt consists primarily of bonds and loans.

[39]See Matthew Guse et al., “Collateralized Loan Obligations in the Financial Accounts of the United States,” *FEDS Notes* (Sept. 19, 2020). The Federal Reserve added new line items to the Financial Accounts of the United States in 2019 that provide a measure of CLO holdings of institutional leveraged loans. The Financial Accounts of the United States includes data on, among other things, transactions and levels of financial assets and liabilities by sector and financial instrument, and full balance sheets for households and nonprofit organizations, nonfinancial corporate businesses, and nonfinancial noncorporate businesses. Since these data are produced quarterly, this measure of CLO holdings of leveraged loans is now publicly available on a quarterly basis. The Federal Reserve analysis concludes that the estimate of CLO holdings of institutional leveraged loans obtained from the Financial Accounts of the United States is similar to those reported by private data vendors, such as Intex and Refinitiv LPC Collateral.

companies, pension funds, broker-dealers, and other investment firms.[40] Limited data are available on these other investors' outstanding holdings of institutional leveraged loans.[41] However, in the aggregate, these investors account for about 26.3 percent of institutional leveraged loans outstanding.

Table 2: Estimated Institutional Leveraged Loan Holdings by Investor Type, as of December 31, 2018

Type of investor	Dollars in billions	Percentage of total	Source of estimate
Collateralized loan obligations (CLO)	611	53.3	Financial Accounts of the United States[a]
U.S. registered funds	191	16.7	Securities and Exchange Commission (SEC)[b]
U.S. insurers	42	3.7	National Association of Insurance Commissioners (NAIC)[c]
Other[d]	303	26.3	Residual calculation
Total institutional leveraged loans outstanding	**1,147**	**100.0**	Leveraged Commentary and Data (LCD), S&P Global Market Intelligence[e]

Sources: SEC, NAIC, Board of Governors of the Federal Reserve System (Federal Reserve), and LCD, an offering of S&P Global Market Intelligence. | GAO-21-167

[a]The Financial Accounts of the United States, maintained by the Federal Reserve, includes data on transactions and levels of financial assets and liabilities, by sector and financial instrument, including CLO securities.

[b]SEC estimates are based on individual registered investment fund data provided by Morningstar.

[c]NAIC estimates are based on insurer financial statement reports of non-investment-grade bank loan assets.

[d]Other includes hedge funds, private equity funds, foreign banks, finance companies, trust services, pension funds, broker-dealers, business development companies, and other investment firms and financial vehicles. We estimated holdings for other types of investors as a residual calculation, using LCD's estimate of $1,147 billion in institutional leveraged loans as the universe of outstanding loans, and subtracting from it known estimates of investor holdings. Using an alternate estimate of total institutional leveraged loans outstanding would impact the size of the residual.

[e]LCD estimates outstanding institutional leveraged loans with information obtained directly from large lead banks that arrange broadly syndicated loans. The loans must be senior secured, have a minimum initial term of 1 year, be denominated in U.S. dollars, have a minimum initial spread of 125 basis points over the London Inter-Bank Offered Rate (reference rate), and have a minimum initial amount of $50 million. According to S&P, its estimate does not include loans held by banks.

Table 3 provides a breakdown of the type of investors holding CLO securities as of December 31, 2018, with U.S. insurers holding an

[40]A November 2019 study by Federal Reserve staff provides qualitative information about the identity of syndicated loan investors. See Seung Jung Lee et al., "The U.S. Syndicated Term Loan Market: Who Holds What and When?" *FEDS Notes* (Nov. 25, 2019).

[41]Non-public data regarding leveraged loan holdings of large hedge funds are reported to the SEC quarterly and private data vendors track leveraged loan holdings of business development companies. While data on primary market issuance by investor type by year is also available from private vendors, these data do not offer insight into these investors' outstanding holdings of leveraged loans.

estimated 21.1 percent of CLO securities outstanding, and U.S. banks and U.S. registered funds holding an estimated 13.9 percent and 9.2 percent, respectively. Other investors in CLO securities include pension funds, hedge funds, and private equity funds. As of year-end 2018, these other investors accounted for over half—55.8 percent—of the remaining total CLO securities outstanding. While comprehensive data are not available regarding these investors' CLO security holdings, we discuss recent advances to estimating these exposures below.

Table 3: Estimates of Investor Holdings of Collateralized Loan Obligation (CLO) Securities by Investor Type, as of December 31, 2018

Type of investor	Dollars in billions	Percentage of total	Source of estimate
U.S insurers	129	21.1	National Association of Insurance Commissioners (NAIC)[a]
U.S banks	85	13.9	Board of Governors of the Federal Reserve (Federal Reserve)[b]
U.S. registered funds	56	9.2	Securities and Exchange Commission (SEC)[c]
Other[d]	341	55.8	Residual calculation
Total CLOs	**611**	**100.0**	Financial Accounts of the United States[e]

Sources: NAIC, Federal Reserve, and SEC. | GAO-21-167

Note: Numbers may not add to 100 percent due to rounding.

[a]NAIC estimates are based on insurer financial statements on CLO security holdings.

[b]Federal Reserve estimates are based on bank holding company reporting of CLO security holdings. The estimates include 20 bank holding companies that file form FR Y-14—generally those with $50 billion or more in consolidated assets—and had leveraged loans with a committed balance of at least $1 million.

[c]SEC estimates are based on individual registered investment fund data provided by Morningstar and CLO tranche data provided by Moody's Investors Service and Datascope.

[d]Other includes pension funds, hedge funds, private equity funds, broker-dealers, trust funds, and other investment and financial vehicles. CLO security holdings for other types of investors are estimated as a residual calculation, using the Federal Financial Accounts of the United States estimate of $611 billion in CLO assets as the universe, and subtracting regulatory estimates of investor holdings for insurers, banks, and registered funds. Using alternate estimates of total CLO securities outstanding would impact the size of the residual.

[e]The Financial Accounts of the United States, maintained by the Federal Reserve, includes data on transactions and levels of financial assets and liabilities, by sector and financial instrument, including CLO securities.

Registered Investment Funds' Exposures as of 2018

According to SEC staff, registered investment funds held an estimated $191 billion in institutional leveraged loans and $56 billion in CLO securities as of December 2018, most of it in mutual funds (see table 4).[42] According to their analysis, these holdings represented less than 1

[42]According to SEC staff, the fund holdings estimates were based on individual open-end and closed-end fund data provided by Morningstar, and CLO tranche data were provided by Moody's Investors Service and Datascope.

percent of registered investment funds' total net assets. SEC staff stated that leveraged loan holdings tend to be concentrated in bank loan funds, which are mutual funds that invest primarily in institutional leveraged loans. According to their analysis, 45 bank loan funds (with approximately $100 billion in combined total assets) had more than 80 percent of their assets invested in leveraged loans. However, they noted that most of these funds were relatively small. In contrast, mutual funds generally do not have concentrated holdings of CLO securities. Further, according to SEC staff's analyses, over 80 percent of registered funds' CLO securities were rated A or higher, with limited holdings of riskier CLO tranches concentrated in a small number of closed-end funds.

Table 4: Registered Investment Funds' Leveraged Loan and Collateralized Loan Obligation (CLO) Security Assets, as of December 31, 2018

	Dollars in billions		
Type of registered fund	**Leveraged loan holdings**	**CLO security holdings**	**Total**
Open-end funds—mutual funds	153	52	**205**
Open-end funds—exchange-traded funds	15	2	**17**
Closed-end funds	23	2	**25**
Total	**191**	**56**	**247**

Source: Securities and Exchange Commission (SEC). | GAO-21-167

Note: Registered investment funds include open- and closed-end funds. Mutual funds are open-end funds that issue and offer shares to investors on a continuous basis. Investors buy their shares from and redeem their shares to the funds themselves at any time at prices based on net asset value, which are generally determined at the end of each trading day. Exchange-traded funds do not purchase and redeem individual shares; investors buy and sell exchange-traded fund shares on the secondary market at market prices. Closed-end funds sell a fixed number of shares at one time (in an initial public offering), after which the shares typically trade on securities exchanges. SEC estimates are based on individual open-end and closed-end fund data provided by Morningstar, and CLO tranche data were provided by Moody's Investors Service and Datascope. According to SEC, registered investment fund holdings have declined since the end of 2018, and as of December 31, 2019, were approximately $233 billion.

Insurance Companies' Exposures as of 2018

According to NAIC, insurers' exposure to institutional leveraged loans was an estimated $42 billion as of the end of 2018, prior to the COVID-19 economic shock. This represented less than 1 percent of the insurers' total cash and invested assets and less than 3 percent of total capital and

surplus.[43] Life insurance companies held about 70 percent of these assets, while property and casualty insurers held about 25 percent.[44]

Insurers held an estimated $129 billion in CLO securities at year-end 2018, about 2 percent of their total cash and invested assets, according to NAIC.[45] Life insurance companies owned most of these CLO securities, which were largely investment grade (approximately 80 percent were rated BBB or higher).

Banks' Exposures to CLO Securities as of 2018

According to the Federal Reserve's estimates of 20 large bank holding company exposures, the banks held an estimated $85 billion in CLO securities as of the fourth quarter of 2018. According to these data, $70 billion or 82 percent of banks' CLO securities were AAA-rated tranches.

Other Investors' Exposures to CLO Securities as of 2018

Comprehensive data on U.S. investor holdings of leveraged loans and CLO securities are not available for investor types other than banks, registered funds, and insurance companies. However, the Federal Reserve took steps to address this gap through a July 2019 study that used data on U.S. holdings of foreign securities from the Treasury International Capital (TIC) database to estimate domestic CLO securities

[43]National Association of Insurance Commissioners, Capital Markets Special Report, *U.S. Insurer Bank Loan Exposure as of Year-End 2018* (June 19, 2019). These estimates are based on regulatory filings by property/casualty, life/accident/health, health, title, and fraternal insurance companies. Institutional leveraged loans include only non-investment-grade bank loans, which correspond to NAIC levels 3 and higher, according to NAIC officials. Non-investment-grade bank loan assets provide an estimate for leveraged loan assets. According to NAIC, 2018 was the first year that U.S. insurers were required to report bank loans as a separate line item in their annual statement filings.

[44]The remaining exposures were held by health, title, and fraternal insurers.

[45]National Association of Insurance Commissioners, *Collateralized Loan Obligations Stress Testing U.S. Insurers' Year End 2018 Exposure* (December 2019). This report updates NAIC's estimate of insurers' CLO exposures reported in National Association of Insurance Commissioners, Capital Markets Special Report, *U.S. Insurers' Exposure to Collateralized Loan Obligations as of Year-End 2018* (June 2019). The former added $8.6 billion of CLO-related investments—primarily CLO combo notes—to the $122.2 billion estimate of CLO exposures calculated in the June 2019 report. In the June 2019 report, NAIC calculated that life insurance companies held about 77 percent of this exposure, property and casualty insurers held about 20 percent, and primarily health insurers held the remaining 3 percent. According to NAIC staff, insurers do not report CLO securities uniformly, and their analysis required some manipulation of NAIC filings and manual matching with third-party data to identify CLO securities holdings by tranche.

holdings by investor type.[46] While the TIC estimates are likely less precise than those derived from regulatory data, they are useful in that they provide exposure estimates for types of investors for which data were previously unavailable.

According to the Federal Reserve's TIC-data analysis, as of December 31, 2018, estimates of domestic CLO security holdings outside of insurance companies, banks, and mutual funds were distributed among

- pension funds ($55 billion);
- hedge funds, other registered funds, and other types of managed funds ($58 billion);
- other financial organizations, including broker-dealers and bank holding companies outside of their bank subsidiaries ($67 billion); and
- nonfinancial organizations, which include university endowments and other nonfinancial investors ($52 billion).[47]

[46]TIC data are a collection of cross-border portfolio investment flows and positions between U.S. residents (including U.S.-based branches of firms headquartered in other countries) and foreign residents (including offshore branches of U.S. firms) obtained through surveys. The data are owned by the Department of the Treasury and collected via mandatory reporting requirements under the purview of the Federal Reserve. According to Federal Reserve staff, because most U.S. CLO securities are technically issued in the Cayman Islands, the TIC survey captures these securities if they are sold to investors in the United States. Similarly, the TIC survey captures CLO securities issued within the United States that are sold to foreign investors. However, the survey would not capture CLO securities issued by a Cayman-incorporated CLO and held by foreign investors or securities issued by a U.S.-incorporated CLO and held by domestic investors. Federal Reserve staff used TIC data to develop estimates of the relative shares of domestic CLO security holdings by investor type. See Emily Liu and Tim Schmidt-Eisenlohr, "Who Owns U.S. CLO Securities?" *FEDS Notes* (July 2019).

[47]Based on TIC calculations, foreign investors hold approximately $60 billion in CLO securities, and U.S. investors other than banks, registered funds, and insurers hold approximately $232 billion in CLO securities, for a combined total of $292 billion. This differs from the $341 billion in CLO securities held by "other" investors as defined and calculated in table 3. While both estimates are useful, they are not directly comparable. As discussed earlier, table 3 estimates are based on regulatory estimates of regulated entity holdings as well as other data sources, while TIC estimates are based on TIC survey information. In addition, the group of entities included in the "other" category differ between the two estimates. For example, the TIC estimate includes registered funds other than mutual funds as part of "other" investors, while registered funds are not included in the "other" category in table 3. On the other hand, table 3 bank estimates include holdings for 20 large bank holding companies (including their depository subsidiaries), while the TIC data bank estimates include only depository institution holdings, and other bank holding company holdings are accounted for in the "other" category.

In June 2020, the Federal Reserve updated its earlier study to provide estimates on the credit quality of CLO security holdings by investor type for about $300 billion in domestically held securities.[48] According to the study, in terms of the total dollar value of rated and equity CLO securities, about 88 percent of pension fund holdings were rated AAA or AA, followed by other financial organizations (71 percent), nonfinancial organizations (50 percent), and managed funds other than mutual funds (41 percent). Managed funds other than mutual funds held the highest percentage of equity securities (36 percent), followed by nonfinancial organizations (22 percent).

Regulators Have Not Identified Leveraged Lending as a Significant Threat to Financial Stability, but Risks Remain Following the COVID-19 Shock

Prior to the COVID-19 shock, financial stability entities and others had identified increased risks to financial stability from leveraged lending activities that included deteriorating borrower credit quality, looser underwriting standards, and declining debt cushions that could increase losses during a downturn. Leveraged loan downgrades hit record highs and defaults increased substantially after the COVID-19 shock. But, as of September 30, 2020, senior CLO securities had generally retained their ratings, and the leveraged loan and CLO markets appeared to be recovering. As of this date, regulators did not find that leveraged lending activities contributed significantly to widespread financial instability. Nonetheless, risks remain, and regulators continue to monitor potential risks to financial stability amid the uncertainty of the pandemic.

Financial Stability Entities Had Cited Riskier Borrowers, Looser Underwriting Standards, and Declining Debt Cushions as Potential Risks

Before the COVID-19 pandemic, financial stability entities and others had identified and monitored several key characteristics of leveraged lending activities that could lead to risk to the financial system. These characteristics increased the probability of default for leveraged loans and reduced expected recoveries on defaulted loans. Financial stability entities noted that in an economic downturn, these characteristics would leave the financial system more vulnerable to losses by increasing the likelihood of losses for holders of leveraged loans, including CLOs.

[48]Laurie DeMarco, Emily Liu, and Tim Schmidt-Eisenlohr, "Who Owns U.S. CLO Securities? An Update by Tranche," *FEDS Notes* (June 25, 2020). TIC data do not explicitly identify CLO securities. For this analysis, Federal Reserve staff identified CLO securities in the TIC data using security identifiers from Moody's Global CLO data, resulting in an estimate of $329 billion (a smaller estimate of domestic holdings of CLO securities relative to the July 2019 analysis). They then mapped these securities to credit ratings by Moody's Investors Service, FitchRatings, and S&P Global Ratings to identify tranche type and the corresponding rating for each security.

Deteriorating Borrower Credit Quality

Before 2019, riskier firms accounted for an increasing share of nonfinancial corporate business debt, according to the Federal Reserve and OFR. In their 2019 reports related to financial stability, the four financial stability entities noted that ratios of debt to earnings before interest, taxes, depreciation, and amortization (EBITDA), a commonly used measure of leverage, had increased among leveraged business borrowers. In particular, the Federal Reserve noted that in the first quarter of 2019, 42 percent of newly issued large loans went to highly leveraged corporations—the highest level on record.[49] Similarly, OFR stated that the share of non-investment-grade companies that were highly leveraged increased from 25 percent in 2010 to 30 percent in 2018.[50]

Deteriorating Lender Underwriting Standards

Looser underwriting standards, characterized by borrower-friendly practices, had weakened protections to lenders and investors in leveraged lending contracts before the COVID-19 shock, according to financial stability entities, banking regulators, and rating agencies. These entities have cited evidence of reliance on lax or optimistic assumptions about future borrower earnings, usually measured using EBITDA, which could inflate the projected capacity of the borrowers to repay their loans. According to OFR, earnings adjustments (also called EBITDA add-backs) often took the form of projected cost savings added back to profits for the purpose of increasing projected profits and lowering the borrower's leverage, or debt-to-EBITDA ratio.[51] FSB stated that these add-backs were generally uncertain, in both magnitude and timing, and may overstate a borrower's EBITDA and thus understate its leverage.[52] A credit rating agency's review of companies' EBITDA adjustments for 31 transactions in 2016 showed that, on average, the companies' projections

[49]The Federal Reserve defined highly leveraged corporations as those with debt-to-EBITDA ratios at or above six. See Board of Governors of the Federal Reserve System, *Financial Stability Report May 2019* (Washington, D.C.: May 2019), based on data from LCD, an offering of S&P Global Market Intelligence.

[50]Office of Financial Research, *2019 Annual Report to Congress* (Washington, D.C.: Dec. 11, 2019).

[51]Office of Financial Research, *2019 Annual Report to Congress*. For example, mergers and acquisitions transactions funded with leveraged loans may use an EBITDA add-back to include an expected profit based on a recent or expected acquisition that is not evident in historic financials captured in the EBITDA calculation. Add-backs may include expenses that could be eliminated at or around the time of the acquisition, including downward adjustments to management salaries and cost synergies.

[52]Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations*.

were approximately 35 percent higher than their actual earnings, and their leverage was approximately three times higher than their leverage projections.[53]

Financial stability entities, banking regulators, rating agencies, and others also noted the increase in covenant-lite loans, which reduce the ability of lenders to take actions if borrowers' credit quality deteriorates.[54] According to FSOC, covenant-lite loans accounted for 84 percent of leveraged loans issued in January–September 2019, compared to 30 percent or less each year between 2003 and 2010.[55] According to one large credit rating agency, covenant-lite loans have a higher risk of loss given default, and the credit rating agency observed lower actual recovery rates for covenant-lite loans versus non-covenant-lite loans for firms emerging from bankruptcy in the United States from 2014 through 2017.[56]

Evidence of other types of contractual provisions has also raised concerns. For example, banking regulators and credit rating agencies found that many leveraged loans had permissive borrowing terms that allowed borrowers to draw on incremental facilities and further increase debt levels.[57] FSB and academics also found evidence of contract

[53]S&P Global Ratings, *When the Cycle Turns: The Continued Attack of the EBITDA Add-Back* (Sept. 19, 2019).

[54]Institutional leveraged loans that are covenant-lite lack financial maintenance covenants, which reduce the ability of lenders to take actions if credit quality deteriorates. For example, these loans do not require borrowers to maintain certain financial ratios that reflect the borrower's ability to repay.

[55]Financial Stability Oversight Council, *FSOC 2019 Annual Report* (Washington, D.C.: Dec. 4, 2019).

[56]S&P Global Ratings, *When the Cycle Turns: Assessing How Weak Loan Terms Threaten Recoveries* (Feb. 19, 2019).

[57]These facilities allow businesses to obtain additional borrowing of equal seniority with their existing bank loans and often without the consent of the lender. According to a Federal Reserve staff member, these facilities rarely limit the use of related proceeds and can be used for non-earnings purposes, such as paying dividends or junior debt. See Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, *Shared National Credit Program, 1st and 3rd Quarter 2019 Reviews* (Washington, D.C.: January 2020), and Todd Vermilyea, Senior Associate Director, Board of Governors of the Federal Reserve System, "Perspectives on Leveraged Lending, Remarks at the Loan Syndications and Trading Association 23rd Annual Conference" (New York, NY: Oct. 24, 2018). Also see S&P Global Ratings, *When the Cycle Turns: Assessing How Weak Loan Terms Threaten Recoveries*.

agreements, such as deductibles and carve-outs, which loosen restrictions on borrowers. Deductibles permit a threshold before certain borrower restrictions apply, and carve-outs include exceptions to existing restrictions.[58]

Borrowers' Reduced Debt Cushion

By 2019, changes in business borrowers' debt structures had led to less of a "cushion" to absorb losses, according to financial stability entities and credit rating agencies. FSB noted evidence of less unsecured debt on the balance sheets of U.S. corporate borrowers to absorb losses before senior secured loans, including leveraged loans.[59] Based on a large credit rating agency's data, OFR stated that about 29 percent of first-lien term loans in 2018 were to borrowers without any subordinated debt, up from 18 percent in 2007.[60] According to the same credit rating agency, this increased to a record 35 percent in 2019, further diminishing the layer of subordination that would potentially absorb losses for senior secured lenders in the event of a future default.[61]

When a business defaults, unsecured debt holders receive payments only after senior secured creditors are paid back. Holding overall leverage fixed, with less unsecured debt to absorb losses, senior creditors face below-average recovery rates. According to all three large credit rating agencies, strong investor demand for leveraged loans resulted in borrower debt structures that were increasingly funded with more senior

[58]For example, a credit agreement may prohibit the borrower from issuing additional senior secured debt, as this may negatively affect recovery prospects in case of borrower bankruptcy. A deductible clause may allow the borrower to issue a certain amount of senior secured debt before the prohibition kicks in. A carve-out may include an exception to the prohibition by, for example, allowing issuance of second-lien debt. See Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations* and V. Ivashina and B. Vallee, *Weak Credit Covenants* (July 16, 2019). According to a Federal Reserve staff member, the risks to bank lenders posed by these various contractual provisions that generally ease terms for borrowers could be mitigated with the appropriate risk management controls. However, the presence of these practices without the appropriate controls may lead to safety and soundness concerns for supervised banks. See Vermilyea, "Perspectives on Leveraged Lending."

[59]Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations*, based on Moody's Investors Service, *Convergence of Bonds and Loans Sets Stage for Worse Recoveries in the Next Downturn* (Aug. 16, 2018).

[60]Office of Financial Research, *2019 Annual Report to Congress*, based on analysis of data from LCD, an offering of S&P Global Market Intelligence.

[61]S&P Global Market Intelligence, *As Loan-Only Issuance Tops Records, Debt Cushions Thin* (Feb. 3, 2020).

secured debt, such as leveraged loans, and less unsecured debt, such as corporate bonds. The rating agencies found that leveraged loan borrowers' weakening debt structures (with less unsecured debt) led to lower expected recovery rates for the institutional leveraged loans they rated.[62]

COVID-19 Shock Severely Affected the Leveraged Loan Market, but Senior CLO Securities Remained Largely Resilient as of September 30, 2020

The leveraged loan and CLO markets were negatively affected by the COVID-19 shock. The subsequent measures taken to contain the pandemic effectively closed some sectors of the economy starting in mid-March 2020. Widespread business closures aimed at decreasing the spread of the virus led to immediate and growing losses in revenue and difficulties in servicing debt, including for leveraged loans, particularly in consumer-facing industries like airlines, nonessential retail, and hotels. According to the Federal Reserve, the severe deterioration in the economic outlook following the COVID-19 shock, and the associated increase in uncertainty and risk aversion, generally depressed asset valuations, increased volatility, and impaired market functioning across the economy, and particularly for riskier assets such as leveraged loans and riskier CLO securities.

The economic fallout of the COVID-19 shock prompted several fiscal and monetary policy responses, which likely helped some leveraged businesses avoid defaulting on their loans. It also led the Federal Reserve to establish lending programs (known as facilities) to provide liquidity to the financial system.[63] Although such facilities generally provided limited assistance to the leveraged lending and CLO markets, government efforts helped bolster economic activity and enhance market liquidity. This may have indirectly helped leveraged corporate businesses'

[62]See FitchRatings, *U.S. Leveraged Finance: Corporate Recovery Rating Trends* (July 8, 2020); Moody's Investor Service, *Convergence of Bonds and Loans*; and S&P Global Ratings, *Lean Senior Debt Cushion Threatens Recovery Prospects For U.S. Leveraged Loans* (Nov. 30, 2017).

[63]The March 2020 CARES Act provided economic and business support by authorizing up to $454 billion and potentially certain other amounts for Treasury to support the Federal Reserve in establishing lending programs (or facilities) to provide liquidity to the financial system. See GAO, *COVID-19: Federal Efforts Could Be Strengthened by Timely and Concerted Actions*, GAO-20-701 (Washington, D.C.: Sept. 21, 2020) for more information.

own liquidity, improving their ability to withstand some of the very large and sudden losses created by the COVID-19 shock.[64]

According to reports by one large credit rating agency, the COVID-19 shock severely affected the leveraged loan market in late February 2020 and March 2020, but the market began to recover in April 2020. First, leveraged loan issuance came to a halt in March 2020. Issuance began to recover slightly in April and continued to grow in the following months. Year-to-date leveraged loan issuance as of September 30, 2020, was $207 billion, down 13 percent compared to the same period in 2019.[65] Second, loan prices declined substantially in March 2020. The amount and percentage of distressed leveraged loans (those trading at distressed prices) increased significantly immediately after the COVID-19 shock.[66] As of the end of March 2020, more than half ($644 billion) of the nearly $1.2 trillion institutional leveraged loan market was distressed loans, which could have exacerbated fire sales for leveraged loan investors.[67] Leveraged loan prices began to stabilize in April 2020 and had largely stabilized as of September 30, 2020.

Third, leveraged loan downgrades hit record highs and defaults increased substantially after the COVID-19 shock. One large credit rating agency said it placed on negative credit watch or downgraded record numbers of U.S. corporate ratings in late March and early April 2020. The rating agency stated that corporate defaults had reached 83 in the first half of 2020 compared to 78 for all of 2019, and they anticipated more defaults

[64]The Federal Reserve emergency lending facilities, authorized under section 13(3) of the Federal Reserve Act, are generally aimed at stabilizing short-term debt markets, such as that for commercial paper, or supporting the flow of credit to investment-grade businesses to support business operations and capacity.

[65]Estimates by LCD, an offering of S&P Global Market Intelligence. See S&P, LCD News, *Amid Shutdown, Investors Ponder What It Will Take to Open the Leveraged Loan Market* (Apr. 24, 2020) and S&P Global Market Intelligence, *LCD Quarterly Review*, *Third Quarter 2020*.

[66]Distressed leveraged loans are those considered by the market to be at a higher risk of defaulting. In the leveraged loan market, loans traded at less than 80 cents on the dollar are usually considered distressed.

[67]S&P LCD News, *Coronavirus Crisis vs 2008: U.S. Leveraged Loan Distress, CLOs, Credit Quality* (Mar. 26, 2020). In this context, a fire sale refers to a situation where leveraged loans are selling well below their intrinsic value, such as during prolonged periods of stress. This may result from borrowers or the market as a whole being in financial distress.

to follow.[68] According to another large credit rating agency, the trailing 12-month default rate on the leveraged loans it rated stood at 3.7 percent as of mid-May, up from 1.8 percent in 2018 and 2019, and the agency estimated that the rate would increase to between 5 and 6 percent by the end of 2020.[69]

The credit profiles of CLO leveraged loan collateral deteriorated after the COVID-19 shock, resulting in negative credit rating actions for many non-senior CLO securities. CLO security issuance decreased substantially in the first quarter of 2020. CLO managers picked up CLO security issuance in the second and third quarters of 2020, although quarterly issuance was still below 2019 levels.[70] All three large credit rating agencies agreed that CLO asset quality weakened after the COVID-19 shock, which increased credit risks for some CLO securities.[71] This led them to downgrade and take other negative credit rating actions on non-senior-tranche CLO securities by September 30, 2020.[72]

However, senior CLO security tranches remained largely resilient to the turmoil in the leveraged loan market. According to staff from the three large credit rating agencies, as of September 30, 2020, two of the agencies had downgraded or placed on review for downgrade a small number of AA CLO security tranches, and none of the agencies had

[68]S&P Global Ratings, *From Crisis to Crisis: A Lookback at Actual Recoveries and Recovery Ratings from the Great Recession to the Pandemic* (Oct. 8, 2020). Also see S&P LCD News, *U.S. Leveraged Loan Downgrade Ratio Hits Staggering 43:1 as COVID-19 Stalls Market* (June 4, 2020).

[69]See FitchRatings, *Fitch U.S. Leveraged Loan Default Insight: Loan Default Rate Approaching 4% on Imminent Energy Bankruptcies* (June 19, 2020). The trailing 12-month default rate measures the percentage of leveraged loan defaults over a consecutive period of 12 months (which does not necessarily coincide with a calendar year).

[70]S&P Global Market Intelligence, *LCD Quarterly Review, Third Quarter 2020*.

[71]See FitchRatings, *What Investors Want to Know: Coronavirus Impact on U.S. CLOs* (May 28, 2020); Moody's Investors Service, *CLO Credit Quality Continues to Weaken as Underlying Corporate Credit Conditions Begin to Stabilize* (June 11, 2020); and S&P Global Ratings, *U.S. CLO Exposure To Negative Corporate Rating Actions (as of June 28, 2020)* (June 30, 2020). For example, according to one large credit rating agency, about 30 percent of U.S. CLO collateral experienced a negative rating action (negative watch placement, downgrade, or both) between March 2020 and late June 2020.

[72]For example, see S&P Global Ratings, *COVID-19 Related Actions on U.S. CLO Ratings* (Sept. 17, 2020). For an alternative assessment of the extent to which CLO tranche ratings reflect the risk of the underlying collateral see John M. Griffin and Jordan Nickerson, *Are CLO Collateral and Tranche Ratings Disconnected?* (November 2020).

placed negative credit rating actions on any AAA CLO tranches.[73] Credit rating agencies stated that the level of credit enhancement in outstanding CLOs was providing a satisfactory buffer to risks for the senior CLO securities. In addition, a November 2020 academic study of CLO performance found that, in 2019, AAA CLO tranches were secured by collateral worth 150 percent of their face value and, by May 2020, only non-investment-grade tranches remained undercollateralized.[74] Lastly, all three large credit rating agencies agreed that they generally do not expect to place negative credit rating actions on AAA CLO tranches, unless conditions deteriorate severely.

As of September 30, 2020, while uncertainty about future economic conditions remained high, all three large credit rating agencies expected corporate businesses' credit conditions to stabilize and the number of rating actions on corporate businesses (and their loans) to decline. They emphasized that the pace of recovery was likely to differ by sector, with parts of the economy that are more vulnerable to the COVID-19 shock taking longer to recover.

Regulators Had Not Found Significant Threats to Financial Stability from Leveraged Lending as of September 30, 2020, but Risks Remained Amid the Pandemic

While the COVID-19 shock negatively affected the leveraged loan and CLO markets, leveraged lending activities generally have not posed significant threats to the stability of the U.S. financial system, according to regulators' assessments as of September 30, 2020. However, risks related to leveraged lending activities remain, and regulators continue to

[73]For example, see Moody's Investors Service, *CLO Credit Quality Continues to Weaken as Underlying Corporate Credit Conditions Begin to Stabilize* (June 11, 2020) and S&P Global Ratings, *COVID-19 Related Actions On U.S. CLO Ratings*.

[74]See Larry Cordell, Michael R. Roberts, and Michael Schwert, *CLO Performance* (Nov. 30, 2020). The authors found that, in contrast, coverage was less than 120 percent for AAA CLO tranches in the run-up to the financial crisis, and all non-equity tranches were undercollateralized by significant margins after the 2007-2009 crisis.

monitor potential risks to financial stability amid the uncertainty of the pandemic.[75]

Effects of Leveraged Lending Risks on Large, Potentially Systemically Important Financial Institutions

Based on regulators' assessments as of September 30, 2020, exposure to leveraged lending has not contributed significantly to the distress of any large, potentially systemically important bank, insurance company, or other financial entity. As experienced during the 2007–2009 financial crisis, the distress or failure of a systemically important financial institution—one whose health can affect the wider economy—could threaten the stability of the U.S. financial system. Leveraged loans could contribute to systemic risk by contributing to the distress or failure of systemically important financial institutions. While regulators have not found this to be the case as of September 30, 2020, they note that risks remain and they continue to monitor entities amid the pandemic.

U.S. Banks

Based on Federal Reserve and OCC staff statements and analyses, banks' leveraged lending exposures had not contributed significantly to the distress of a large U.S. bank as of September 30, 2020. As noted earlier, banks' lines of credit to leveraged borrowers represent the largest leveraged lending exposures.[76] In its May 2020 financial stability report, the Federal Reserve stated that banks were able to absorb the increased

[75]There is evidence that the COVID-19 shock could have nontrivial negative effects on leveraged firms and the economy. International Monetary Fund research suggests that U.S. leveraged firms could experience relatively large solvency and funding pressures following the COVID-19 shock. They estimated that, assuming a second wave of infections toward the end of 2020, losses from corporate debt could reach $675 billion between 2020 and 2025, with $465 billion related to leveraged firms. See International Monetary Fund, *United States Financial System Stability Assessment* (August 2020). More generally, periods of rapid growth in corporate debt have been linked to negative effects on the economy during downturns, including higher unemployment and deeper and longer recessions. See J. Bridges et. al, "Down in the Slumps: the Role of Credit in Five Decades of Recessions," Bank of England Staff Working Paper No. 659 (April 2017), and M. Kiley, *Unemployment Risk*, Finance and Economics Discussion Series 2018-067, Board of Governors of the Federal Reserve System (September 2018).

[76]As noted in table 1, before the pandemic, approximately 63 percent of bank exposures to leveraged lending activities, excluding CLO holdings, were in the form of lines of credit to leveraged borrowers as of year-end 2018. As noted in table 3, U.S. banks' CLO holdings were about $85 billion as of year-end 2018. According to Federal Reserve staff, these holdings are almost exclusively in AAA and AA rated CLO securities, which we previously noted have generally maintained their credit quality as of September 30, 2020.

draws on credit lines associated with the onset of the pandemic. According to the Federal Reserve, drawdowns reached $284 billion in March and April 2020, and non-investment-grade businesses accounted for a little less than half of the drawdowns.[77] However, Federal Reserve and OCC staff noted that drawdowns stabilized and were being repaid as of June 2020.[78] Federal Reserve staff told us that, in general, banks' leveraged lending losses had not been big enough to put downward pressure on banks' creditworthiness, and they had not negatively impacted banks' ability to access credit markets as of September 30, 2020. However, they noted that the outlook for the pandemic and economic activity remains uncertain, and declines in interest rates and the potential for rising credit losses pose challenges for banks' ability to replenish capital.

The June 2020 Dodd-Frank stress tests, which included a severely adverse scenario with disruptions in the leveraged loan and CLO markets, concluded that banks would experience substantial losses under this scenario but could continue lending to businesses and households.[79] Because the scenarios were designed before March 2020, the Federal Reserve conducted an additional sensitivity analysis on the same firms subject to the stress test to explore their vulnerabilities to the risks caused by COVID-19. The Federal Reserve concluded that the large majority of banks would remain sufficiently capitalized over the entirety of the

[77]Board of Governors of the Federal Reserve System, *Financial Stability Report May 2020*.

[78]According to OCC's calculations, by June 2020, banks' unused commercial loan commitments and letters of credit had largely returned to pre-COVID-19 levels, even though total commercial loan commitments increased by almost 4 percent during that time.

[79]All banks accounting for the exposures estimated in table 1 were part of the 2020 Dodd-Frank stress tests. Under the severely adverse scenario, common equity tier 1 bank capital ratios decline by 1.7 percentage points in aggregate and remain above minimum ratio requirements. According to Federal Reserve staff, common equity tier 1 capital is considered the highest-quality capital that a banking institution can have to support its operations and absorb unexpected financial losses. Common equity tier 1 capital consists primarily of retained earnings (the profits a bank has earned but has not paid out to shareholders in the form of dividends or other distributions) and qualifying common stock, with deductions for items such as goodwill and deferred tax assets. See Board of Governors of the Federal Reserve System, *Assessment of Bank Capital during the Recent Coronavirus Event* (June 25, 2020) and *Dodd-Frank Act Stress Test 2020: Supervisory Stress Test Results* (June 25, 2020).

projection horizon in all scenarios.[80] Federal Reserve staff stated that this result reflects the strong capital positions banks had coming into 2020, with capital ratios exceeding those prevailing during the 2007–2009 financial crisis, despite higher risk weights on many exposures, including undrawn credit lines.[81]

U.S. Insurers

NAIC staff told us that they did not believe that U.S. insurers' leveraged loan or CLO security holdings were likely to be large enough to cause disruptions to the industry or the wider economy, as of September 30, 2020. According to NAIC staff, potential risks to financial stability from insurers' exposures largely would be limited to their CLO security holdings, as their leveraged loan holdings are relatively small.[82] NAIC found that insurers' holdings of CLO securities were approximately $158 billion as of December 31, 2019, and about 61 percent ($96.6 billion) of these securities were rated AA or AAA.[83] NAIC conducted a stress test of insurers' holdings of CLO securities as of year-end 2019 and found that losses likely would reach securities rated A in the worst-case scenarios, which incorporated COVID-19-shock-related assumptions. Based on these analyses, NAIC does not believe that U.S. insurers' CLO security

[80]All banks accounting for the exposures estimated in table 1 were also part of the Federal Reserve's June 2020 additional sensitivity analysis to explore their vulnerabilities to COVID-19-related risks. The sensitivity analysis scenarios were more stringent than the pre-pandemic stress test scenarios, with the unemployment rate peaking at between 15.6 percent and 19.5 percent and severe conditions for business borrowers. Common equity Tier 1 bank capital ratios decline by up to 4.3 percentage points in aggregate.

[81]For example, according to Federal Reserve staff, for the largest 20 bank holding companies in the fourth quarter of 2008, total commercial and industrial exposures (that is, commercial and industrial loans plus an estimate of commercial and industrial unused commitments) exceeded 600 percent of their common equity tier 1 capital, compared to about 340 percent in the fourth quarter of 2019.

[82]National Association of Insurance Commissioners, *U.S. Insurer Exposure to Bank Loans Increased by 17.5% at Year-End 2019* (June 2, 2020) and *U.S. Insurer Bank Loan Exposure as of Year-End 2018* (June 19, 2019). According to one of the studies, U.S. insurers' exposures to speculative-grade bank loans, which are an estimate of leveraged loan asset holdings, increased by 21 percent from $41.7 billion as of year-end 2018 to $50.4 billion as of year-end 2019. U.S. insurer investments in bank loans (investment and noninvestment grade) were about 1 percent of the industry's total cash and invested assets as of year-end 2019.

[83]National Association of Insurance Commissioners, *The Rise in the U.S. Insurance Industry's Exposure to Collateralized Loan Obligations as of Year-End 2019* (May 14, 2020).

holdings present a risk to the industry as a whole, since such exposures were relatively small, at about 2 percent of the industry's total cash and invested assets, and the majority were rated A or above. Further, NAIC staff stated that the few companies with concentrations in riskier CLO securities do not include very large insurance companies, noting that only a handful of smaller insurers suffered large losses in their most conservative stress test scenario.[84] However, NAIC staff noted that they will continue monitoring insurers' CLO holdings amid the pandemic, particularly for insurers with high concentrations in riskier securities, which may incur significant losses during periods of stress.

Other Investors

Hedge funds and other investors purchase lower-rated CLO securities using leverage, and downgrades of these CLO securities could result in calls for additional collateral that could force the hedge funds to sell their holdings. However, OFR staff said that hedge funds' leveraged loan and CLO security assets are typically small relative to total assets under management for the hedge fund industry, so problems in the leveraged loan and CLO markets are not likely to be a key driver of distress for hedge funds. According to OFR staff, financial stability concerns from large hedge funds are likely to come from other large holdings that are independent of their leveraged loan or CLO holdings.[85]

[84]National Association of Insurance Commissioners, *Collateralized Loan Obligations Stress Testing U.S. Insurers' Year End 2019 Exposure* (June 18, 2020). According to NAIC staff, the most conservative stress scenario resulted in four insurers, with a combined capital and surplus of about $185 million, exceeding 100 percent of capital and surplus in CLO losses. NAIC found a few insurers with concentrated investments in lower-rated CLO securities or riskier types of CLO securities called combo notes. CLO combo notes are a packaging of all or a portion of several tranches from the same CLO often into a separate special purpose vehicle. According to NAIC, U.S. insurers held approximately $1.4 billion in CLO combo notes as of December 31, 2019. In August 2020, NAIC adopted new policies that generally prohibit insurers from relying on assigned credit ratings for a CLO combo note for purposes of computing its risk-based capital charge. Insurers must instead generally submit their CLO combo notes to NAIC for review.

[85]The Federal Reserve found that at least some hedge funds appeared to have been severely affected by the large asset price declines and increased volatility in February and March 2020. See Board of Governors of the Federal Reserve System, *Financial Stability Report May 2020*.

Effects of Leveraged Lending Risks to Market Liquidity That May Pose a Threat to Financial Stability

Based on the Federal Reserve and SEC staff's assessments, post COVID-19 shock asset sales from mutual funds that invest primarily in leveraged loans may have contributed to downward pressure on loan prices in an already declining market but had not posed a significant threat to financial stability as of September 30, 2020. Because mutual funds offer daily redemptions to investors, those with significant investments in less liquid assets are subject to liquidity risk.[86] If a sizable wave of redemptions across many funds with concentrated investments in less liquid assets occurred during a period of economic stress, mutual funds that had not effectively managed their liquidity risk could be forced to sell assets, which could in turn contribute to depressed market prices and disruptions to the wider financial sector.

According to SEC and financial stability entities, potential risks from mutual funds' exposures largely would be limited to their leveraged loan assets, as their CLO security holdings are relatively small and of higher quality. Both forced sales of leveraged loans and reduced demand for leveraged loans by investors in the broader market could have contributed to distressed leveraged loan prices following the COVID-19 shock. According to SEC data, leveraged loan holdings for mutual funds were about $112 billion as of March 31, 2020, a decrease of about 27 percent from the end of 2018.[87] SEC staff stated that following the COVID-19 shock, mutual funds managed redemptions by, among other things, selling leveraged loan holdings, which may have put downward pressure on already-distressed loan prices. However, leveraged loan prices largely stabilized as of September 30, 2020, indicating that some market participants may have taken advantage of distressed prices to

[86]Investors in mutual funds buy fund shares and redeem fund shares at any time from the fund managers at a price based on the net asset value of the fund (the value of the fund's assets minus the value of its liabilities). Mutual funds face liquidity risk since fund assets (which include leveraged loans and CLO securities) may have longer maturities than fund liabilities (which include investor shares with the promise of daily redemptions).

[87]Estimates of bank loan funds' assets under management were provided by SEC staff.

invest in leveraged loans, thus mitigating downward pressure on loan prices.[88]

SEC generally requires mutual funds to establish a written liquidity risk management program, maintain a minimum amount of highly liquid assets, and limit purchases of illiquid investments to 15 percent of the funds' assets.[89] After the COVID-19 shock, SEC took some steps to provide temporary liquidity relief to mutual funds.[90] Both the Federal Reserve and SEC stated they are continuing to monitor open-end funds' redemptions during the COVID-19 pandemic, and SEC staff stated they are doing so using newly reported information on the liquidity of fund portfolios and through risk-based examinations, as appropriate.[91]

[88]An association representing private funds stated that in the months following the COVID-19 shock, many established private debt fund managers used committed investor funds to invest in distressed assets, including leveraged loans. Committed investor funds for such investments fell by $6.9 billion globally in the first quarter of 2020, indicating that fund managers are investing committed capital on debt funds within that distressed debt strategy. In addition, private debt fundraising increased in the second quarter of 2020, with direct lending and distressed debt funds among the strategies leading fundraising. See Preqin, *Quarterly Update: Private Debt Q2 2020*.

[89]17 C.F.R. § 270.22e-4. Mutual funds must generally report their portfolio holdings at the end of each month in reports submitted quarterly to SEC and provide information on the liquidity of those holdings.

[90]In March 2020, SEC announced a temporary flexibility for registered funds affected by the COVID-19 shock to borrow funds from certain affiliates and to enter into certain other lending arrangements. While these measures may help funds access more funds to manage investor redemptions, they may not be effective in preventing redemptions.

[91]The Investment Company Act allows mutual funds to suspend redemptions under very limited circumstances, including emergencies, as determined by SEC. 15 U.S.C. § 80a-22(e). According to SEC staff, orders have been issued to a few mutual funds to suspend redemptions in specific emergency situations. *See, e.g.*, *In the Matter of Third Avenue Trust and Third Avenue Management LLC,* Investment Company Act Rel. No. IC-31943 (Dec. 16, 2015). They stated that SEC may grant such an order, however, only if it determines that the order is necessary for the protection of the mutual fund's shareholders.

Effects of Securitization and Related Activities on Financial Stability

The Role of Collateralized Debt Obligations and Credit Default Swaps in the 2007–2009 Financial Crisis

In the 1980s, banks and thrifts began selling their mortgage loans for securitization into mortgage-backed securities (MBS). As interest rates declined in the early 2000s, mortgage originations surged. While initially dominated by prime, fixed-rate refinancing loans, mortgages shifted toward nontraditional mortgage products, many provided by private entities, and growth in the subprime mortgage market also increased. Private-label MBS backed by lower-quality mortgages grew rapidly from 2004 to 2006. Collateralized debt obligations (CDO), securities backed by mainly by MBS, were also instrumental to creating demand for these riskier, lower-quality loans.

Widespread use of credit default swaps (CDS)—used to transfer risk from one party to another—multiplied investor exposure to CDO losses, which became many times larger than the exposures generated by the MBS alone. CDS allowed investors to take on exposure to the mortgage market without actually owning the mortgages, MBS, or CDOs.

The dramatic decline in the U.S. housing market that began in 2006 precipitated a decline in 2007 in the price of mortgage-related assets. Losses resulted in failures or near-failures of some financial institutions. Uncertainty about the liquidity and solvency of certain large financially interconnected firms led to widespread liquidity and credit shortages, limiting credit for businesses and households. By the late summer of 2008, the ramifications of the financial crisis ranged from the continued failure of financial institutions to increased losses of individual wealth, reduced corporate investments, and further tightening of credit that would exacerbate the emerging global economic slowdown.

Source: GAO. | GAO-21-167

As of September 30, 2020, present-day CLO securities have not posed the same risks to financial stability as those posed by similar securities common during the 2007–2009 financial crisis (crisis-era securities). Prior to the COVID-19 shock, some market observers expressed concern that CLO securities exhibited features similar to the collateralized debt obligations (CDO) issued prior to the 2007–2009 financial crisis (see sidebar). As a result, they feared that declines in the performance of CLOs could disrupt financial stability as did crises-era CDOs in the event of an economic shock.

However, in their pre-COVID-19 analyses, financial stability entities and market participants generally agreed that present-day CLO securities' features are more resilient to losses of underlying assets when compared to the performance of CDOs during the 2007–2009 financial crisis. By one estimate, securities in AAA-rated tranches of CDOs issued before the 2007–2009 financial crisis lost $325 billion during the following years.[92] In contrast, one large credit rating agency stated that no AAA-rated CLO securities it rated—issued before or since the financial crisis—suffered any losses as of September 30, 2020.[93] Unlike crisis-era CDOs, CLO structures have proven to be more resilient to sudden, large increases in credit risk of the underlying collateral, in this case driven by the effects of the pandemic on the leveraged loan market.

Present-day CLO securities appear to pose less of a risk to financial stability than did similar securities during the 2007–2009 financial crisis. According to regulators, market experts, and market participants, when compared to crisis-era CDOs, present-day CLOs are more diversified and more transparent, and they are structured to have low liquidity risk. In addition, credit rating agencies and others have noted that since the financial crisis, the CLO market has seen a number of adjustments that have increased investor protections. Nevertheless, it is too early to conclude how CLOs will fare once the full effects of the COVID-19 shock on the leveraged lending markets unfold.

[92]Larry Cordell, Greg Feldberg, and Danielle Sass, "The Role of ABS CDOs in the Financial Crisis," *Journal of Structured Finance* (Spring 2019).

[93]Also see S&P Global Ratings, *Twenty-Five Years Strong: Update On CLO 1.0 Defaults* (Aug. 12, 2019) and S&P Leveraged Loan News, *CLOs Show Strong Historic Performance with Few Defaults* (Jan. 31, 2014).

More Diversification and Transparency

According to various sources and documents, CLOs are backed by simpler, more diversified pools of collateral than crisis-era CDOs. CLO portfolios are generally diversified across firms and sectors, and information on the individual corporate loans held in CLO portfolios is available to investors and credit rating agencies.[94] In addition, according to staff from a large credit rating agency, CLOs are actively traded, and prices are easily discoverable by market participants.[95] In contrast, crisis-era CDOs were exposed mainly to the housing market and most contained subprime mortgage-backed securities (MBS) ultimately backed by mortgages, which have no credit ratings.[96] In addition, re-securitizations—CDOs backed by other CDOs—were common, while re-securitizations of current CLOs are not. According to the Bank for International Settlements, in 2006, almost 70 percent of the collateral of newly issued CDOs corresponded to subprime MBS, and an additional 15 percent was backed by other CDOs.[97]

Lastly, present-era CLOs are not widely linked to derivatives. Crisis-era synthetic CDOs were backed by derivatives such as credit default swaps that referenced—but did not own—MBS.[98] Thus, synthetic CDOs used a portfolio of credit default swap contracts to create a rated securitization

[94]A typical CLO portfolio contains leveraged loans from more than 100 borrowers. Most of the loans receive a credit rating from one of the three major credit ratings agencies, and ratings assigned to CLO securities held by investors account for the risk of the individual loans in the collateral portfolio. For example, see S&P Global Ratings, *S&P Global Ratings' CLO Primer* (Sept. 21, 2018).

[95]According to SEC staff, CLO securities generally are not subject to SEC registration and related reporting requirements (see app. II). However, investors generally can obtain pricing on CLO securities and the underlying leveraged loans. For example, one company provides daily pricing on loans from over 2,500 leveraged borrowers covering multiple geographical regions as well as pricing for more than 8,500 tranches of U.S. and European CLO securities, and another company offers information on CLO deal structures, collateral holdings and cash flows. While credit ratings for MBS were available, according to the staff from a major credit rating agency, comparable information was not readily available for investors in crisis-era CDOs.

[96]Office of Financial Research, *2019 Annual Report to Congress*.

[97]Bank for International Settlements, *BIS Quarterly Review: International Banking and Financial Market Developments* (September 2019).

[98]A credit default swap is a type of credit derivative allowing a purchaser of the swap to transfer loan default risk to a seller of the swap. The seller agrees to pay the purchaser if a default event occurs. The purchaser does not need to own the loan covered by the swap.

structure. The use of such credit derivatives multiplied investor exposure to losses in these markets to be many times larger than the exposures generated by the MBS alone. One study found that approximately 31 percent of the underlying collateral of CDOs issued between 1999 and 2007 was composed of synthetic references, or credit default swaps, with over 90 percent placed after mid-2005.[99] The same study found that some 5,500 BBB-rated subprime securities were placed or referenced into these synthetic CDOs about 37,000 times, transforming $64 billion of BBB subprime bonds into $140 billion of CDO assets. In contrast, according to the three large credit rating agencies, OFR, and the Bank for International Settlements, synthetic CLOs existed before the 2008 crisis but are not known to be prevalent today.[100]

More Stable Funding

Present-day CLOs have less liquidity risk than crisis-era CDOs. According to the Federal Reserve and OFR, CLOs have more stable funding than crisis-era CDOs because they issue securities with maturities similar to the loans in which they invest, whereas some crisis-era CDOs relied on funding from short-term debt.[101] In addition, present-day CLOs are generally insulated from market value swings, and CLO managers generally are not forced to sell assets during periods of stress.[102] Abrupt price declines in leveraged loans, like those experienced

[99]L. Cordell, Y. Huang, and M. Williams, "Collateral Damage: Sizing and Assessing the Subprime CDO Crisis," Federal Reserve Bank of Philadelphia, Working Papers, no 11-30/R (May 2012).

[100]Office of Financial Research, *2019 Annual Report to Congress* and Bank for International Settlements, *BIS Quarterly Review*. In addition, the November 2020 academic paper mentioned previously studied the collateral holdings and transactions of present-day CLOs, among other things, and found no evidence of CDS holdings. See L. Cordell, M. Roberts, and M. Schwert, *CLO Performance*.

[101]Bank for International Settlements, *BIS Quarterly Review;* Board of Governors of the Federal Reserve System, *Financial Stability Report May 2019*; Office of Financial Research, *2019 Annual Report to Congress*; and Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Report* (Washington, D.C.: January 2011). In the lead-up to the financial crisis, some CDOs issued billions in CDO securities as short-term securities (in the form of asset-backed commercial paper), rather than long-term securities, so the CDO would have to reissue the security to investors regularly—usually within days or weeks—for the life of the CDO.

[102]According to FSB, almost all post-crisis CLOs are insulated from market value swings, while around 2 percent of crisis-era CLOs had market value triggers. Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations*.

following the COVID-19 shock, generally do not trigger losses that force CLO managers to sell CLO assets at fire sale prices, which could further depress prices and amplify market stress. Lastly, according to the Federal Reserve, present-day CLOs are now predominantly held by investors with relatively stable funding. In contrast, before the financial crisis, CDO tranches were commonly held by leveraged financial entities that relied heavily on short-term wholesale funding.[103]

Higher Levels of Subordination

According to financial stability entities and the three large credit rating agencies, present-day CLOs have higher levels of subordination than crisis-era CLOs, providing greater protection or credit enhancement to securities in the senior CLO tranches.[104] For instance, the November 2020 academic study of CLO performance mentioned earlier also stated that revisions to the criteria used by rating agencies increased the subordination level for AAA CLO tranches from 30 percent pre-crisis to 40 percent post-crisis.[105] Thus, current CLOs are better able to absorb defaults in the underlying collateral loans before the AAA-rated CLO securities face losses. As mentioned earlier, all three large credit rating agencies stated that after the COVID-19 shock, subordination had provided a satisfactory buffer to risks for the senior CLO securities as of September 30, 2020. In addition, CLO managers, who actively manage CLOs by buying, selling, and substituting loans in the underlying asset portfolio, are subject to rules or tests aimed at protecting the credit quality

[103]See Board of Governors of the Federal Reserve System, *Financial Stability Report May 2019*. According to the Bank for International Settlements, unlike crisis-era CDOs, CLOs are not generally used as collateral in the short-term repurchase agreement (repo) market. See Bank for International Settlements, *BIS Quarterly Review*. The repo market is a short-term market that provides financing for a wide range of securitization activities and financial institutions. In a repo contract, the borrower sells securities to investors (creditors), usually on an overnight basis, and buys them back on a specified date at a slightly higher price. The repo market suffered liquidity strains in 2007 because of the decline in the housing market.

[104]Subordination in a CLO refers to the layering of risk levels by giving some tranches higher priority claims on the CLO cash flows than other tranches. Subordination protects holders of senior CLO securities, which are expected to have a high degree of creditworthiness, by distancing the senior CLO tranches from loss exposure. Securitizations often need credit enhancements, such as subordination, to achieve a credit rating for one or several security tranches.

[105]Cordell et. al, *CLO Performance*.

of the CLO securities.[106] In particular, overcollateralization and other coverage tests help ensure that the cash flows generated by the underlying CLO loan collateral are used to prioritize payments to the senior-most CLO security holders before payments to lower-rated CLO security holders. According to a large credit rating agency, the weakening in CLO asset quality following the COVID-19 shock led a significant number of CLOs to fail certain overcollateralization tests which resulted in payments to investors in the senior tranches over investors in lower-rated CLO tranches.[107]

While present-era CLOs appear resilient, characteristics of the leveraged loan market discussed previously—including deteriorating borrower credit quality and looser underwriting standards—make it difficult to predict how CLOs will continue to fare through the economic crisis brought on by the pandemic. For example, the November 2020 study of CLO performance also found that current CLOs generally have higher shares of lower-rated loan collateral relative to crisis-era CLOs, which may lead to certain CLO coverage test failures. According to the study, this indicated that fewer collateral loan downgrades are necessary in the current crisis to trigger the failure of CLO coverage tests and that test failures may come sooner after the initial shock than they did in the financial crisis.[108]

According to FSB, changes in AAA CLO tranche subordination levels partly reflect more conservative requirements by the credit rating agencies after the financial crisis, when they increased subordination requirements following a reassessment of their rating methodologies.[109] While SEC reviews a rating agency's internal controls, among other

[106]CLO managers are subject to rules or tests set forth in a governing indenture or legally binding contract. The CLO indenture is negotiated among the CLO manager and the investors in the various security tranches when a new CLO transaction is created. CLO indentures specify the tests and ramifications for noncompliance.

[107]Thus, overcollateralization tests serve as an automatic mechanism to reduce leverage of a CLO and bring the tests back to compliance. See Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations*.

[108]A CLO manager must generally ensure that a maximum of 7.5 percent of the collateral pool of loans is in CCC debt or below. If the limit is surpassed, the collateral value above the threshold is marked down for purposes of the overcollateralization tests, which may lead to test failures. According to the study, relative to crisis-era CLOs, present-day CLOs had a higher share of loan collateral rated CCC+ and below before the economic shock occurred. Also, this share rose sharply for present-day CLOs after the initial COVID-19 shock. Cordell et. al, *CLO Performance*.

[109]Financial Stability Board, *Vulnerabilities Associated with Leveraged Loans and Collateralized Loan Obligations*.

things, as required by statute, the agency is prohibited from regulating the rating methodology itself. According to SEC staff, SEC has reviewed rating agencies' activities related to CLO securities and leveraged loan borrowers in prior examinations of credit rating agencies. For example, in 2018 SEC reviewed credit rating agencies' sufficiency of staffing and training to handle the substantial increase in CLO activity, including the sufficiency of surveillance activity.

FSOC Promotes Information Sharing but Is Missing Opportunities to Use Scenario-Based Exercises to Enhance Its Response to Risks

FSOC's Systemic Risk Committee Monitors Potential Risks to Financial Stability from Leveraged Lending Activities

FSOC has a statutory duty to monitor the financial services marketplace to identify potential threats to U.S. financial stability.[110] FSOC announced in a December 2019 release that it would address this duty by taking an activities-based approach to monitoring.[111] This approach includes evaluation by FSOC member agency staff of a diverse range of financial products, activities, and practices that could pose risks to U.S. financial stability, with FSOC's observations and analyses subsequently highlighted in FSOC's annual reports. In particular, the release establishes a two-step process for the activities-based approach:

- **Step one.** FSOC monitors financial markets and market developments—such as nonfinancial corporate debt activities, including leveraged lending—and evaluates risks to identify products,

[110]12 U.S.C. § 5322(a)(2)(C).

[111]*See* Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 84 Fed. Reg. 71,740 (Dec. 30, 2019). As GAO reported in February 2016, FSOC member staff also monitored activities in the financial marketplace before the December 2019 Final Interpretive Guidance was finalized; see GAO, *Financial Regulation: Complex and Fragmented Structure Could Be Streamlined to Improve Effectiveness*, GAO-16-175 (Washington, D.C.: Feb. 25, 2016). However, the concept of financial stability monitoring occurring within an "activities-based approach" was introduced in the December 2019 release.

activities, or practices that could pose risks to financial stability.[112] FSOC considers a risk to financial stability to mean a risk of an event or development that could impair financial intermediation or financial market functioning to a degree that would be sufficient to inflict significant damage to the broader economy.[113] If FSOC identifies a potential risk to financial stability, the process moves to step two. An FSOC member vote is not required to move to step two. Products, activities, or practices not identified as potential risks to financial stability continue to be monitored under step one.

- **Step two.** Once FSOC identifies a potential risk to financial stability, it works with the relevant financial regulatory agencies to seek the implementation of appropriate actions to address the potential risk. According to the release, the goal of this step is for regulators to take appropriate actions, such as modifying their regulation or supervision of companies or markets under their jurisdiction to mitigate identified potential risks. FSOC may use its authority under Section 120 of the Dodd-Frank Act to recommend actions to a relevant regulator if FSOC members find that the regulator's actions to respond to the identified threat are inadequate.[114]

FSOC has identified nonfinancial corporate debt activities, including leveraged lending activities, as potential risks to U.S. financial stability. Consequently, FSOC members have been monitoring leveraged lending activities within step two of FSOC's activities-based approach to monitoring. Step-two outcomes have included interagency monitoring of leveraged lending activities within the FSOC committee structure, and annual report recommendations related to potential risks from nonfinancial corporate debt.

[112]According to the release, in this evaluation, FSOC consults with relevant financial regulatory agencies and takes into account existing laws and regulations that may mitigate the potential risk. FSOC also takes into account the risk profiles and business models of relevant market participants and considers available relevant evidence. The type and scope of FSOC's analysis are tailored to the potential risk under consideration.

[113]A financial intermediary is an entity that acts as the middleman between two parties in a financial transaction. Financial intermediaries move funds from parties with excess capital to parties needing funds, including from lenders to borrowers.

[114]Section 120 of the Dodd-Frank Act also instructs FSOC to report to Congress on recommendations for legislation that would help prevent potential threats to financial stability in cases where no primary financial regulatory agency exists for the nonbank financial company conducting the risky financial activities or practices. Section 120 authorities are discussed in more detail below.

Monitoring of Leveraged Lending Activities at the Systemic Risk Committee

FSOC member agency staff monitor and evaluate leveraged lending activities primarily through the work of the Systemic Risk Committee.[115] As we reported in 2016, FSOC's Systemic Risk Committee is the council's main staff-level vehicle for collaboration on systemic risk monitoring and identification efforts across the many federal and state financial regulators.[116] The committee generally holds monthly meetings where FSOC member agency staff present and discuss analyses on financial activities that might pose threats to financial stability, serving as a venue for a regular and collaborative exchange of ideas and information on such risks. According to FSOC staff, the committee began holding weekly or biweekly meetings in March 2020 to facilitate communication and information sharing among member agency staff as the various regulators responded to the COVID-19 shock.

Our analysis of FSOC member staff analyses related to leveraged lending between January 2015 and August 2020 shows that the topic of nonfinancial corporate debt, including leveraged lending, was discussed sporadically before late 2018. Leveraged lending became a more frequent item for discussion in Systemic Risk Committee meetings in 2019 and the first half of 2020. For example, between February 2018 and December 2019, the Federal Reserve and OFR presented analyses of nonfinancial corporate debt trends and vulnerabilities. Their analyses were informed by their own continued financial stability monitoring efforts. In addition, in 2019 and 2020, various FSOC members presented on leveraged lending issues related to the types of financial institutions they oversee. In 2019, the Systemic Risk Committee frequently discussed the leveraged loan and CLO markets, including the concentration of holdings. Lastly, beginning in March 2020, the Systemic Risk Committee discussed

[115]FSOC's functional committees, which comprise staff from each of its member agencies, help the council carry out its authorities. The duties of the Systemic Risk Committee include (1) monitoring and analyzing financial markets, the financial system, and issues related to financial stability to support FSOC's mission to identify and respond to risks and emerging threats, (2) facilitating information sharing and coordination among FSOC member staff and member agencies to help identify and respond to risks to financial stability, (3) supporting FSOC's responsibilities to annually report to and testify before Congress, and (4) coordinating with other FSOC committees on issues of common interest, as appropriate. Other FSOC committees also help the council carry out its authorities and perform analysis of systemic risks related to their own missions. For example, FSOC's Nonbank Financial Companies Designations Committee and Financial Market Utilities and Payment, Clearing, and Settlement Activities Committee both are tasked with analyzing potential risks and providing recommendations to FSOC related to potential designations under titles I and VIII of the Dodd-Frank Act, respectively.

[116]GAO-16-175.

potential risks to the financial system related to leveraged lending activities. FSOC staff said that they had been monitoring the effects of the COVID-19 shock on the leveraged loan market, CLO market, and key investors, including mutual funds, and would continue to do so.

We also found that OFR facilitated FSOC members' access to analyses that used confidential supervisory data otherwise unavailable to all members. For example, OFR leveraged its access to confidential data on certain private funds through SEC's Form PF to gain insights into private debt funds.[117] According to OFR, using its authorities to collect information to support the activities of FSOC, OFR established a memorandum of understanding with SEC. According to OFR, while the relevant memorandums of understanding do not grant FSOC member agencies access to the data obtained by OFR, they allowed OFR to share analyses of these data with FSOC members on a confidential basis.

FSOC Annual Report Recommendations Related to Leveraged Lending Risks

FSOC's annual reports communicate the council's analyses of potential emerging financial stability threats to Congress and the public. The activities of the Systemic Risk Committee are guided by and inform the discussion of such threats in FSOC's annual reports. Specifically, FSOC annual reports between 2015 and 2019 contain analyses of nonfinancial corporate debt trends, including leveraged lending, and most identify some of the vulnerabilities mentioned earlier, including riskier debt and looser underwriting standards. In its 2019 report, FSOC included a discussion of the vulnerabilities and risks associated with leveraged lending activities, with a more robust discussion than in previous reports of investor holdings of leveraged loans and CLO securities.

FSOC's 2018 and 2019 annual reports recommended that agencies continue monitoring levels of nonfinancial business leverage. Reflecting growing concern about risks from nonfinancial corporate debt activities, the 2018 and 2019 annual reports recommended that regulators "continue monitoring of nonfinancial business leverage, trends in asset valuations, and potential implications for regulated entities in order to assess and reinforce their ability to manage severe, simultaneous losses." The 2019 report recommendation further stated that regulators and market participants should analyze the exposures, loss-absorbing capacity, and incentives of different types of holders of nonfinancial

[117]As mentioned earlier, SEC-registered investment advisers to certain private funds are required to file Form PF. Form PF data are not publicly available and are considered confidential.

corporate debt, and specifically cited liquidity risks related to mutual funds.[118] As explained in more detail below, even if FSOC had recommended that its members take more specific action, FSOC annual report recommendations are not binding, and ultimate actions to respond to systemic risks lie in the hands of individual regulators.

FSOC's Authorities to Respond to Systemic Risks from Activities Like Leveraged Lending Are Limited and Unclear

FSOC is tasked with responding to systemic risks, but it may lack the tools needed to do so comprehensively, particularly when the risks stem from broad-based activities like leveraged lending that involve a range of bank and nonbank participants overseen by multiple financial regulators.

FSOC's Legal Authority

The Dodd-Frank Act left the responsibility for overseeing financial entities and activities with financial regulatory agencies, and FSOC's own authorities do not divest its members of their existing authorities. FSOC's authorities to respond to systemic risks include annual report recommendations and recommendations under Section 120 of the Dodd-Frank Act, but these recommendations are nonbinding.

- **Annual report recommendations.** The Dodd-Frank Act requires FSOC to report annually and testify before Congress on recommendations to enhance financial stability, and FSOC has included such recommendations in its annual reports. FSOC annual report recommendations can be broad and do not necessarily identify specific systemic risk mitigation actions for member agencies on specific timelines, and identified agencies are not required to respond to them.
- **Section 120 recommendations.** Per Section 120 of the Dodd-Frank Act, FSOC may recommend that a primary financial regulator apply new or heightened standards for a financial activity or practice conducted by financial companies under the regulator's jurisdiction. If no primary regulator exists, FSOC can recommend appropriate

[118]Report recommendations related to nonfinancial corporate debt between 2015 and 2017 were related to concerns about risky search-for-yield behaviors given the low interest rate environment and potential negative effects of rising interest rates. See Financial Stability Oversight Council, *2015 Annual Report* (Washington, D.C.: May 19, 2015); *2016 Annual Report* (Washington, D.C.: June 21, 2016); *2017 Annual Report* (Washington, D.C.: Dec. 14, 2017); *2018 Annual Report* (Washington, D.C.: Dec. 19, 2018); and *2019 Annual Report* (Washington, D.C.: Dec. 4, 2019).

legislation to Congress.[119] As of September 30, 2020, FSOC had proposed to use this authority once, in November 2012, when it issued for public comment a proposed Section 120 recommendation to SEC to implement reforms in money market mutual funds in order to address structural weaknesses in that market.[120]

FSOC's Section 120 recommendation authority is broad in scope and can be used to address a financial activity or practice that is conducted by multiple financial companies. The authority can provide clarity and public accountability for an identified risk by allowing FSOC to state which regulator should respond to the risk and how it should do so. However, the recommendations are nonbinding, and regulators can choose either to comply with FSOC's Section 120 recommendations or not to comply and explain the reasoning.[121]

In addition, FSOC has three distinct designation authorities that, if invoked, require certain federal agencies to impose enhanced standards on designated entities or financial institutions conducting designated activities. These include two entity-specific authorities and one activities-based authority:

- FSOC's **nonbank designation authority** is entity-specific and allows FSOC to designate a nonbank financial company for consolidated

[119]FSOC's 2019 Final Interpretive Guidance outlines specific conditions for the use of the more formal Section 120 authorities. For example, FSOC plans to use this authority only after it believes that the relevant financial regulatory agencies' actions to address an identified potential financial stability threat are inadequate, and if it determines that the conduct, scope, nature, size, scale, concentration, or interconnectedness of the activity or practice could create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies and nonbank financial companies, U.S. financial markets, or low-income, minority, or underserved communities. Lastly, FSOC stated that in cases where the relevant primary financial regulatory agency would not be required to perform a cost-benefit analysis in response to a Section 120 recommendation, FSOC itself will evaluate the benefits and costs of such recommendation before making it final.

[120]FSOC issued this proposed Section 120 recommendation in November 2012, offering specific alternatives that SEC could adopt to reform money market mutual funds. In summer 2014, SEC adopted rule amendments to address risks of investor runs in money market mutual funds.

[121]A final Section 120 recommendation to an agency requires that the agency impose the recommended reforms or, within 90 days, explain in writing why the agency determined not to follow the recommendation.

supervision by the Federal Reserve and enhanced prudential standards.

- FSOC's **financial market utility designation authority** is entity-specific and allows FSOC to designate a financial market utility as systemically important.[122]
- FSOC's **payment, clearing, and settlement (PCS) designation authority** is activities-based and allows FSOC to designate a payment, clearing, or settlement activity as systemically important.[123]

While FSOC has used its nonbank designation authority in the past, as of September 30, 2020, there were no nonbank financial companies designated for consolidated supervision by the Federal Reserve, and there were eight financial market utilities designated as systemically important.[124] As of September 30, 2020, FSOC had not yet designated any PCS activities as systemically important or published guidelines on how it plans to use this authority.

FSOC's designation authorities are binding in the sense that they assign financial stability oversight responsibilities to a financial regulator and require the regulator to impose enhanced supervision. Specifically, the Federal Reserve must prescribe enhanced prudential standards for designated nonbank financial companies, and in certain circumstances the Federal Reserve, SEC, or the Commodity Futures Trading Commission must prescribe enhanced risk management standards for designated financial market utilities. Unlike these entity-specific

[122]Financial market utilities are multilateral systems that provide the infrastructure for transferring, clearing, or settling payments, securities, or other financial transactions among financial institutions or between financial institutions and the system.

[123]A PCS activity is an activity carried out by one or more financial institutions to facilitate the completion of financial transactions. PCS activities may include the calculation and communication of unsettled financial transactions between counterparties, the netting of transactions, or the final settlement of financial transactions.

[124]By December 2014, FSOC had voted to designate the following four nonbank financial companies for enhanced supervision by the Federal Reserve: American International Group, Inc., General Electric Capital Corporation, Inc., Prudential Financial, Inc., and MetLife, Inc. By the end of 2018, all designations had been rescinded. MetLife's designation was rescinded by court ruling, while FSOC voted to rescind the other three designations. On July 18, 2012, FSOC voted to designate the following eight financial market utilities as systemically important: The Clearing House Payments Company L.L.C., CLS Bank International, Chicago Mercantile Exchange, Inc., the Depository Trust Company, Fixed Income Clearing Corporation, ICE Clear Credit LLC, National Securities Clearing Corporation, and the Options Clearing Corporation.

designation authorities, FSOC's PCS activities designation authority could apply to all financial institutions that engage in the designated activity and in certain circumstances would require SEC, the Commodity Futures Trading Commission, or the Federal Reserve to impose enhanced risk management standards on those financial institutions.

Limitations of FSOC's Authorities

The scope of FSOC's PCS activities designation authority is limited by the statutory definition of PCS activities and generally does not appear to apply to leveraged lending activities. A PCS activity is an activity carried out by one or more financial institutions to facilitate the completion of financial transactions. The Dodd-Frank Act does not explicitly include lending as a financial transaction for purposes of defining a PCS activity.[125] In addition, the act excludes from the definition of a PCS activity (1) any offer or sale of a security under the Securities Act of 1933, and (2) any quotation, order entry, negotiation, or other pre-trade activity or execution activity. Thus it is likely that the sale of CLO securities or activities—such as, for example, nonbank direct lending to leveraged borrowers—would be excluded from the definition of PCS activities and thus would not be covered by the scope of FSOC's PCS activities designation. Consequently, FSOC may not be able to use its PCS designation authority to designate certain leveraged lending activities as systemically important or to assign enhanced oversight by SEC or the Federal Reserve over the leveraged lending activities for the multiple types of nonbank market participants. As of September 30, 2020, FSOC staff had not taken a position on the applicability of the PCS designation authority to leveraged lending activities.

While FSOC's nonbank designation authority could be used to address potential risks to financial stability from broad-based activities like leveraged lending, the authority may not be well suited to effectively

[125]The Dodd-Frank Act defines a financial transaction for the purposes of payment, clearing, or settlement activity to include funds transfers, securities contracts, contracts of sale of a commodity for future delivery, forward contracts, repurchase agreements, swaps, security-based swaps, swap agreements, security-based swap agreements, foreign exchange contracts, financial derivatives contracts, and any similar transaction that FSOC determines to be a financial transaction. Pub. L. No. 111-203, § 803 (2010) (codified at 12 U.S.C. § 5462(7)). When conducted with respect to a financial transaction, PCS activities may include (1) the calculation and communication of unsettled financial transactions between counterparties; (2) the netting of transactions; (3) the provision and maintenance of trade, contract, or instrument information; (4) the management of risks and activities associated with continuing financial transactions; (5) the transmittal and storage of payment instructions; (6) the movement of funds; (7) the final settlement of financial transactions; and (8) other similar functions that FSOC may determine applicable.

address those risks. A variety of financial entities under the jurisdiction of various FSOC member agencies participate in lending, securitizing, or investing in leveraged loans. In the event that FSOC deemed its nonbinding authorities insufficient for addressing potential risks from broad-based activities like leveraged lending, FSOC could use its entity-specific designation authorities to address the risks. But it may be difficult for FSOC to do so effectively. For example, if the actions of a large group of different types of investors in nonbank leveraged loans or CLO securities were found to be a significant threat to financial stability, FSOC could try to designate each of the nonbanks in the group individually. Assuming each met the statutory standards for designation (and any additional conditions imposed by FSOC), the Federal Reserve would impose enhanced prudential standards on the entities.[126] However, this would be a difficult and time-consuming process that likely would require FSOC to consider each nonbank individually.

In contrast, an activities-based designation authority may allow FSOC to designate the activity itself as systemically important and provide a credible rationale for why the activity—not the separate actions of each nonbank—poses significant risk to financial stability unless enhanced oversight is exercised. It may also allow for regulators other than the Federal Reserve to impose enhanced oversight, if appropriate.

FSOC has a Nonbank Financial Companies Designations Committee and a Financial Market Utilities and PCS Activities Committee that develop analyses and conduct other work for such designations. FSOC staff told us that, as of September 30, 2020, FSOC's Financial Market Utilities and PCS Activities Committee had not yet discussed how FSOC would use its

[126]The Dodd-Frank Act sets forth two nonbank determination standards. FSOC can designate a nonbank financial company if it determines that the company's (1) material financial distress or (2) nature, scope, size, scale, concentration, interconnectedness, or mix of activities could pose a threat to the financial stability of the United States. In addition, FSOC's December 2019 release also made a number of procedural changes to FSOC's implementation of its binding nonbank designation authority and added certain considerations for its use. It stated that FSOC would pursue nonbank designations only if a potential risk or threat cannot be adequately addressed through the activities-based approach. According to the release, when considering a nonbank firm for designation, FSOC will perform a cost-benefit analysis and proceed with designation only if the expected benefits to financial stability justify the expected costs from such designation. As part of its pre-designation analysis, FSOC will assess the likelihood of the nonbank's material financial distress. FSOC anticipates it would consider a nonbank financial company for a potential determination under Dodd-Frank Act section 113 only in rare instances, such as if the products, activities, or practices of a company that pose a potential threat to U.S. financial stability are outside the jurisdiction or authority of financial regulatory agencies.

PCS designation authority or interpret the scope of that authority. Consequently, the extent to which the statutory constraints on the scope of this authority may limit FSOC's ability to respond to certain threats involving multiple entities remains unclear. FSOC staff stated that, thus far, FSOC members have been able to address identified risks primarily through their own supervisory authorities or FSOC's other authorities.

GAO's 2016 Recommendation on Amending FSOC's Authorities

Although FSOC's mission is to identify and mitigate systemic risks, FSOC's designation authorities have limited scope and represent a gap in the post-Dodd-Frank mechanisms for the mitigation of systemic risks. In particular, FSOC's designation authorities may not allow it to comprehensively address systemic risks arising from financial activities like leveraged lending, in which multiple types of financial entities participate. By statute, FSOC's PCS designation authority excludes certain types of activities, and its scope remained untested and unclear as of September 30, 2020, since FSOC had not used this authority or issued statements to clarify how or under what circumstances it would use it.

As a result, there may be risks that arise from widely conducted financial activities, such as leveraged lending activities, that FSOC cannot address through its PCS designation authority and for which entity-by-entity designation may not be effective or feasible. In those cases, FSOC can recommend regulatory action, but it cannot act or compel action even with a broad consensus among FSOC members. In the event that regulators do not or cannot act to mitigate systemic threats, FSOC's authorities to respond are limited. As a result, FSOC may lack the tools needed to comprehensively address systemic risks that may emerge. In addition, without requisite authorities, it is difficult for Congress to hold FSOC accountable for addressing threats to financial stability.

For these reasons, in 2016 we recommended that Congress consider whether legislative changes were necessary to align FSOC's authorities with its mission to respond to systemic risks.[127] As of September 30, 2020, Congress had not amended FSOC's authorities in this regard. Accordingly, we reiterate our 2016 recommendation that Congress

[127]GAO-16-175. We stated that Congress could implement our suggestion by making changes to FSOC's mission, its authorities, or both, or to the missions and authorities of one or more of the FSOC member agencies to support a stronger link between the responsibility and capacity to respond to systemic risks. In doing so, Congress could solicit information from FSOC on the effective scope of its collective designation authorities, including any gaps.

consider doing so. Providing FSOC with broader authority—such as activities-based designation authority—could improve its ability to respond to financial stability risks that may not be easily or effectively addressed with entity-specific designations.

Additional Scenario-Based Exercises Could Enhance FSOC's Ability to Respond to Financial Stability Risks from Activities Like Leveraged Lending

FSOC's activities to monitor and respond to potential threats to financial stability—including those arising from leveraged lending—do not include regular scenario-based emergency preparedness tools, such as tabletop or other simulation exercises. Tabletop exercises are discussion-based sessions where team members meet in an informal setting to discuss their roles during an emergency and their responses to a particular emergency situation. Such exercises help government and nongovernment entities evaluate program plans, procedures, and capabilities for responding to crises.

While often used outside of the financial regulatory space, tabletop exercises also have been used by regulators in the context of macroprudential policy.[128] The Conference of Federal Reserve Bank Presidents has conducted two macroprudential tabletop exercises that included hypothetical scenarios with heightened vulnerabilities related to leveraged lending. Participants in the exercises were presented with a hypothetical economy, specific financial stability vulnerabilities, and shock scenarios. Participants used the exercises to evaluate how macroprudential tools at their disposal could be used to respond to risks presented by the shocks, and they evaluated the efficiency of these tools under the specific scenario.[129]

Federal Reserve staff said that the main purpose of the exercises was to identify the macroprudential toolkit available to the Federal Reserve and

[128]For example, the Department of Homeland Security (DHS) and other entities have conducted tabletop exercises to enhance their emergency preparedness. In 2013, DHS implemented a campus resilience program for institutions of higher education that has since held a series of tabletop exercises that may bring together campus leadership; local, state, and federal officials; law enforcement; and public health personnel, among others, to simulate emergencies on a range of threats such as campus cybersecurity data breaches and active shooter incidents. Similarly, the Financial Services Information Sharing and Analysis Center, a nonprofit entity established by the financial services sector, conducts a variety of simulated exercises, including tabletop exercises that simulate cyberattacks against payment systems.

[129]See Tobias Adrian et al., "Macroprudential Policy: A Case Study from a Tabletop Exercise," Federal Reserve Bank of New York, *Economic Policy Review* (Feb. 1, 2017) and Denise Duffy et al., "Macroprudential Policy: Results from a Tabletop Exercise," Federal Reserve Bank of Cleveland, Working Paper 19-11 (May 2019).

to evaluate the tools' practicality in hypothetical yet realistic scenarios. Federal Reserve staff stated that the exercises allowed them to understand the practicality of deploying each of the tools, including monetary policy tools, under time-sensitive shock scenarios.[130] The exercises yielded a catalog of macroprudential tools available to the Federal Reserve along with an assessment of their degree of functionality in helping participants address the challenges in the hypothetical scenarios presented.[131]

The use of scenarios in a tabletop exercise or similar setting can provide (1) insights about the resilience of financial sectors to specific shocks, and (2) important operational insights that can help participants prepare to manage risks when shocks or emergencies arise. First, scenarios can be designed to assess the strength of the financial system or financial sectors to an external shock. For example, according to the Federal Reserve, scenarios describe a hypothetical set of conditions designed to assess the resilience of banks to an adverse economic environment. The Basel Committee on Banking Supervision states that stress-test scenarios should capture material and relevant identified risks, and they should be severe yet plausible in order to provide a meaningful test of the resilience of banks.[132] Similarly, scenarios used in tabletop exercises can capture material and relevant risks identified by participants, and provide severe yet plausible circumstances that help participants assess the resilience of various financial sectors to shocks to the economy.

[130]One objective of the exercises was to model scenarios that created tension between the Federal Reserve's dual mandate of effectively promoting the goals of maximum employment, stable prices, and moderate long-term interest rates and the macroprudential objective of reducing the occurrence and severity of major financial crises.

[131]Macroprudential policy tools include the use of "prudential" tools for financial stability purposes. Prudential policy tools are rules or requirements that enhance the safety and soundness of specific firms, sectors, or practices. Examples include capital regulation, liquidity regulation, and supervisory stress tests. In addition, monetary policy can be used for financial stability purposes and is therefore part of the Federal Reserve's macroprudential toolkit.

[132]See Bank for International Settlements, Basel Committee on Banking Supervision Consultative Document, *Stress Testing Principles* (December 2017). According to the Basel Committee on Banking Supervision, the scenarios should consider the current macroeconomic and financial environment and could consider historical events and hypothetical future events that take into account new information and emerging risks in the present and foreseeable future.

Second, analyzing such scenarios in a tabletop setting can provide important operational insights, in particular when many players must be involved in containing or managing risks under stressed circumstances. According to the Department of Homeland Security (DHS), tabletop and other scenario-based exercises play a vital role in emergency preparedness and should engage team members and encourage collaboration to manage the response to a hypothetical incident.[133]

According to DHS, a well-designed table-top exercise

- provides a low-risk environment to familiarize personnel with roles and responsibilities; foster meaningful interaction and communication across jurisdictions/organizations; assess and validate plans, policies, procedures, and capabilities; and identify strengths and areas for improvement;
- enables entities to identify strengths and incorporate them within best practices to sustain and enhance existing capabilities;
- provides an objective assessment of gaps and shortfalls within plans, policies, and procedures to address areas for improvement prior to a real-world incident; and
- helps clarify roles and responsibilities among different entities, improve interagency coordination and communications, and identify needed resources and opportunities for improvement.

FSOC does not include emergency preparedness tools such as tabletop or similar scenario-based exercises as part of its efforts to assess financial stability. FSOC staff said that FSOC has sufficient processes in place to monitor threats to financial stability from leveraged lending and other activities through its established guidelines and activities-based approach. They stated that they have participated in tabletop exercises conducted by FSOC member agencies and other interagency bodies. However, FSOC's own activities could be supplemented with scenario-

[133]DHS defines preparedness as a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response. Tabletop exercises are one example of exercises suited for emergency preparedness. Other exercises include walkthroughs, workshops, education seminars, functional exercises, and full-scale exercises. See https://www.ready.gov/business/testing/exercises (accessed April 13, 2020). For a discussion of DHS's Preparedness Cycle, see Department of Homeland Security, *National Response Framework* (Washington, D.C.: January 2008) and *Homeland Security Exercise and Evaluation Program (HSEEP)*, (Washington, D.C.: January 2020).

based exercises that could yield additional insights specifically about systemic risks and FSOC's member agencies' ability to respond.

Conducting tabletop or other scenario-based exercises could assist FSOC in fulfilling its statutory mission to monitor and respond to potential threats to financial stability. These exercises could be particularly helpful for analyzing risks stemming from broad-based activities like leveraged lending that involve a variety of entities overseen by multiple regulators. Conducting tabletop or other scenario-based exercises could

- serve as a flexible tool for modeling hypothetical economies that incorporates identified potential threats to financial stability and assesses various financial sectors' resilience to severe but plausible adverse conditions;
- enhance FSOC's ability to identify gaps in authorities or challenges to implementing existing authorities for macroprudential purposes;
- help FSOC member staff determine how best to navigate the structure of FSOC to effectively respond to specific scenarios, given that the mission to respond to risks was given to FSOC but the authorities to act are fragmented among multiple financial regulators; and
- help FSOC identify its collective macroprudential policy toolkit for responding to threats to financial stability, understand the benefits and challenges in operationalizing the toolkit, and identify and address any interagency coordination challenges in responding to the threats.

Conclusions

Although financial regulators and others noted an increase in riskier practices in leveraged lending activities before the COVID-19 shock, as of September 2020 they had not found that leveraged lending activities had contributed significantly to widespread financial instability. However, the leveraged loan market was severely affected after the COVID-19 shock and, although it had recovered some as of September 2020, risks remain. Amid the uncertainty created by the pandemic, federal oversight of financial stability and systemic risk continues to be critical.

Limitations in FSOC's designation authorities raise questions about its ability to effectively respond to different kinds of systemic risks, particularly those whose origins are not entity-specific. These limitations also make it difficult to hold FSOC accountable for identifying and responding to risks to financial stability. We therefore reiterate our 2016 recommendation that Congress consider legislative changes to align

FSOC's authorities with its mission to respond to systemic risks.[134] For example, with a broader activities-based designation authority, FSOC could assign clear responsibility over an activity to one or more regulators with the authority to impose enhanced risk management or other standards on entities involved in that activity. This would provide FSOC with an additional tool for responding to potential risks from activities that involve many regulators, such as leveraged lending.

FSOC also could improve its members' collective ability to respond to systemic risks by conducting regular tabletop or other scenario-based exercises. Such exercises would complement FSOC's monitoring activities with structured discussions of financial distress scenarios that could provide additional insights into the financial system's resilience to adverse economic conditions, as well as FSOC members' abilities and limitations to respond to potential threats. In particular, the exercises could enhance FSOC's understanding of its collective tools and ability to respond to risks from broad-based activities that span across multiple regulatory jurisdictions, such as leveraged lending activities.

Recommendation for Executive Action

The Secretary of the Treasury, as Chairperson of FSOC and in consultation with FSOC members, should incorporate regular scenario-based exercises designed to evaluate individual FSOC member and collective capabilities for responding to crises into its risk-assessment activities. These could include tabletop exercises that assume increased financial risks under plausible macroeconomic and financial conditions that may require multiple regulators to respond. (Recommendation 1)

Agency Comments and Our Evaluation

We provided a draft of this report to the Commodity Futures Trading Commission, the Federal Reserve, FDIC, FSOC, NAIC, OCC, OFR, and SEC for review and comment. The Commodity Futures Trading Commission, FDIC, FSOC, NAIC, OCC, OFR, and SEC provided technical comments, which we incorporated as appropriate. FSOC also provided written comments, which are reproduced in appendix III. FSOC neither agreed nor disagreed with our recommendation. In its written comments, FSOC noted that it consists of individuals who lead federal and state financial regulatory agencies, and that it often leverages the work and expertise of its member agencies in order to avoid unnecessary overlap or duplication of efforts. It noted that, consistent with this approach, a number of financial regulators organize tabletop exercises, and FSOC staff regularly participate in those activities. FSOC stated that

[134]GAO-16-175.

where it has found it appropriate to engage in additional activities beyond those of its individual member agencies, it regularly does so, including by generating rigorous analyses for interagency discussion. It stated that if it determines that further analysis or action is needed, it will act, as appropriate.

We maintain that FSOC could improve its members' collective ability to respond to systemic risks by conducting regular tabletop or other scenario-based exercises. We agree that the analyses FSOC staff generate for interagency discussion are an important tool for monitoring and evaluating risks to the financial system. We also recognize that FSOC staff have participated in the tabletop exercises organized by financial regulators. However, we believe that FSOC's own activities could be supplemented with scenario-based exercises that could yield additional insights specifically about regulatory responses to systemic risks. In particular, structured discussions of financial distress scenarios could provide additional insights into the financial system's resilience to adverse economic conditions, as well as FSOC members' abilities and limitations to respond to potential threats. We do not believe that conducting these exercises would lead to overlap or duplication with the efforts of individual member agencies. As we noted in the report, these exercises could be particularly helpful for analyzing risks stemming from broad-based activities like leveraged lending that involve a variety of entities overseen by multiple regulators. In particular, they could aid FSOC in identifying its collective macroprudential policy toolkit for responding to threats to financial stability, understanding the benefits and challenges in operationalizing the toolkit, and identifying and addressing any interagency coordination challenges in responding to the threats.

We are sending this report to the appropriate congressional committees. We are also sending copies of the report to the Secretary of the Treasury as the Chairperson of FSOC and in his leadership role for OFR, the Chairman of the Board of Governors of the Federal Reserve System, the Chairman of the Federal Deposit Insurance Corporation, the Acting Comptroller of the Currency, the Chairman of the Securities Exchange Commission, the Chairman of the Commodity Futures Trading Commission, the Chief Executive Officer of the National Association of Insurance Commissioners, and other interested parties. In addition, the report will be available at no charge on the GAO website at http://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 major contributions to this report are listed in appendix IV.

Michael E. Clements
Director, Financial Markets and Community Investment

List of Agency Officials

The Honorable Jerome H. Powell
Chairman
Board of Governors of the Federal Reserve System

The Honorable Heath P. Tarbert
Chairman
Commodity Futures Trading Commission

The Honorable Steven T. Mnuchin
Secretary
Department of the Treasury

The Honorable Jelena McWilliams
Chairman
Federal Deposit Insurance Corporation

The Honorable Brian P. Brooks
Acting Comptroller of the Currency
Office of the Comptroller of the Currency

The Honorable Jay Clayton
Chairman
Securities and Exchange Commission

Appendix I: Objectives, Scope, and Methodology

This report examines (1) the extent to which financial institutions are exposed to leveraged lending activities; (2) financial regulators', the Financial Stability Oversight Council's (FSOC), the Office of Financial Research's (OFR), and others' assessments of the potential risks to financial stability stemming from leveraged lending activities before and after the Coronavirus Disease 2019 (COVID-19) shock; and (3) the extent to which FSOC has established approaches for identifying, monitoring, and mitigating potential risks to financial stability arising from broad-based market activities such as leveraged lending.[1]

Objective 1 Scope and Methodology

To examine the extent to which financial institutions are exposed to leveraged lending activities, we conducted the following activities:

- **Market size.** We obtained data from two private sources to estimate the size of the leveraged lending market. To estimate the size of the broadly syndicated leveraged loan market, we used estimates of outstanding broadly syndicated leveraged loans from Leveraged Commentary and Data (LCD), an offering of S&P Global Market Intelligence. We approximated the size of the non-broadly syndicated leveraged loan market using estimates of assets under management for private debt funds and business development companies, the primary types of lenders in that segment of the market. We obtained data on private debt funds from Preqin, and we obtained data on business development companies from LCD. Our Preqin estimate likely overestimates the size of the non-broadly syndicated leveraged loan market, as the data include holdings other than leveraged loans.[2]
- **U.S. Banks', registered funds', and insurers' exposures.** We obtained estimates of exposures to leveraged lending activities as of year-end 2018 for U.S. banks from the Board of Governors of the Federal Reserve System (Federal Reserve), for U.S. registered funds from the Securities and Exchange Commission (SEC), and for U.S. insurers from the National Association of Insurance Commissioners (NAIC), which is the organization of insurance regulators from the 50 states, the District of Columbia, and the five U.S. territories. We

[1]In this report, we use "leveraged lending activities" as a general term referring to activities by market participants involved in the leveraged lending market and CLO security market.

[2]Preqin estimates include assets under management used for direct lending, which are senior loans made primarily to mid-market leveraged companies. Because private debt funds may also invest in other types of debt, private debt funds' assets under management likely overestimate the amount of outstanding leveraged loans originated by the funds. However, the measure provides a useful approximation.

reported year-end 2018 exposures as that is the most recent year for which the data were available.

- **Other investors' exposures.** We obtained estimates of CLO security holdings for other types of investors as of year-end 2018 from Federal Reserve staff analyses of data from the Treasury International Capital (TIC) survey (explained in more detail below). We also obtained qualitative information on investor holdings of leveraged loans and CLO securities from interviews with staff and documentation obtained from Federal Reserve, SEC, OFR, FSOC, and three large credit rating agencies—Moody's Investors Service, S&P Global Ratings, and FitchRatings.[3] These credit rating agencies rate the majority of U.S.-issued CLO securities.

To assess the reliability of the estimates of the size of the leveraged lending market, we reviewed relevant documentation from LCD and Preqin and interviewed knowledgeable officials. LCD estimates issued and outstanding broadly syndicated leveraged loans as part of its process of maintaining the S&P/Loan Syndications and Trading Association Leveraged Loan Index. Preqin collects information on private debt funds' assets directly from fund managers, institutional investors, and other industry professionals, as well as public filings and industry-recognized news sources. LCD also tracks the portfolio holdings of sixty nine publicly traded and private business development companies by reviewing their quarterly public SEC filings. According to the data providers, data on private debt funds and business development companies undergo quality checks to sufficiently ensure the reliability of the estimates.

To assess the reliability of the exposure estimates we reported, we reviewed relevant documentation, interviewed knowledgeable officials, and compared estimates across alternative data sources. In particular, the Federal Reserve, SEC, and NAIC estimate the value of leveraged loan and CLO securities holdings of supervised entities based on data collected from required reporting in FR Y-14 bank regulatory filings, schedules of portfolio holdings and shareholder reports of registered investment funds, and insurance companies' annual statements,

[3]A credit rating is an assessment of the creditworthiness of an obligor as an entity or in relation to specific securities or money market instruments. *See eg.* 15 U.S.C. § 78c(a)(60). Credit rating agencies designate credit ratings to issuers or securities. The three large credit rating agencies are Standard & Poor's (S&P) Global Ratings, Moody's Investors Service, and FitchRatings.

respectively.[4] Regulators and NAIC develop and validate their estimates using data checks and subject-matter expertise. While a uniform definition of leveraged loans does not exist across alternative data sources and leveraged loans are not identified as a separate loan category in these regulatory filings, regulators and NAIC generally define leveraged loans for estimation purposes as term loans with tenor (length of time before the loan is due) greater than 1 year, first or second lien, floating rate over the London Inter-Bank Offered Rate (LIBOR) with a spread over LIBOR of 125 basis points.[5] Using different criteria could result in different estimates for leveraged loan holdings.

- **Reliability of U.S. bank exposure estimates.** Bank regulatory data from FR Y-14 filings provide a reasonable estimate of leveraged loan and CLO holdings held by domestic bank holding companies by vintage and rating category. The estimates include revolving lines of credit, non-revolving lines of credit, and term loan Bs. The data do not include loans with a committed balance of less than $1 million and do not include loans held at smaller banks. We do not believe that this is a significant limitation, as this market is dominated by the largest banks. We conducted additional analysis of these bank holding companies' exposures to understand the size of the exposure relative to the bank holding companies' total capital and total assets. To do so, we obtained the underlying committed exposure data for each of the 20 bank holding companies that constitute the Federal Reserve's estimates from the Federal Reserve. We obtained year-end 2018 data on total capital and total assets for 16 out of the 20 bank holding companies from SNL Financial, a product of S&P Global Market Intelligence. For four bank holding companies that were not included in the SNL database, we obtained the data from their 2018 annual reports.
- **Reliability of U.S. registered funds' and U.S. insurers' exposure estimates.** SEC estimates total holdings of leveraged loan and CLO securities by registered funds. All loans held by those funds are assumed to be leveraged loans. Matching of CLO securities by a unique identifier (i.e., CUSIP code), which is available for the majority

[4]Federal Reserve's Capital Assessments and Stress Testing information collection (FR Y-14) collects data from bank holding companies and U.S. intermediate holding companies on their various asset holdings, including loans and securities such as CLOs, among other things. FR Y-14 data are used to assess the capital adequacy of large companies (generally those with $50 billion or more in assets) to support supervisory stress test models, and in continuous monitoring efforts.

[5]The LIBOR is a reference interest rate.

of CLO tranches, provides sufficiently reliable estimates of registered funds' holdings by type of fund and rating classification. Data collected by NAIC also provide consistent and comparable estimates of insurance companies' holdings of leveraged loans and CLO securities by rating category.

- **Reliability of other investors' exposure estimates**. As mentioned above, we obtained estimates on CLO security holdings for investors other than U.S. banks, U.S. registered funds, and U.S. insurers from Federal Reserve staff analyses based on data from the TIC survey. The survey provides data on U.S. portfolio holdings of foreign securities, which include U.S. holdings of CLO securities issued in the Cayman Islands. The estimates are based on data collected from annual surveys of U.S. holdings of asset backed securities issued in the Cayman Islands. TIC data do not explicitly identify CLO securities and do not contain information on U.S. issued CLO securities. We use a Federal Reserve estimate of U.S. issued CLO securities based on lender and loan information from the Shared National Credit database. The amount of leveraged loans held by foreign CLO issuers is estimated from the TIC data. This combined amount is approximately the same as the value used in alternative estimates of total U.S. holdings of CLO securities by investor type. These alternative estimates use matching and extrapolation methods based on reasonable assumptions to provide estimates of total U.S. holdings of CLO securities by investor type and rating classification. These alternative estimates can be used to construct a range of leveraged loan and CLO securities holdings by investor type and rating classification based on alternative methodologies and data.

We concluded that all applicable data were sufficiently reliable for the purposes of identifying key market participants' exposures to leveraged loans and CLO securities.

As part of this work, we also took steps to understand how banking regulators, SEC, and NAIC oversee participants in the leveraged lending market and their exposures to leveraged lending activities. To do so, we analyzed relevant regulations, examination manuals and related guidance and reviews, and forms, reports, and other documents from the banking regulatory agencies (the Federal Reserve, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation), SEC, and NAIC, and we conducted interviews with the staff of these agencies. We also reviewed relevant statutes and GAO reports.

Scope and Methodology for Other Objectives

To examine financial regulators', FSOC's, OFR's, and others' assessments of the potential risks to financial stability stemming from leveraged lending activities before and after the COVID-19 shock, we reviewed and analyzed reports and studies from U.S. and international entities concerned with financial stability, including FSOC, OFR, the Federal Reserve, and the Financial Stability Board; academics; market experts; industry associations, and the three large credit rating agencies. We also analyzed regulators' and NAIC's reports on the resilience of their regulated entities to leveraged lending exposures. We interviewed staff from FSOC, OFR, the Federal Reserve, the Commodity Futures Trading Commission, SEC, NAIC, the large credit rating agencies, and industry associations, including the Loan Syndication & Trading Association, the American Investment Council, and the Coalition for Business Development. After the COVID-19 shock to the U.S. economy, we obtained updated views from credit rating agencies and regulators on the performance of the leveraged loans and CLO securities markets and the effects on market participants. We also obtained data from the three large credit ratings agencies on trends in leveraged loan and CLO performance after the COVID-19 shock. We did not assess the reliability of these sources as the data were solely used for descriptive purposes to discuss current market conditions and did not provide the basis for any findings, conclusions, or recommendations. However, we observed that the trends reported by the three rating agencies were consistent. We also interviewed experts from two nonpartisan public policy organizations that focus on financial stability issues, the Systemic Risk Council and Brookings.

To assess the extent to which FSOC has established approaches for identifying, monitoring, and mitigating potential risks to financial stability arising from broad-based market activities such as leveraged lending, we analyzed annual reports from FSOC, other FSOC public documents, and internal presentations related to leveraged lending topics from monthly FSOC Systemic Risk Committee meetings held between January 2015 and June 2020. We also reviewed relevant statutes, regulations, FSOC interpretive guidance, and GAO reports. In addition, we interviewed staff from FSOC, OFR, banking regulatory agencies, and SEC about their participation in FSOC's monitoring activities. We also reviewed a prior GAO report that evaluated and identified limitations in FSOC's authorities to respond to broad-based activities and included a suggestion to

Congress to address these limitations.[6] We evaluated FSOC's activities for monitoring and responding to financial stability risks against criteria for evaluating governmental and nongovernmental efforts' for preparing and responding to crises. These criteria include principles for conducting stress tests developed by the Bank for International Settlements and principles for conducting scenario–based emergency preparedness exercises from the Department of Homeland Security. We used the stress testing principles because they provide insights about the benefits of using scenarios to analyze the financial system's response to economic shocks. We used the principles for conducting scenario-based emergency preparedness exercises because they offer insights that can help multiple governmental entities better prepare and respond to risks when shocks or emergencies occur.

We conducted this performance audit from August 2019 to December 2020 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.

[6]GAO, *Financial Regulation: Complex and Fragmented Structure Could Be Streamlined to Improve Effectiveness*, GAO-16-175 (Washington, D.C.: Feb. 25, 2016).

Appendix II: Multiple Regulators Oversee Key Leveraged Lending Market Participants, and the Nature and Extent of Oversight Vary

Oversight of the leveraged lending market and key participants is spread among a number of regulators at the federal and state levels. Federal banking regulators—the Office of the Comptroller of the Currency (OCC), the Board of Governors of the Federal Reserve System (Federal Reserve), and the Federal Deposit Insurance Corporation (FDIC)—monitor risks from banks' leveraged lending exposures that may threaten the safety and soundness of banks. In contrast, the Securities and Exchange Commission's (SEC) oversight primarily is focused on compliance with federal securities laws, including registration and reporting requirements. State insurance regulators' supervision may encompass insurance companies' investments in leveraged lending.

Banking Regulators Oversee Banks' Leveraged Lending Activities Primarily through the Shared National Credit Program

Federal banking regulators oversee banks' leveraged lending activities primarily through Shared National Credit program reviews, examinations, and analysis of data reported by bank holding companies.[1] Through these oversight activities, regulators assess the credit quality of individual leveraged loans and the banks' risk management processes with respect to leveraged lending.

- **Shared National Credit (SNC) program reviews.** The SNC program is the federal banking regulators' primary window into the leveraged loan market. A SNC is any loan or loan commitment that aggregates to $100 million or more and is shared by three or more regulated financial institutions, among other characteristics.[2] The SNC program contains reporting requirements specific to leveraged lending. For example, the reporting bank has to identify those credits it considers leveraged loans, using the definition it has established. The review looks semiannually at a sample of leveraged loans issued and

[1]According to FDIC, these data are generally reported by individual banks or domestically based foreign branches. In situations where more than one entity within a bank holding company structure or affiliated banks originate syndicated credit, one entity is designated as the "reporting bank" for data submission for the group.

[2]Specifically, an SNC is any loan or loan commitment (U.S. or non-U.S.) for which the commitment amount aggregates to $100 million or more and that meets one of the following criteria: 1) the loan is shared by three or more federally supervised unaffiliated institutions under a formal lending agreement or 2) a portion of the loan is sold to two or more federally supervised unaffiliated institutions, with the purchasing institutions assuming their pro-rata share of the credit risk. SNCs include assets such as real estate, stocks, notes, and debentures taken for debts previously contracted. The minimum commitment threshold for SNC reviews was increased from $20 million to $100 million effective January 1, 2018. While the increase in the minimum commitment threshold reduced the number of borrowers and credit facilities identified as SNCs, the change had an immaterial effect on total commitments and asset quality measures.

designated by a bank as leveraged loans. As part of the review, the Federal Reserve, OCC, and FDIC select a risk- based sample of SNC loans and assess asset quality and trends in the composition of SNC commitments, including leveraged loans.[3] The agencies jointly issue an annual public statement that summarizes the review findings, which currently includes specific commentary on and concerns about leveraged lending. Examiners use the results of the SNC review to inform individual bank examinations, and according to one federal banking regulator, this ensures that participating banks are consistent in assigning regulatory risk ratings for SNCs. Further, the agencies use the results of the SNC review to analyze leveraged lending trends and risks across the banking industry.

- **Examinations.** Under the banking regulators' risk-focused examination approach, examiner resources are focused on a bank's highest-risk areas, and regulators have identified leveraged lending as one of those areas. Federal banking regulators said they review banks' leveraged lending activities as part of their risk-based safety and soundness examinations or as part of targeted examinations.[4] In response to growth in the volume of leveraged credit and participation of unregulated investors in this market, the banking regulators released the revised Interagency Guidance on Leveraged Lending in 2013. The release outlined high-level principles related to safe and

[3]For example, regulators identify special mention credits, which are commitments with potential weaknesses that deserve management's close attention. If left uncorrected, these potential weaknesses could result in further deterioration of the repayment prospects, or in the institution's credit position in the future.

[4]Federal banking regulators conduct ongoing examination activities that are generally intended to evaluate an institution's operating condition, management practices and policies, and compliance with applicable laws and regulations. In addition, regulators conduct targeted examinations, which focus on a specific activity or line of business at the bank. For example, targets can include the examination of a bank's internal audit function; a review of a particular lending activity, such as leveraged lending; or an assessment of the bank's management of derivatives activities in a specific market. Federal banking regulators are required to conduct a full-scope, on-site examination of each insured depository institution they supervise at least once during each 12-month period. For certain smaller banks, the regulators may extend the examination interval to 18 months, generally for institutions that have less than $3 billion in total assets and that meet certain conditions, based on ratings, capitalization, and status of formal enforcement actions, among other things.

sound leveraged lending activities by their supervised banks.[5] It also broadly defined leveraged lending activities in terms of types of transactions and borrowers, developed a risk-management framework for those activities, and discussed a number of policy expectations shared by the three regulators. For example, it articulated the regulators' recommended underwriting standards, risk rating criteria and assumptions, standards for documenting and assessing the value of the borrower, risk management expectations for pipeline portfolio management of loans awaiting distribution, and stress testing expectations, among other things. OCC, Federal Reserve, and FDIC officials told us when examiners identify gaps in risk management programs or have concerns that may represent safety and soundness issues, they may rely on supervisory tools such as matters requiring attention to prompt remediation.[6]

- **Analysis of data reported by bank holding companies.** As part of its large bank supervision program, the Federal Reserve collects

[5]The interagency guidance on leveraged lending issued in March 2013 replaced prior interagency guidance issued in 2001. In response to a request from Senator Pat Toomey, in October 2017, GAO issued a decision on whether the 2013 Interagency Guidance on Leveraged Lending is considered a rule for the purposes of the Congressional Review Act. GAO concluded that the Interagency Guidance is a general statement of policy and is a rule under the Congressional Review Act. GAO, *Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation—Applicability of the Congressional Review Act to Interagency Guidance on Leveraged Lending*, B-329272 (Oct. 19, 2017). In September 2018, the Federal Reserve, OCC, NCUA, and FDIC issued an interagency statement clarifying the role of supervisory guidance. See Federal Reserve, Federal Deposit Insurance Corporation, National Credit Union Administration, and Office of the Comptroller of the Currency, *Interagency Statement Clarifying the Role of Supervisory Guidance* (2018). In the September 2018 interagency statement, the regulators stated that, unlike a law or regulation, supervisory guidance does not have the force and effect of law and that the agencies do not take enforcement actions based on supervisory guidance. We did not assess whether this change had any impact on the examination process.

[6]Matters requiring attention are deficiencies that are important and should be addressed over a reasonable period of time. They are directed to senior management of institutions for corrective action. The regulators employ progressive enforcement regimes to address supervisory concerns that arise during the examination cycle. If the institution does not respond to the concern in a timely manner, the regulators may take informal or formal enforcement action, depending on the severity of the circumstances. Informal enforcement actions include obtaining an institution's commitment to implement corrective measures under a memorandum of understanding. Formal enforcement actions include issuance of a cease-and-desist order or assessment of a monetary penalty, among others. The regulators told us in October 2020 that they had taken no enforcement actions specific to leveraged lending against large or mid-sized banks in the past 5 years. OCC staff observed that the OCC has taken enforcement action to address general lending deficiencies imposing requirements that would include leveraged lending.

information that can be used to gain insights about leveraged lending activities by bank holding companies. For example, the Federal Reserve can use information from FR Y-14 reports to estimate bank holding companies' direct exposures to leveraged lending, including term loans, pipeline loans, collateralized loan obligation (CLO) warehouse loans, revolving lines of credit to leveraged borrowers, and CLO securities holdings by tranche and year of issuance.[7]

These sources give federal banking regulators insight into large banks' direct exposures to credit risk from leveraged loans, but regulators have less insight into the extent of banks' indirect exposures. Banks may have indirect credit risk exposures to leveraged loans, including exposures from the extension of credit to other market participants that invest in leveraged loans or CLO securities, which may cause losses for large banks. Staff from the federal banking regulators told us that their reviews of firms' management information systems, which occur during examinations and discussions with management, can provide some insight into the level of indirect exposure that is not readily visible through regulatory reporting. Officials clarified that they have some information on the type of nonbanks that receive credit from banks. However, regulators cannot always tell from regulatory reporting what kinds of activities nonbanks may be conducting, including leveraged loan and CLO activities. In particular, regulatory reporting does not reveal whether a large bank has arranged a CLO, provided lines of credit for warehousing of CLOs, or made a loan to an investor that purchased a leveraged loan or CLO security.

Several other supervisory activities and regulatory requirements help increase banks' resiliency and mitigate credit and liquidity risks from leveraged lending, by, for example, providing a financial cushion for banks to absorb unexpected losses.

- **Stress tests.** Federal banking regulators noted that they have incorporated leveraged lending into mandated stress tests for banks. Stress tests are hypothetical exercises that assess the potential impact of economic, financial, or other scenarios on the financial performance of a company. Stress tests of banking institutions are

[7]Federal Reserve's Capital Assessments and Stress Testing information collection (FR Y-14) collects data from bank holding companies and U.S. intermediate holding companies on their various asset holdings, including loans and securities such as CLOs, among other things. FR Y-14 data are used to assess the capital adequacy of large companies (generally those with $50 billion or more in assets) to support supervisory stress test models, and in continuous monitoring efforts.

conducted annually and typically evaluate if the institutions have sufficient capital to remain solvent under stressful economic conditions. The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), as amended by the Economic Growth, Regulatory Relief, and Consumer Protection Act, requires the Federal Reserve to conduct an annual stress test (known as a supervisory stress test) of bank holding companies with total consolidated assets of $250 billion or more.[8] The act also requires each of these companies and all other banks with more than $250 billion in total consolidated assets that are supervised by a primary federal financial regulatory agency to conduct their own periodic stress tests (known as a company-run stress test).[9]

As part of the annual supervisory stress tests, regulators stress test banks' direct exposures in the leveraged lending market. The tests stress leveraged loans as a component of commercial and industrial loan commitments, holdings of leveraged loans in the trading and wholesale portfolio, commitments in the syndicated lending pipeline, and CLO securities holdings. The tests also stress any indirect exposures to nonbank financial entities that may participate in the leveraged loan market. Banking regulators stated that they also require banks to stress test leveraged lending exposures as part of the company-run stress tests. These tests are tailored to the risk profile of the bank and its portfolio.[10]

[8]Pub. L. 115-174, § 401, 132 Stat. 1296, 1356 (2018).

[9]The Dodd-Frank Act requires statutory stress tests, known as the Dodd-Frank Act Stress Tests, which consist of supervisory- and company-run stress tests that are based on a banking institution's size and type. The Federal Reserve's stress tests generally evaluate banks' revenues, losses, net income, regulatory capital ratios, and ultimately their capital levels under baseline, adverse, and severely adverse scenarios. They reflect projections of risk-weighted assets and balance sheet and income statement items under the stress scenarios and measure the amount of capital a banking institution has available to cover unexpected losses. In addition, the Federal Reserve also conducts a Comprehensive Capital Analysis and Review, which uses information from the stress tests to assess the capital adequacy (a quantitative assessment) and capital planning processes (a qualitative assessment) for bank holding companies with total consolidated assets of $100 billion or more. The scope of the assessment depends on the size and complexity of the bank holding company.

[10]For the severely adverse scenario of the 2020 supervisory and company-run stress tests, the Federal Reserve, OCC, and FDIC incorporated a global market shock in which the leveraged loan market comes under considerable pressure. The global market shock is a set of hypothetical shocks to a large set of risk factors reflecting general market distress and heightened uncertainty.

- **Capital, leverage, and liquidity requirements.** Federal banking regulators have established minimum capital, leverage, and liquidity requirements to support the credit and liquidity risk exposures of banks.[11] Capital and leverage requirements help covered banks and their bank holding companies mitigate the negative effects of losses from their leveraged loan activities. Banking regulators imposed more stringent capital and leverage requirements that serve as an additional capital buffer on larger, more complex firms. These firms include large, internationally active bank holding companies and global systemically important banks.[12] Similarly, minimum liquidity requirements, such as the liquidity coverage ratio and the liquidity risk management standard, encourage banks to hold high-quality liquid assets.[13] Large banks are generally required to hold sufficient high-quality liquid assets to cover any net cash outflows during times of stress.
- **The Volcker rule.** The Volcker rule is a provision of the Dodd-Frank Act that, among other things, generally prohibits banks from acquiring ownership interest in "covered funds," such as hedge funds and private equity funds, which can include loan securitizations like CLO securities, unless they hold only qualified assets such as loans, cash, or cash equivalents. The rule generally excluded securities, derivatives, and commodity forward contracts from permitted loan securitizations.[14] By restricting a bank's ability to own debt securities of "covered funds," the rule is intended to promote safety and

[11]Federal banking regulators have established an integrated regulatory capital framework by implementing many aspects of the Basel III regulatory capital reforms and the Dodd-Frank Act's prudential reforms. The reforms include implementing a number of minimum risk-based capital and leverage requirements and a capital conservation buffer for banking organizations, including U.S. banks and their holding companies.

[12]Global systemically important banks are banking organizations whose distress or disorderly failure would cause significant disruption to the wider financial system and economy because of their size, complexity, and interconnectedness. In the United States, the Federal Reserve established criteria for identifying a global systemically important bank through a rulemaking in 2015. See 80 Fed. Reg. 49,082 (Aug. 14, 2015).

[13]For example, the liquidity coverage ratio rule generally requires banks to hold sufficient quality liquid assets to fund cash outflows for 30 days. *See* 12 C.F.R. pts. 50 (OCC), 249 (Federal Reserve), and 329 (FDIC). If a mutual fund that has invested in leveraged loan assets were facing redemptions and a bank were to make it a loan, the bank would have to back up the loan with the same amount of high-quality liquid assets to keep the ratio unchanged.

[14]In July 2020, the rule was modified to permit 5 percent of banks' total assets of a qualifying loan securitization, such as CLO securities, to consist of non-loan assets. 85 Fed. Reg. 46,422, 46,4432-33 (July 31, 2020).

soundness of banking entities by limiting proprietary trading activities and investments in or relationships with covered funds.

SEC Oversight of Investment Funds' Leveraged Lending Activities Largely Focuses on Registered Funds

SEC oversees the leveraged lending activities of registered investment funds and investment advisers registered with SEC chiefly through its registration and reporting requirements for these entities and risk-based examinations for compliance with these requirements and other federal securities laws, as applicable. SEC's oversight of investment funds' leveraged lending activities is largely focused on registered funds, which include mutual funds and exchange-traded funds. According to SEC staff, SEC has greater insight into the leveraged lending activities of registered funds than it does into those of investment funds that are exempt from SEC registration, such as private funds, and CLOs and CLO securities, which are also generally exempt from registration. However, advisers to private funds may be subject to SEC registration and reporting requirements. SEC also oversees credit rating agencies and has reviewed activities related to CLO securities and leveraged loan borrowers in prior examinations of credit rating agencies.[15]

Registered Investment Companies

SEC-registered investment companies are generally public investment funds open to all institutional and individual investors in the public. The Investment Company Act of 1940 requires investment companies or funds to register with SEC and disclose information about the funds and their investment objectives, as well as about their structure and operations, unless they are provided an exemption. Registered investment funds must also comply with that act's substantive provisions, including requirements regarding, among other things, leverage limitations, transactions with affiliates, and capital structure. SEC lacks the power to directly supervise the funds' investment decisions or activities or judge the merits of the funds' investments. Registered investment funds include open-end funds, such as mutual funds and exchange-traded funds, and closed-end funds. The investment portfolios

[15]Credit rating agencies that are registered with SEC as Nationally Recognized Statistical Rating Organizations are subject to oversight.

of registered funds are managed by investment advisers that are registered with SEC.[16]

- **Mutual funds** issue and offer shares to investors on a continuous basis. Investors buy their shares from and redeem their shares to the funds themselves at any time from the fund managers at a price based on the net asset value of the fund.[17] Mutual fund shares are not listed on securities exchanges.
- **Exchange-traded funds**, unlike mutual funds, do not sell individual shares directly to, or redeem their individual shares directly from, retail investors. Instead, their shares are traded on securities exchanges and at market prices.
- **Closed-end funds** sell a fixed number of shares at one time (in an initial public offering), after which the shares typically trade on securities exchanges. The price of closed-end fund shares that trade on a securities exchange is determined by the market and may be greater or less than the shares' net asset value. Closed-end funds are not required to buy their shares back from investors upon request.

Registered funds must generally file periodic reports on their securities holdings within certain deadlines. For example, open-end funds must generally report their portfolio holdings as of the end of each month in reports submitted quarterly to SEC and provide information on the liquidity of those holdings. They are also generally required to file annual notices with information about the number and amount of securities sold and redeemed in the past fiscal year.[18] These requirements provide SEC

[16]SEC oversees investment advisers—firms or sole practitioners compensated for advising others about securities investments. The Investment Advisors Act of 1940, as implemented by SEC, generally requires investment advisers who manage $110 million or more in assets (large investment advisers) or advise a registered investment company to register with SEC. The act imposes certain record keeping and reporting requirements about investment advisers' business practices, disciplinary history, services, and fees, as well as a broad fiduciary duty to act in the best interest of their clients. Small and "mid-sized" advisers are generally subject to state regulation and are prohibited from registering with SEC. Most large advisers must register with SEC unless an exemption is available, and state adviser laws are preempted for these advisers.

[17]The net asset value of an entity is the value of an entity's assets minus the value of its liabilities, which represents the value of its total equity. Mutual funds calculate their share price by dividing their net asset value by the number of shares outstanding at the end of each trading day.

[18]Among other filing requirements, qualified funds report their securities sales annually on Form 24F-2 and their shareholder report of registered management investment companies on Form N-CSR.

information on open-end fund exposures to specific CLO securities and leveraged loans, but not to transactions for specific CLO securities. In addition, SEC has access to additional information on CLO structure and CLO security ratings from other sources.[19]

Open-end funds, such as mutual funds and exchange-traded funds that invest in leveraged loans, are exposed to liquidity risk as a result of the potential mismatch between the liquidity of assets and the funds' liabilities. Mutual funds that invest in leveraged loans and to a lesser extent CLO securities must be ready to redeem investor shares on a daily basis as promised. If the mutual fund does not have other means to meet a redemption request, during times of stress the fund may have to sell less liquid assets into a market of declining prices.[20] To promote effective liquidity risk management and reduce the risk that funds will be unable to meet redemption requests, SEC rules require them to generally maintain a minimum amount of highly liquid assets to be able to satisfy short-term redemption requests as well as limit their investments in illiquid assets.[21] SEC also requires funds to implement a liquidity risk management program that considers a number of factors that affect a fund's ability to satisfy redemption requests under normal and foreseeable stressed conditions. In contrast, closed-end funds are not subject to the same liquidity risks because the funds themselves do not redeem shares daily with investors. Closed-end fund investors who want to redeem their shares must generally do so in the secondary market (i.e., in the securities exchange where the closed-end fund is listed) and at the market price.

SEC staff said that as part of their risk-based examination approach to selecting examination candidates and scope areas, examination efforts associated with registered funds are typically tailored to address funds'

[19]According to SEC staff, for information on CLO tranche holdings, SEC used data from Datascope and Moody's Investors Service, which provide data on rated CLO tranches.

[20]An illiquid security is generally considered to be a security that the fund reasonably expects cannot be sold or disposed of in current market conditions in 7 calendar days or less without the sale or disposition significantly changing the market value of the investment.

[21]SEC rules generally limit an open-end fund's aggregate holdings of illiquid assets to no more than 15 percent of the fund's net assets. Funds are required to report to their board of directors within 1 business day if they exceed the 15 percent illiquid asset limit or if their highly liquid investments fall below their highly liquid investment minimum.

business practices, risks, and conflicts of interest.[22] They noted that examinations generally focus on whether the fund has made appropriate disclosures to investors related to investment assets, risks, and investment strategy. In addition, SEC staff may also assess the fund's oversight and governance practices.[23] While the examinations have not specifically focused on leveraged lending, consistent with SEC's risk-based approach, examinations may consider the holdings of a fund, including leveraged loans, which may affect a fund's liquidity profile. SEC staff noted that for the past few years, they have focused examination efforts on risks associated with certain mutual funds and exchange-traded funds, including, among other things, funds' liquidity risks, as well as funds' risk identification, monitoring, and mitigation. SEC staff added that SEC regularly monitors fund exposures to CLOs and leveraged loans, as well as funds' liquidity classifications, reviews fund disclosures and issues comments relating to fund investments in these instruments and related risks, and considers the policy implications of fund exposures.

Unregistered Funds

Relative to public funds, unregistered funds, often referred to as private funds, face fewer regulatory restrictions concerning their governance and operations, and they are subject to more investor access restrictions.[24] Private funds—including hedge, private equity, and private debt funds—have restricted ownership and are available to only a small number of investors or certain qualified institutional and individual investors.[25] Private funds are exempt from registration as investment companies and are not required to make the same public disclosures. They are also not required to report their individual portfolio holdings to SEC. However, SEC has some insight into certain private funds' exposures to leveraged

[22]SEC's examination program uses a risk-based approach that focuses its resources on selecting higher-risk registrants and selected areas of focus.

[23]SEC can bring enforcement actions for violations of securities laws. For example, SEC's Complex Financial Instruments unit investigates entities for violations arising from the ratings, sale, usage, or valuation of complex financial instruments, including CLOs. SEC staff identified several recent enforcement matters related to the leveraged lending market, which resulted in penalties and cease-and-desist orders from violations of the federal securities laws or otherwise operations that have harmed investors.

[24]Private funds are pooled investment vehicles that are excluded from the definition of an investment company under the Investment Company Act of 1940 by section 3(c)(1) or 3(c)(7) of that act. The term private fund generally includes funds commonly known as hedge funds and private equity funds.

[25]These institutional and individual investors generally are more sophisticated clients with higher net worth who are typically better positioned to understand and tolerate risks.

lending via SEC-registered advisers' required reporting on Form PF.[26] Specifically, large hedge fund advisers—advisers to hedge funds with more than $1.5 billion in assets under management—are required to register with SEC and report on their advised funds' aggregate exposures, including leveraged loans and a combined category of CLOs and other kinds of asset-backed securities.[27] SEC and Office of Financial Research (OFR) staff noted that they have also used Form PF filings to study private debt fund lending to leveraged borrowers.[28]

SEC staff said that as part of their risk-based process in selecting examination candidates and examination focus areas, they examine registered investment advisers to private funds for compliance with applicable federal securities laws.[29] SEC staff added that examinations of advisers to private funds typically assess compliance risks, including controls to prevent the misuse of material, nonpublic information, and conflicts of interest, such as inadequately disclosed fees and expenses and the use of adviser affiliates to provide services to clients.

SEC staff said they can gain some insight into the leveraged lending activities of certain business development companies through review of public filings of shareholder reports. Business development companies are closed-end investment companies established by Congress that are not required to register with SEC under the Investment Company Act of 1940 but are subject to certain substantive regulations under the act. However, according to SEC staff, these companies often register their securities and those sold to the public with SEC. Public business

[26]SEC adopted Form PF in 2011 in part to obtain, on behalf of the Financial Stability Oversight Council (FSOC), data that FSOC can use to monitor systemic risk in the U.S. financial markets. As required by statute, Form PF was designed by SEC in consultation with FSOC and provides SEC and FSOC with information about the operations and investment allocations of registered investment advisers.

[27]Large private equity fund advisers—advisers to private funds with more than $2 billion in assets under management—are also required to register with SEC and report certain information about their advised funds on Form PF. However, Form PF does not require them to disclose exposures related to leveraged lending.

[28]Form PF does not require specific disclosures for advisers to private debt. OFR officials noted that they have matched self-identified private debt funds from a private vendor database to private funds advised by investment advisers who are required to file Form PF.

[29]SEC has examination authority over advisers to private funds pursuant to section 204 of the Investment Advisers Act of 1940 and over business development companies pursuant to sections 31 and 32 of the Investment Company Act of 1940.

development companies are required to file periodic reports, which contain information on their lending activities such as investment allocations in different asset classes and the terms of their loans. By statute, business development companies are also subject to limits on their leverage and certain restrictions on their capital structure.

Collateralized Loan Obligations and CLO Securities

SEC has limited oversight of CLOs, as they are generally exempt from SEC registration as investment companies, although CLO managers are required to register with SEC as investment advisers if they cannot rely on any of the exemptions from registration. Further, according to SEC staff, CLO securities are generally offered and sold under an exemption from registration under the Securities Act of 1933, and therefore the related CLO offering materials are not required to be filed with SEC nor reviewed by SEC staff.[30] In April 2018, the Court of Appeals for the District of Columbia held that SEC and the Federal Reserve lacked the authority to apply the credit risk retention rule to open-market CLO managers.[31] This rule generally requires the securitizer of asset-backed securities to retain at least 5 percent of the credit risk of the assets collateralizing those securities.[32]

Credit Rating Agencies

In its oversight of credit rating agencies that are Nationally Recognized Statistical Rating Organizations, SEC assesses the extent to which they conduct business in accordance with policies, procedures, and rating methodologies. To this end, SEC reviews credit rating agencies' internal controls, among other things, as required by statute, but it is prohibited

[30]The Securities Act of 1933 generally requires registration of securities offered to the public for sale and disclosure of financial and other significant information. It also prohibits deceit, misrepresentations, and other fraud in the sale of securities.

[31]The Loan Syndications and Trading Ass'n v. SEC, 882 F.3d 220 (D.C.Cir. 2018). The Court held that managers of open-market CLOs are not "securitizers" within the meaning of section 15G of the Securities Exchange Act of 1934 and thus, they cannot be required to retain a portion of the credit risk of those assets. In contrast to balance sheet CLOs that securitize loans already held by a single institution or its affiliates in portfolio, open-market CLOs securitize assets purchased on the secondary market, in accordance with investment guidelines.

[32]See 79 Fed. Reg. 77,602 (Dec. 24, 2014). By requiring that a securitizer retain a portion of the credit risk of the securitized assets, the rule is intended to provide securitizers an incentive to monitor and control the quality of the securitized assets underlying a securitization transaction and thus help align the interests of the securitizer with the interests of investors.

from regulating the rating methodology itself.[33] According to SEC staff, SEC has reviewed credit rating agencies' activities related to CLO securities and leveraged loan borrowers in prior examinations of these agencies. For example, in 2018 SEC reviewed credit rating agencies' sufficiency of staffing and training to handle the substantial increase in CLO security activity, including the sufficiency of surveillance activity.

State Insurance Supervisory Activities and Regulatory Requirements Encompass Leveraged Lending-Related Investments

Insurance companies may invest in leveraged loans and CLOs and may therefore be exposed to their associated risks. According to National Association of Insurance Commissioners (NAIC) staff, state insurance regulators' general supervisory activities and regulatory requirements may help mitigate these risks. Examples they noted included state statutes that require insurers to meet certain minimum capital and financial reporting requirements and that authorize regulators to examine insurers, including performing stress tests, and take other actions to protect policyholders against excessive risk of insurer insolvency.[34] NAIC staff also noted that states have investment laws that are general in nature and serve to limit the percentage an insurance company can hold in any one entity to collectively foster diversification in investment portfolios. State regulators may also assess the appropriateness of a company's investment planning and investment strategy, given the company's complexity, its expertise, and the scope of its operations. Other regulatory requirements that NAIC staff said may help mitigate credit and liquidity risks from leveraged lending include minimum capital requirements and asset-liability matching requirements.

[33]Section 15E(c)(2) of the Securities Exchange Act of 1934 provides that SEC may not "regulate the substance of credit ratings or the procedures and methodologies by which any nationally recognized statistical rating organization determines credit ratings." 15 U.S.C. § 78o-7(c)(2).

[34]NAIC has developed a Risk-Based Capital for Insurers Model Act. According to NAIC, most U.S. insurance jurisdictions have adopted statutes, regulations, or bulletins that are substantially similar to this model law as enactment of this model law is required for a state to be accredited by NAIC. Under risk-based capital standards, insurers with a higher amount of risk are required to hold a higher amount of capital. According to NAIC, generally the risk-based capital formulas focus on risk related to (1) assets held by an insurer, (2) insurance policies written by the insurer, and (3) other factors affecting the insurer. According to NAIC officials, the model act addresses, among other things, asset credit quality for life and property/casualty insurance companies. Under the model act, when an insurer's capital falls below a certain level, state insurance regulators are required to instigate corrective regulatory actions, which may include liquidation of the company and seizure of the insurer's assets in the most severe cases.

NAIC collects information that it uses to gain insights about insurance companies' leveraged lending activities. NAIC staff said that all insurance companies operating in more than one state are required to file annual reports with NAIC that include information on security holdings. NAIC staff said they can generally identify CLO security assets by tranche using these data. Additionally, they noted that since 2018 insurance companies have been required to flag bank loans, including leveraged loans, in their annual filings. Using these data, NAIC published reports on insurance industry exposure to CLO securities in 2018 and 2019. As part of these studies, NAIC also conducted stress tests on insurance companies' CLO security assets on behalf of the state regulators for the insurance companies under their jurisdiction.

NAIC staff told us that their Capital Markets Bureau reports to state regulators when it identifies concentrated exposures within the industry, including leveraged loan concentrations.[35] NAIC also addresses emerging issues with the states through its Financial Analysis Working Group, which includes representatives from 18 states and looks at potentially troubled companies or market trends.[36] For example, NAIC staff stated that in prior reviews they identified several insurers with concentrations of leveraged loans and CLO securities. They said they sent inquiries through the working group to the relevant state regulators and received information that allowed them to more closely monitor these insurers and better understand how they are managing the risk.[37]

[35]NAIC's Capital Markets Bureau monitors developments in the capital markets globally and analyzes their potential impact on the investment portfolios of U.S. insurance companies.

[36]The Financial Analysis Working Group's mission is to identify nationally significant insurers that exhibit characteristics of trending toward financial trouble; interact with relevant regulators and lead states in order to assist and advise on appropriate regulatory strategies, methods, and actions; and encourage, promote, and support coordinated, multistate efforts in addressing solvency issues.

[37]According to NAIC, financial surveillance of insurance companies is predominately built around an extensive and uniform financial reporting system that allows for detailed analysis of asset holdings, reinsurance, and reserves, among other things. Using an extensive centralized database, regulators can perform stress tests on companies, determine the impact of other company insolvencies on the market, find anomalies from one company to another through benchmarking and other processes, and look for new risk concentrations or optimistically valued risks.

Appendix III: Comments from the Department of the Treasury

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C.

December 1, 2020

Michael E. Clements
Director, Financial Markets and Community Investment
Government Accountability Office
441 G St., NW
Washington, DC 20548

Dear Mr. Clements:

I am writing on behalf of Secretary Mnuchin, who serves as the Chairperson of the Financial Stability Oversight Council (Council or FSOC). We appreciate the opportunity to review the Government Accountability Office's (GAO) draft report entitled *Financial Stability: Agencies Have Not Found Leveraged Lending to Significantly Threaten Stability but Remain Cautious Amid Pandemic* (GAO-21-167) (Draft Report).

The Council's activities-based approach (ABA) is a robust and effective method for identifying, monitoring, and responding to potential risks, such as those related to leveraged lending activities. As described in the Draft Report, the Council's annual report and Systemic Risk Committee (SRC) play important roles in the implementation of the ABA. The annual report has identified vulnerabilities related to leveraged lending for several years and has included recommendations for Council member agencies to continue to monitor and evaluate the risks in this market. The SRC has been the forum for numerous staff-level presentations and discussions related to leveraged lending and other aspects of nonfinancial corporate credit. As a result of these efforts, federal and state regulators were well informed regarding the potential risks of leveraged lending activities and were better able to assess market developments in this sector following the economic shock from the COVID-19 pandemic.

The Draft Report recommends that the Secretary of the Treasury, in consultation with FSOC members, incorporate scenario-based tools, such as tabletop or other simulation exercises, into the Council's current risk-monitoring processes to evaluate capabilities for responding to crises. FSOC consists of individuals who lead federal and state financial regulatory agencies, and FSOC often leverages the work and expertise of its member agencies in order to avoid unnecessary overlap or duplication of efforts. Consistent with this approach, a number of financial regulators organize tabletop exercises, and FSOC staff regularly participate in those activities. Where FSOC has found it appropriate to engage in additional activities beyond those of its individual member agencies, it regularly does so, including by generating rigorous analyses for interagency discussion.

FSOC's processes for monitoring leveraged lending activities are carefully tailored and appropriately calibrated to the potential risk. The Council's perspective is informed by its long-term evaluation of relevant sectors of the financial system, and benefits from the resources and

expertise of all of the Council member agencies. If the Council determines that further analysis or action is needed, it will act, as appropriate.

Thank you again for the opportunity to review and comment on the Draft Report. We value GAO's input and look forward to continuing our constructive engagement with you.

Sincerely,

/s/ Howard B. Adler

Howard B. Adler
Deputy Assistant Secretary for the Council

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, Stefanie Jonkman (Assistant Director), Silvia Arbelaez-Ellis (Analyst in Charge), Gergana Danailova-Trainor, M'Baye Diagne, Risto Laboski, Courtney LaFountain, Marc Molino, Jennifer Schwartz, Tyler Spunaugle, and Farrah Stone made key contributions to this report.