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Liquidity Facilities: Purposes and Functions

Remarks by

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Thank you, President Bostic, for that kind introduction and for the opportunity to talk to this group today.¹ I am delighted to be here, and I look forward to discussions at this important conference.

The theme of today's conference is developments in financial intermediation and potential implications for monetary policy. As this conference embarks on a larger discussion of the role of banks and nonbanks in various market segments—including credit markets, Treasury and money markets, and payments—I believe it is worth taking a step back to explore an important background factor, which is how and why central banks provide liquidity.

The provision of liquidity by central banks is a foundational element of financial intermediation. Central banks should be able to provide liquidity effectively for the financial system to function smoothly. Today, I will take this opportunity to discuss some aspects of liquidity provision by the central banks. Of course, the main forms of liquidity provided by central banks—namely, currency and bank reserves—are the foundation of safe liquidity in the economy. It is vital for a central bank to make clear that it stands ready to provide liquidity should stress emerge. But a central bank must also take steps to minimize moral hazard. “Moral hazard” in this context refers to the concern that publicly provided liquidity might encourage private financial institutions to take on excessive risk.

What I would like to focus on in this speech are two types of liquidity provision that aim to reduce the frictions associated with the basic operations of banks. The first type of liquidity is intraday credit, which is key in handling payment system frictions

¹ The views expressed here are my own and are not necessarily those of my colleagues on the Federal Reserve Board or the Federal Open Market Committee.

during the day, and the second one is overnight credit, which deals with a range of frictions.² I will also highlight some design features of broadly similar liquidity facilities in three other advanced economies: the U.K., Japan, and the euro area. I believe it is valuable to look at other central banks' experiences with liquidity provision, which entails recognizing the important differences that exist across jurisdictions and mandates and considering what lessons can be learned.

At their core, liquidity facilities support the smooth operation and stability of the banking system, the effective implementation of monetary policy, and the furtherance of a safe and efficient payment system. This activity in turn supports the flow of credit to businesses and households. Last year, the Federal Reserve Board issued a public request for information (RFI) seeking to identify operational frictions in these facilities, and those comments are under review. I hope that today's discussion about how facilities operate in the U.S. and around the globe can further that dialogue among participants at this conference.

How It Works in the U.S.

Let me start by discussing how liquidity provisions work in the U.S., as summarized in slide 3. Banks maintain deposit accounts at the Federal Reserve (Fed). The balances in these accounts, known as reserves, are the most liquid assets that banks have and are used to meet payment flows as households and business customers of banks carry out their regular business. Banks often experience mismatches in the timing of payment inflows and outflows, which could occasionally cause the balance in a bank's

² I refer to primary credit lending as overnight lending for simplicity even though banks are able to borrow for maturities of up to three months. The vast majority of primary credit lending is overnight. See Jefferson (2024a) and (2024b) for a summary of the evolution of the discount window.

account at the Fed to become negative. To help institutions manage this mismatch and promote the smooth functioning of the payment system, the Fed extends intraday credit, also known as daylight overdrafts.

Intraday credit facilities provide temporary credit to depository institutions such as commercial banks and credit unions to foster the smooth functioning of the payment system. If a bank temporarily lacks the funds to process payments, it can use intraday credit to avoid delaying payments until it has sufficient liquidity. The Fed provides intraday credit on both a collateralized and an uncollateralized basis. Collateralized intraday credit is provided free of charge, whereas uncollateralized credit incurs a fee. Since this type of credit is provided on an intraday basis, the Fed expects banks to have positive balances in their accounts by the end of the operational day. If a bank has a negative balance at the end of day, it incurs an overnight overdraft and pays a penalty.

The Fed also provides overnight credit through the discount window to approved counterparties against a broad range of collateral. This type of liquidity provision is designed to mitigate short-term misallocations of liquidity. For example, a bank may need to settle a large payment at the end of the day, but it may temporarily have insufficient funds in its account to do so. To meet the payment obligation, the bank could borrow in private interbank markets—in which financial institutions lend funds to each other on a short-term basis—or from the central bank. The rate on overnight credit also helps central banks with monetary policy implementation. In addition, overnight liquidity facilities often serve as a first line of defense against stresses, and they stand ready to provide liquidity when institutions face outflows.

All discount window loans are collateralized, and a wide range of bank assets, including a variety of loans and securities, are eligible to serve as collateral.³ The Fed operates three separate facilities under the discount window: primary credit, secondary credit, and seasonal credit.

The first one, primary credit, is available to generally sound banks at a rate that is currently set at the top of the target range for the federal funds rate. Providing liquidity at this rate supports the implementation of monetary policy because institutions can turn to the Fed if conditions tighten in money markets that might otherwise push overnight money market rates above levels that would be consistent with the Fed's target range. As I noted earlier, primary credit also helps deal with idiosyncratic funding challenges that banks might be experiencing. Most of the funding provided is on an overnight basis; however, funding is available for up to 90 days.

The next one, secondary credit, is available to banks that are not sufficiently healthy to have access to primary credit. It is available at a higher rate, features higher haircuts on collateral, and is limited to overnight credit.⁴

³ Examples of assets that may serve as collateral include, but are not limited to, U.S. Treasury securities, investment-grade corporate bonds, U.S. government agency-backed mortgage securities, commercial and industrial loans, commercial real estate loans, agricultural loans secured by farmland, one- to four-family mortgage loans, and auto loans. For more detail on assets that may serve as collateral, please see Federal Reserve Banks (n.d.), "Collateral Eligibility – Securities and Loans," Discount Window Direct, https://www.frbdiscountwindow.org/pages/collateral/collateral_eligibility.

⁴ The Fed lends less than the fair market value of the collateral provided to manage the credit risk associated with its lending operations. For example, if a bank needs a loan of \$100, a portfolio of securities valued at \$200 may be required to be posted if the discount or haircut associated with that portfolio is 50 percent. The difference between the amount that the Fed will lend on a particular asset and the fair market value of that asset reflects the haircut, or margin. These haircuts differ, for instance, with the historical price volatility and credit risk associated with the asset. Information on the haircuts for different assets may be found at Federal Reserve Banks (n.d.), "Collateral Valuation," Discount Window Direct, https://www.frbdiscountwindow.org/pages/collateral/collateral_valuation.

The third facility, seasonal credit, provides short-term liquidity to smaller institutions that experience sizable seasonal fluctuations in their balance sheets.

Typically, these are banks located in agricultural or tourist areas.

Short-Term Credit Provision across Jurisdictions

Looking at central banks' experiences across jurisdictions provides useful insights about different approaches to providing liquidity.⁵ Central banks choose a combination of interest rates, collateral requirements, collateral valuation practices, and other design features to encourage usage of facilities while minimizing undesired consequences—in particular, moral hazard. For example, a central bank facility that provides liquidity at an attractive interest rate could be very effective in ensuring that shocks to the financial system do not disrupt the flow of credit but may potentially increase moral hazard. If that facility only accepted a narrow set of high-quality collateral, however, then the moral hazard associated with it could be reduced. Alternatively, the usage of a facility that charges an interest rate above the market rate (a so-called penalty rate) is likely limited, but if the facility accepted a broad range of collateral, usage can be encouraged.⁶ In these two examples, the counterbalancing choices are with respect to the interest rate charged and the eligible collateral. Different central banks might prefer one approach over the other depending on specific aspects of their frameworks and banking systems.

Of course, there are challenges in comparing liquidity facilities across jurisdictions given important differences with respect to central banks' legal authorities,

⁵ See Arseneau and others (2025).

⁶ A penalty rate in the Board's emergency lending regulation is defined as a rate that is higher than the market rate in normal circumstances, affords liquidity in unusual and exigent circumstances, and encourages repayment of the credit and discourages use of the program or facility as the unusual and exigent circumstances that motivated the program or facility recede and economic conditions normalize. See Regulation A—Extensions of Credit by Federal Reserve Banks, 12 CFR pt. 201.4(d)(7) (2024).

monetary policy frameworks, the size of the economy and financial sector, and institutional structures. This divergence is also true across the four advanced economies that I will consider today: the U.S., the U.K., Japan, and the euro area. There can be large differences in each jurisdiction's banking sector and central bank balance sheets relative to the size of their economies, highlighting the need to use caution when comparing aspects of their liquidity provision.

With that caveat in mind, let's look at the design features of some foreign central bank liquidity facilities that are fairly similar to the Fed's discount window. As shown in figure 1, the Bank of England (BOE) operates two such short-term facilities: an operational standing facility and a discount window. The operational standing facility features lower rates but restricts acceptable collateral to high-quality, highly liquid sovereign debt. The discount window facility accepts a broader range of collateral but charges a higher rate.

Which facility an eligible borrower turns to in the U.K. depends on the sorts of collateral that are being pledged. In the U.S., whether an institution has access to primary or secondary credit depends on the condition of the borrower. The BOE monitors borrower conditions, and the Fed also sets haircuts on collateral based on asset riskiness. The differences in design considerations could influence how eligible borrowers integrate these facilities into their regular liquidity management practices.

The Bank of Japan (BOJ) has two facilities: one that provides overnight loans and another that provides somewhat longer-term funding up to three months. Because the BOJ has been operating a system with a very large supply of reserves for some time, its lending facilities tend not to be used extensively, other than in stress periods.

The European Central Bank (ECB) operates a marginal lending facility quite similar to the Fed's discount window. It can meet the idiosyncratic funding needs of individual banks and serves as a ceiling on interbank rates and thus helps the ECB implement monetary policy. This facility is an important element of the ECB framework even though the ECB's approach to monetary policy implementation involves providing the banking system with a sizable amount of reserves through weekly (repo) lending operations.⁷

The international differences show that central banks can accomplish their objectives using facilities with quite different designs. As I noted earlier, one of the vital purposes of a short-term liquidity facility is to be able to provide support to the banking systems during stress. The Fed, the BOE, the BOJ, and the ECB have been able to do so. Figure 2 shows short-term credit provision over time for the four central banks: the BOJ, the green line; the Fed, the black line; the ECB, the blue line; and the BOE, the red line.⁸ Each line is the monthly short-term credit outstanding as a share of central bank assets in 2019. This figure illustrates a few important points.

First, at most times, use of the short-term central bank liquidity facilities is modest. Second, central bank provision of short-term liquidity can increase very rapidly during times of stress.⁹ For example, the Fed and the ECB provided substantial short-term liquidity during the 2007–09 financial crisis. Third, the figure also illustrates that stress is not always global in nature and peak usage does not necessarily coincide. For

⁷ See Isabel Schnabel (2024), "The Eurosystem's Operational Framework," speech delivered at the Money Market Contact Group meeting, Frankfurt, Germany, March 14, <https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp240314~8b609de772.en.html>.

⁸ Values in figure 2 represent the marginal lending facility for the euro area, the complementary lending facility for Japan, the operational standing lending facility for the U.K., and primary credit for the U.S.

⁹ See Jefferson (2024a) for a longer historical perspective on the Fed's liquidity provision over time.

instance, short-term liquidity provision rose in the euro area during the European sovereign debt crisis that began in late 2009 and peaked in 2012, but it did not increase much in the U.S. Similarly, short-term liquidity provision increased in the U.S. during the March 2023 banking stress episode, but it did not increase in the euro area. I also want to highlight that during stress events, central banks complement their regular short-term standing liquidity facilities with other facilities. Therefore, stress events may not necessarily result in an increase in liquidity provision through a short-term standing facility.

Now let's turn to more recent developments. Over the past few years, as central banks have shrunk their balance sheets, liquidity has been gradually reduced, which has made the existing liquidity provision tools more relevant. The BOE and the ECB have indicated that they are moving toward operating frameworks in which short-term liquidity providing repo operations will play a key role.¹⁰

The Fed has stated that it will continue to operate in an ample-reserves regime. In this regime, the primary credit rate is positioned to be slightly above the rate expected to prevail in interbank markets so use of the discount window should typically remain modest. Still, the facility remains available to be used. Figure 3 shows the discount window credit as a share of Fed assets over the past decade. As you can see from this figure, over the past few years, the discount window has been used more than was the case before the pandemic. Increased usage may be due to the discount rate being set

¹⁰ See, for example, B (2024), "Transitioning to a Repo-Led Operating Framework," discussion paper (London: BOE, December 9), <https://www.bankofengland.co.uk/paper/2024/dp/transitioning-to-a-repo-led-operating-framework>.
See, for example, Schnabel, "The Eurosystem's Operational Framework," [The Eurosystem's operational framework](#).

closer to private market rates than was the case before the pandemic, the availability of longer maturity loans, and shifts in communication.

Intraday Credit Provision across Jurisdictions

Just as there are differences with respect to the provision of overnight liquidity across central banks, there are also differences in the provision of intraday credit. One difference is with respect to unresolved intraday overdrafts. As I noted earlier, it is possible for banks to incur overnight overdrafts if they fail to take such action as requesting an overnight loan, although overnight overdrafts are not considered business as usual and carry a penalty rate in the U.S., currently set at the primary credit rate plus 400 basis points.¹¹ The BOJ does something quite similar. By charging a high penalty on overnight overdrafts, both the Fed and the BOJ discourage overdrafts.

In contrast to the Fed and the BOJ, the ECB and the BOE can automatically convert most of the intraday overdrafts into an overnight loan from the business-as-usual facility seamlessly, without action on the part of the bank, against the same collateral at the end of the day.¹² That feature creates a greater similarity between intraday credit and overnight credit in those jurisdictions. The relationship between intraday credit and overnight credit is going to be an important one for central banks amid developments in payment systems, including advances in technology and the expansion of payment system operating hours.

¹¹ See Board of Governors of the Federal Reserve System (2023), *Federal Reserve Policy on Payment System Risk*, (Washington: Board of Governors), p. 33, https://www.federalreserve.gov/paymentsystems/files/psr_policy.pdf.

¹² The BOE is a special case because, for most institutions, intraday overdrafts are seamlessly converted into an overnight loan if the institution signed up to use the operational standing facility in advance. Institutions that have not signed up in advance and end the day with an overdrawn reserve account face an overdraft charge of 2 percent plus the Bank Rate or another rate set at discretion.

Conclusion

Today, I provided an overview of the Fed's provision of liquidity through the discount window and intraday credit and highlighted some similarities and differences across jurisdictions. In summary, the Fed's discount window and intraday credit facilities have many features that are similar to those found in other central bank facilities. While differences in institutional, legal, and financial system structures across jurisdictions make central bank short-term lending context specific, looking at the experiences of central banks across other jurisdictions is informative, as central banks share similar goals and face similar challenges when it comes to liquidity provision.

The Fed is continually assessing and striving to improve the operational aspects of discount window and intraday credit. The Federal Reserve System has made several important advancements to ensure that liquidity provision meets the needs of the 21st century economy. For example, Reserve Banks have worked to streamline the use of electronic files when establishing access to the discount window and made technological advancements in the process for requesting a discount window loan. The Federal Reserve System launched a convenient online portal called "Discount Window Direct" for requesting and prepaying discount window loans that is generally accessible to banks 24–7. To improve familiarity with the discount window, Reserve Banks have conducted outreach to banks and made efforts to guide them in using the program.

To complement these efforts, the Board issued an RFI last September seeking input on the operations of the discount window and intraday credit. Any issues identified in the responses to the RFI can help the Fed understand further improvements that may promote efficiency and reduce the burden on banks.

I look forward to hearing insights you may have into central banks' liquidity facilities and how these issues intersect with the topics that will be discussed at this conference. Thank you!

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Road Map of Talk

- Liquidity facilities and their purposes
- How it works in the U.S.
 - Daylight overdrafts
 - Discount window
- Short-term credit provision across jurisdictions
- Conclusion



Federal Reserve Liquidity Provision

Intraday Credit (Daylight Overdrafts)

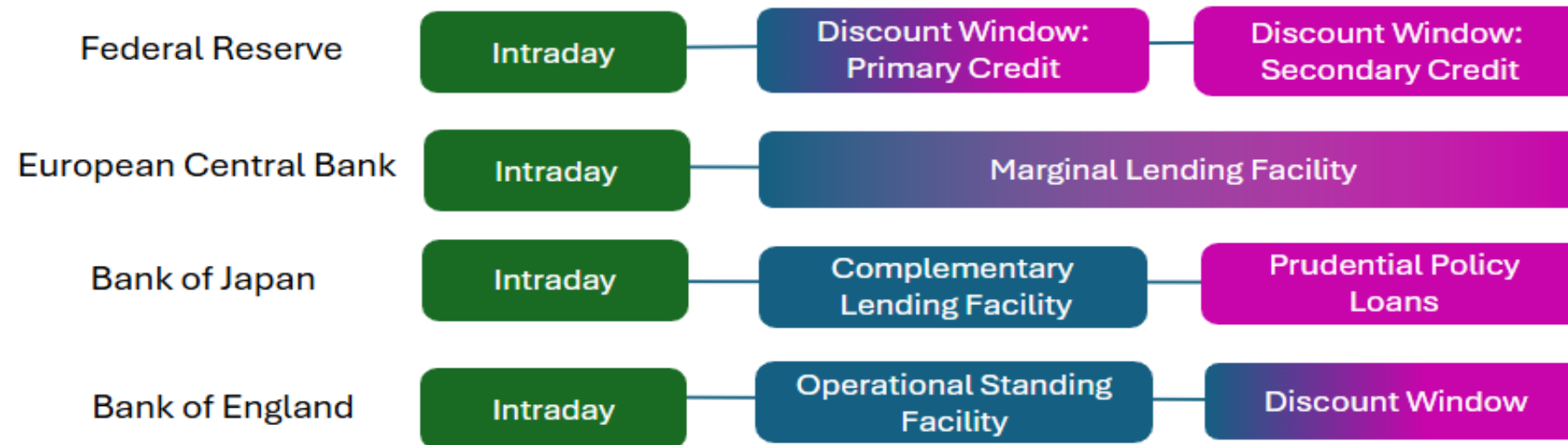
- Smooths payment mismatches during the day
- Provided to banks and other depository institutions
- Provided free of charge (if collateralized)
- May be uncollateralized

Short-Term Credit (Discount Window)

- Smooths funding fluctuations overnight or during short periods
- Provided to banks and other depository institutions
- Interest rate linked to monetary policy
- Always collateralized



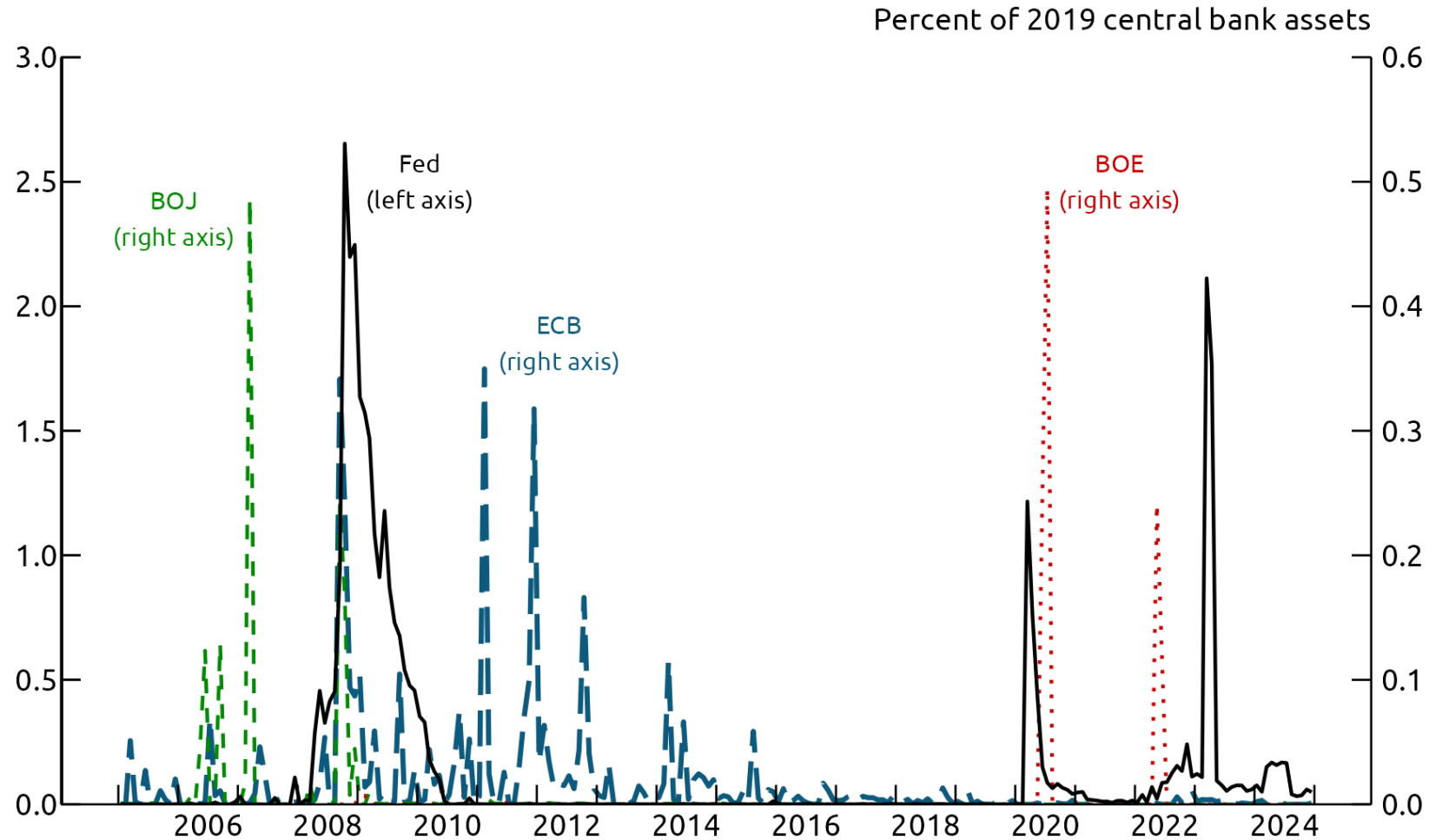
Figure 1. Liquidity Facilities and Their Functions



FUNCTION: Intraday | Business-as-Usual Overnight Liquidity | Stress-Related Temporary Liquidity



Figure 2. Short-Term Liquidity Provision across Central Banks

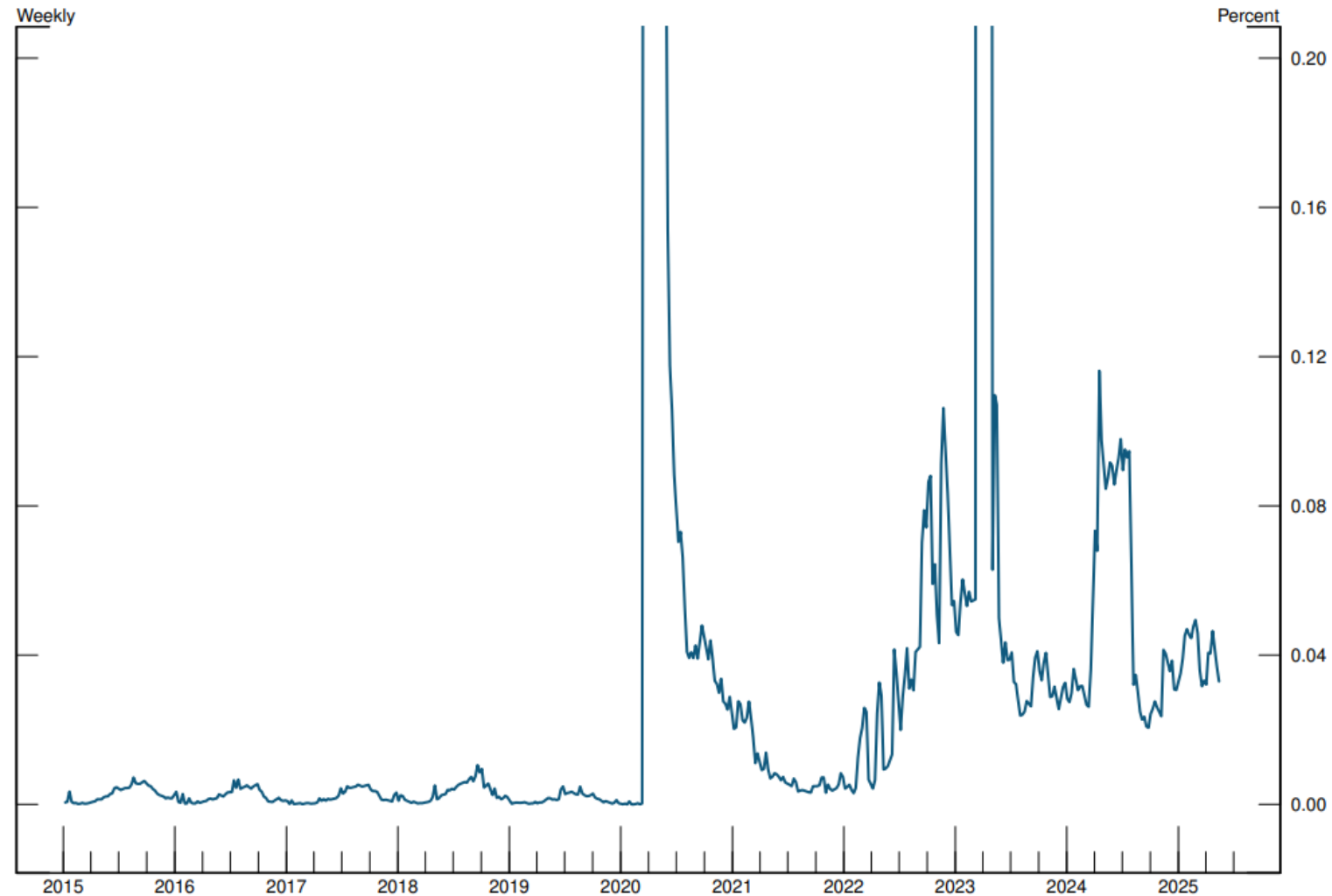


Note: Data extend through Dec. 2024. U.S. values are for primary credit only. Usage is end-of-month values, except BOE which is the monthly average of daily values. Central bank assets are as of Dec. 31, 2019.

Source: European Central Bank (ECB), Marginal Lending Facility; Bank of Japan (BOJ), Complementary Lending Facility; Bank of England (BOE), Operational Standing Lending Facility; Federal Reserve (Fed), Primary Credit; via FRED.



Figure 3. Discount Window Usage as a Share of Federal Reserve Assets



Note: Stress periods during COVID-19 and the March 2023 banking turmoil are truncated at the top of the figure, peaking at 0.97 percent and 1.77 percent, respectively. Month-ends +/- 1 business day have been filtered out. Data extend through May 14, 2025.

Source: Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances."



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