Chairman Himes, Ranking Member Barr, and members of the Subcommittee, thank you for inviting me to testify at this hearing. My name is June Rhee. For the past six years, I have been researching at the Yale Program on Financial Stability (YPFS) on interventions used by the government and central banks in response to financial crises around the world. The focus of my research has been on market liquidity and capital injection programs. I also instruct a course on financial regulations relating to financial stability and serve as a director for a specialized master’s program at Yale School of Management focused on training junior and mid-level employees of central banks and other regulatory agencies with a financial stability mandate. The mission of YPFS is to create, disseminate and preserve knowledge about financial crises. YPFS commits to maintain neutrality and objectivity, and to make all its works, including data and research, publicly available.

In these remarks, I will focus on my research in market liquidity programs by the Federal Reserve (Fed) during the global financial crisis (GFC) and the COVID-19 pandemic based on the paper I co-authored and published in 2020 and a forthcoming working paper on post-GFC facilities. We define market liquidity programs as interventions for which the key motivation is to stabilize liquidity in a specific wholesale funding market that is under stress. These include various Fed facilities during the GFC, including the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), Commercial Paper Funding Facility (CPFF), Money Market Investor Funding Facility (MMIFF), Primary Dealer Credit Facility (PDCF), Term Asset-Backed Securities Loan Facility (TALF) and Term Securities Lending Facility (TSLF). The Fed relied on its emergency power under Section 13(3) of the Federal Reserve Act to construct these facilities.

I will start by highlighting some challenges the Fed faced during the GFC in constructing these lending facilities. Next, I will discuss post-GFC changes in the Fed’s authorities to construct similar lending facilities and how this affected the Fed’s response during the COVID-19 pandemic. Finally, I will discuss post-COVID 19 pandemic changes that may affect future efforts to introduce similar Fed lending facilities.

**Fed’s 13(3) Authority in GFC-era Market Liquidity Programs**

The Fed is not allowed to extend loans to nonbanks in normal times, and its power to purchase market instruments is limited. Therefore, the Fed relied on its authority under Section 13(3) of the Federal Reserve Act to lend to nonbanks in “unusual and exigent circumstances.” In some cases, the Fed lent to nonbanks to enable those organizations to purchase assets on the open market.² For example, in the AMLF, the Fed lent cash to primary dealers so that they could purchase asset-backed commercial paper from money market mutual funds.

The Fed also created special-purpose vehicles, or SPVs, to purchase specific instruments and lent money to them using its emergency authority. The SPVs in turn purchased assets to help restore liquidity in troubled markets. These assets served as collateral for the Fed’s loans to the SPVs. The Fed used SPVs to deal in securities that it did not normally handle and with entities that it did not normally lend to. For example, in the CPFF, the CPFF LLC, an SPV, purchased A-1/P-1/F-1-rated commercial paper directly from eligible issuers, including nonfinancial companies. The CPFF LLC received loans from the Federal Reserve Bank of New York for that purpose and these loans were secured by the commercial paper that the CPFF LLC acquired.

Lending under Section 13(3) requires the Fed to be secured to its satisfaction. The Fed has taken a variety of paths to make sure it is secured to its satisfaction. In the CPFF, the Fed secured itself to its satisfaction by requiring borrowers to pay fees, which, in aggregate, functioned as loss reserves. In the MMIFF, which the Fed established to support money market funds facing extraordinary redemptions, the Fed secured itself to its satisfaction by requiring money market funds or other investors that elected to sell assets to the SPV to then purchase subordinated debt issued by the SPV equivalent to 10% of the value of the assets they sold. This facility was never utilized, however.

It is relevant to note that, of all the Fed’s lending facilities established under Section 13(3) during the GFC, only the TALF received credit protection from the Treasury to ensure that it was ensured to its satisfaction. In contrast, Treasury protection was a distinct feature of the lending facilities

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² At the time of the GFC, the European Central Bank, Bank of Japan, and Bank of England faced few constraints limiting their market liquidity programs. They lent to a broad range of private actors and made outright purchases on the open market. After the crisis, the Financial Services Act 2012 clarified the Bank of England’s responsibility for crisis management but required the Bank to seek cooperation from Her Majesty’s Treasury if a liquidity program could put public funds at risk.
the Fed created in response to the COVID-19 pandemic, as I will discuss in more detail. None of the Fed facilities set up during the GFC or the pandemic crisis suffered losses.

In part because the Fed’s indirect asset purchase programs were more complex than the direct asset-purchase programs implemented by other central banks, some of these programs (for example, the MMIFF, TALF, PPIP) took more than one month to get off the ground. The ability to roll out a program quickly can provide benefits in some cases, serving as a bridge as other programs are put together. For example, the AMLF and the Treasury’s money market fund guarantee were both announced on September 19, 2008. The AMLF, in which the Federal Reserve Bank of Boston made loans to depository institutions to purchase certain asset-backed commercial paper from money market mutual funds, was rolled out the very next business day because it used existing arrangements through the discount window. But the Treasury guarantee did not go into effect until September 29. During the week of September 22, as some money market mutual funds continued to experience significant redemptions, AMLF usage jumped to more than $150 billion. Fed economists concluded that the Fed’s program had “provided substantial liquidity to MMFs at a critical moment.”3 Similarly, banks that borrowed from the CPFF when it was launched on October 27—as much as $15 billion by Bank of America Corporation alone—soon replaced those borrowings with longer-term debt, once the Federal Deposit Insurance Corporation’s Temporary Liquidity Guarantee Program, which guaranteed newly issued debt at far longer maturities, was under way.4

Fed economists involved in constructing some of the Fed’s market liquidity programs—including lending programs like TSLF and PDCF and the later indirect asset purchase programs—have said that, in hindsight, earlier rollout might would have made them more effective. “In retrospect … we think that earlier introduction of broader programs and in some cases, in larger initial size could have been more effective. The programs were not approved and implemented until it was abundantly clear that runs were seriously impairing the ability of the financial institutions affected to meet the credit needs of the economy.”5

Ultimately, however, whether an intervention was indirect or direct does not seem to have had much influence on its effectiveness.

**Post-GFC Reforms of Fed’s 13(3) Authority**

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Following the GFC, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 added some restrictions to Section 13(3). Under the revised law, the Fed retains the ability to conduct market-wide liquidity programs, but it now must obtain the Treasury secretary’s approval before establishing such a program. Also, it is required to report to Congress detailed transaction-level information on any loan extended under a Section 13(3) program within seven days. Some observers had raised the concern that this reporting requirement will disincentivize financial institutions from participating in future 13(3) programs because of the perceived stigma. Now that we have had a round of 13(3) facilities under this new regime, it may be worth surveying whether Congress released this information to anyone and the perception around these reports among participants of these facilities.

**Brief Overview on Evaluating GFC-era Market Liquidity Programs**

Post-GFC evaluations of market liquidity programs, typically conducted by central bank staff, have measured success in various ways: 1) Was the program used sufficiently? 2) Was the program introduced expeditiously? 3) Was price discovery restored? 4) Did market volumes recover relatively quickly? 5) Was credit restored to the real economy? To be sure, all of these criteria are not appropriate for evaluating all market liquidity programs. For example, recovery of market volumes is not necessarily a fair measure of the success of a program like the AMLF, which successfully helped money market funds dispose of their CP but could not address the market’s aversion to CP during the crisis. It helped the funds, but not the issuers of CP. Policymakers then introduced the CPFF to temporarily create a market for commercial paper until market conditions recovered. Moreover, post-crisis studies emphasize the difficulty of isolating the independent effects of these facilities. They are often part of larger policy packages and, as their launches typically coincide with the worst of a crisis, the aftermath may coincide with a broader recovery. For example, a study suggests that it is hard to determine the role of PDCF in alleviating liquidity constraints for primary dealers as the Fed had TSLF running at the same time.6

**COVID-19 Pandemic and Market Liquidity Programs**

Disruptions caused by the COVID-19 pandemic again drove the Fed to open market liquidity programs, some like GFC-era ones and some new ones, using Section 13(3) authority. Armed with know-how from the GFC, the Fed was able to quickly reintroduce four GFC-era market liquidity programs: the CPFF, PDCF, MMLF, and TALF. It also introduced new programs authorized by Congress with the passage of the Coronavirus Aid, Relief, and Economic Security (CARES) Act: the Corporate Credit Facility (CCF), Main Street Lending Program (MSLP), Municipal Liquidity Facility (MLF), and Paycheck Protection Program Liquidity Facility (PPPLF). For the reopened

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facilities, much of the design was the same as their GFC-era counterparts. However, unlike GFC-era facilities, most COVID-19-era facilities received Treasury’s credit protection.

Among the COVID-19-era facilities, all except the PDCF and PPPLF received Treasury’s support using the Exchange Stabilization Fund (ESF). CPFF and MMLF were each backed by $10 billion in equity support that the Treasury agreed to provide prior to the passage of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The rest, TALF, CCF, MSLP and MLF, were backed by $195 billion committed by the Treasury under the CARES Act. On November 19, 2020, however, Treasury Secretary Steven Mnuchin sent a letter to Fed Chair Jerome Powell stating that he would not extend the four remaining lending facilities that used funds from the CARES Act after December 31, 2020. He asked the Fed to return the Treasury’s unused funds for those facilities. On the same day, the Fed released a public response to Mnuchin stating it would “prefer that the full suite of emergency facilities established during the coronavirus pandemic continue to serve their important role as a backstop for our still-strained and vulnerable economy.” The next day, though, Chair Powell confirmed the Fed would return the unused portions of the funds allocated to the CARES Act facilities as Mnuchin had requested.

**Post-COVID Reforms and Future**

The Consolidated Appropriations Act, 2021 signed into law on December 27, 2020, definitively closed the CARES Act Fed facilities and rescinded funds “not needed to meet the commitments, as of January 9, 2021, of the programs and facilities established.” The Act preserved the Fed’s authority under Section 13(3).

However, the Act removed the Treasury’s authority to use ESF funds to support a Fed facility that is “the same as” the MLF, CCF, or MSLP. The Act made an exception for TALF. How broadly the Treasury will interpret the “same as” language in the future remains an open question. Therefore, if the Fed wanted to create a lending facility that falls within the scope of the Act in the future, it may have to find other ways to secure the loans to its satisfaction. The Treasury may not be able to assist the Fed in meeting that standard with ESF funds. As discussed above, the Fed has experience in constructing facilities where it deems itself sufficiently secured without receiving any credit protection from the Treasury and instead using other risk-management techniques. But there may be some need for the Treasury to support a future lending facilities. The MMLF accepted a much broader range of eligible collateral than the AMLF, its GFC-era counterpart—it included unsecured commercial paper and municipal securities, while the AMLF only accepted highly rated asset-backed commercial paper. Of course, all Fed lending facilities under Section 13(3) will continue to require the Treasury secretary’s approval.

Under the Act, the Treasury can still provide equity protection to Section 13(3) lending facilities using non-CARES Act ESF funds, as it did for the CPFF and MMLF, as long as the facilities are

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7 Fed Programs GFC & COVID-19, Yale Program on Financial Stability
not “the same as” the MLF, CCF, or MSLP. Approximately $75 billion, as of December 2020, remained in the ESF that the Treasury can use for this purpose, providing some flexibility for the Treasury and the Fed to set up such structures as they deem necessary. This concludes my remarks. Thank you and I welcome all questions.