



Quarterly Report on Federal Reserve Balance Sheet Developments

November 2018

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM



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Purpose

The Federal Reserve prepares this quarterly report as part of its efforts to enhance transparency about its balance sheet, financial information, and monetary policy tools, and to ensure appropriate accountability to the Congress and the public.¹

The appendix of this report contains information about the transparency provisions of the Dodd-

¹ Financial information in this report has not been audited. Financial data are audited annually and are available at www.federalreserve.gov/monetarypolicy/bst_fedfinancials.htm.

Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) and the Federal Reserve's compliance with those provisions.

For prior editions of this report (which was published from June 2009 to August 2012 as the "Monthly Report on Credit and Liquidity Programs and the Balance Sheet") and other resources, please visit the Board's public website at www.federalreserve.gov/monetarypolicy/clbsreports.htm.

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Abbreviations

CAMELS	Capital, Assets, Management, Earnings, Liquidity, and Sensitivity	LSAP	Large-scale asset purchase program
CMO	Collateralized mortgage obligations	MBS	Mortgage-backed securities
FCB	Foreign central bank	OMO	Open market operation
FOMC	Federal Open Market Committee	RRP	Reverse repurchase agreement
FRBNY	Federal Reserve Bank of New York	SOMA	System Open Market Account
GSE	Government-sponsored enterprise	TAF	Term Auction Facility
LLC	Limited liability company	TDF	Term Deposit Facility

Overview

Recent Developments

The Overview section of this report highlights recent developments in the operations of the Federal Reserve's monetary policy tools and presents data describing changes in the assets, liabilities, and total capital of the Federal Reserve System as of October 24, 2018.

FOMC Raises Target Range for the Federal Funds Rate; Federal Reserve Takes Associated and Related Implementation Steps

- On September 26, 2018, the Federal Open Market Committee (FOMC) announced that it had decided to raise the target range for the federal funds rate to 2 to 2-1/4 percent, from 1-3/4 to 2 percent. Additional information on the FOMC's decision is available at www.federalreserve.gov/newsevents/pressreleases/monetary20180926a.htm and www.federalreserve.gov/newsevents/pressreleases/monetary20181017a.htm.
- To implement this monetary policy stance, the FOMC directed the Federal Reserve Bank of New York (FRBNY) to conduct open market operations (OMOs), including overnight reverse repurchase operations, as necessary to maintain the federal funds rate in a target range of 2 to 2-1/4 percent. In related actions, effective September 27, 2018, the Board of Governors of the Federal Reserve System (Board) raised the interest rate paid on required and excess reserve balances to 2.20 percent and approved a 1/4 percentage point increase in the discount rate (the primary credit rate) to 2.75 percent.
- In addition, the FOMC directed the FRBNY to continue rolling over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing during September that exceeded \$24 billion and to continue reinvesting in agency mortgage-backed secu-

rities (MBS) the amount of principal payments from the Federal Reserve's holdings of agency debt and agency MBS received during September that exceeded \$16 billion. Effective in October 2018, the FOMC directed the FRBNY to increase these principal payment reinvestment thresholds to \$30 billion per calendar month for Treasury securities and \$20 billion per calendar month for agency debt and agency MBS. Small deviations from these amounts for operational reasons are acceptable. Additional information on these implementation steps is available at www.federalreserve.gov/newsevents/pressreleases/monetary20180926a1.htm and www.newyorkfed.org/markets/rrp_op_policies.html.

FRBNY Completes Sales of Securities in Maiden Lane LLC Portfolio

- On September 18, 2018, the FRBNY announced the completion of the sale of the remaining securities in the portfolio of Maiden Lane LLC (ML LLC), a limited liability corporation formed by the FRBNY in 2008 to acquire certain assets of The Bear Stearns Companies, Inc. Net proceeds from sales of ML LLC assets, as well as interest paid by ML LLC to the FRBNY, provided a net gain of approximately \$2.5 billion for the benefit of the U.S. public. Additional information is available at www.newyorkfed.org/newsevents/news/markets/2018/an180918.html.

Federal Reserve Board Publishes Quarterly Financial Report

- On November 16, 2018, the Federal Reserve System published the "Federal Reserve Banks Combined Quarterly Financial Report" for the third quarter of 2018, which includes summary information on the combined financial position and results of operations of the 12 Reserve Banks. All financial information included in the report is unaudited. The report is available on the Federal

Reserve Board’s website at www.federalreserve.gov/aboutthefed/combined-quarterly-financial-reports-unaudited.htm.

Federal Reserve System Assets, Liabilities, and Total Capital

Table 1 reports selected assets, liabilities, and total capital of the Federal Reserve System and presents the change in these components over selected intervals. The Federal Reserve publishes its complete bal-

ance sheet each week in the H.4.1 statistical release, “Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks,” available at www.federalreserve.gov/releases/h41/.

Figure 1 displays the levels of selected Federal Reserve assets and liabilities, securities holdings, and credit extended through liquidity facilities since April 2010.

Table 1. Assets, liabilities, and capital of the Federal Reserve System

Billions of dollars

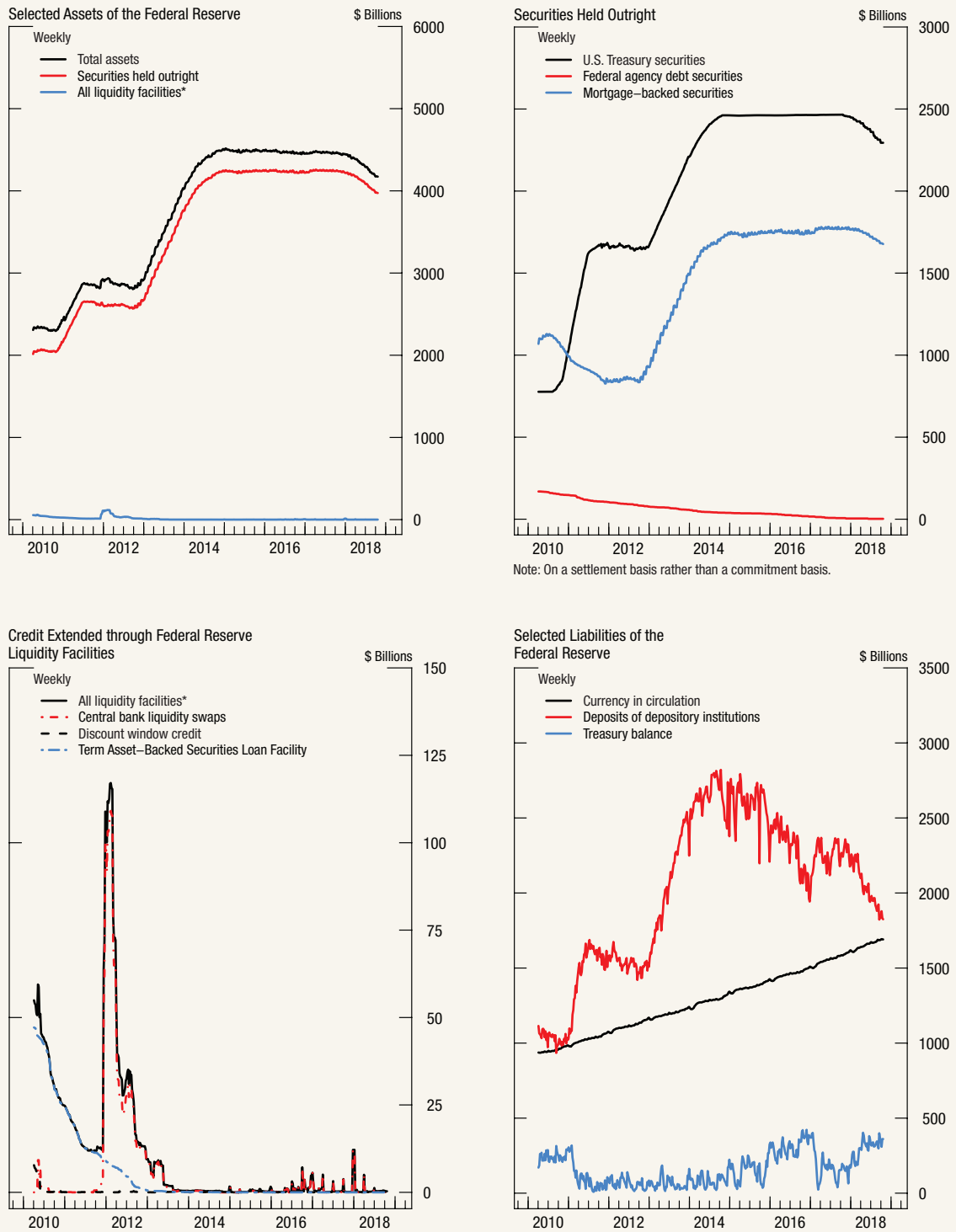
Item	Current October 24, 2018	Change from July 25, 2018	Change from October 25, 2017
Total assets	4,173	-105	-288
Selected assets			
Securities held outright	3,974	-98	-269
U.S. Treasury securities ¹	2,294	-66	-172
Federal agency debt securities ¹	2	0	-4
Mortgage-backed securities ²	1,677	-33	-94
Memo: Overnight securities lending ³	16	-2	-9
Memo: Net commitments to purchase mortgage-backed securities ⁴	3	-5	-15
Unamortized premiums on securities held outright ⁵	144	-5	-18
Unamortized discounts on securities held outright ⁵	-14	+*	1
Lending to depository institutions ⁶	*	-*	+*
Central bank liquidity swaps ⁷	*	-*	+*
Net portfolio holdings of Maiden Lane LLC ⁸	*	-2	-2
Foreign currency denominated assets ⁹	21	-*	-*
Total liabilities	4,134	-105	-286
Selected liabilities			
Federal Reserve notes in circulation	1,643	22	106
Reverse repurchase agreements ¹⁰	226	-24	-122
Foreign official and international accounts ¹⁰	219	-30	-16
Others ¹⁰	6	6	-106
Term deposits held by depository institutions	0	0	-14
Other deposits held by depository institutions	1,825	-122	-417
U.S. Treasury, General Account	361	22	176
Other deposits ¹¹	68	-3	-14
Total capital	39	+*	-2

Note: Unaudited. Components may not sum to totals because of rounding.

* Less than \$500 million.

¹ Face value.² Guaranteed by Fannie Mae, Freddie Mac, and Ginnie Mae. The current face value shown is the remaining principal balance of the securities.³ Securities loans under the overnight facility are off-balance-sheet transactions. These loans are shown here as a memo item to indicate the portion of securities held outright that have been lent through this program.⁴ Current face value. Includes commitments associated with outright purchases, dollar rolls, and coupon swaps.⁵ Reflects the premium or discount, which is the difference between the purchase price and the face value of the securities that has not been amortized. For U.S. Treasury securities, federal agency debt securities, and mortgage-backed securities, amortization is on an effective-interest basis.⁶ Total of primary, secondary, and seasonal credit.⁷ Dollar value of the foreign currency held under these agreements valued at the exchange rate to be used when the foreign currency is returned to the foreign central bank. This exchange rate equals the market exchange rate used when the foreign currency was acquired from the foreign central bank.⁸ Fair value. Fair value reflects an estimate of the price that would be received upon selling an asset if the transaction were to be conducted in an orderly market on the measurement date. Assets are revalued quarterly.⁹ Revalued daily at current foreign currency exchange rates.¹⁰ Cash value of agreements, which are collateralized by U.S. Treasury securities, federal agency debt securities, and mortgage-backed securities.¹¹ Includes deposits held at the Reserve Banks by international and multilateral organizations, government-sponsored enterprises, designated financial market utilities, and deposits held by depository institutions in joint accounts in connection with their participation in certain private-sector payment arrangements. Also includes certain deposit accounts other than the U.S. Treasury, General Account, for services provided by the Reserve Banks as fiscal agents of the United States.

Figure 1. Credit and liquidity programs and the Federal Reserve's balance sheet



Note: On a settlement basis rather than a commitment basis.

Note: Data are shown through October 24, 2018.

*All liquidity facilities includes primary credit, secondary credit, seasonal credit, Term Asset-Backed Securities Loan Facility, and central bank liquidity swaps.

Monetary Policy Tools

The Federal Reserve currently uses several tools to implement monetary policy in support of its statutory mandate to foster maximum employment and stable prices.

The Federal Reserve conducts OMOs in domestic markets. OMOs can be permanent, including the outright purchase and sale of Treasury securities, government-sponsored enterprise (GSE) debt securities, and federal agency and GSE MBS; or temporary, including the purchase of these securities under agreements to resell, and the sale of these securities under agreements to repurchase. The authority to conduct OMOs is granted under section 14 of the Federal Reserve Act, and the range of securities that the Federal Reserve is authorized to purchase and sell is relatively limited. OMOs are conducted by the FRBNY's Trading Desk, which acts as agent for the FOMC. The FRBNY's traditional counterparties for OMOs are the primary dealers with which the FRBNY trades U.S. government and select other securities.² Since 2009, the FRBNY has designated other counterparties for certain OMO programs.

OMOs have been used historically to adjust the supply of reserve balances so as to keep the federal funds rate around the target federal funds rate established by the FOMC. In recent years, the Federal Reserve has also developed other tools to strengthen its control of short-term interest rates and to reduce the large quantity of reserves held by the banking system.

² A current list of primary dealers, along with the FRBNY's expectations and requirements of them, is available on the FRBNY's website at www.newyorkfed.org/markets/primarydealers.html. Information on the FRBNY's administration of its relationships with primary dealers and other counterparties for market operations—including requirements for business standards, financial condition and supervision, and compliance and controls—is available at www.newyorkfed.org/markets/counterparties/policy-on-counterparties-for-market-operations.

The Federal Reserve provides short-term liquidity to domestic banks and other depository institutions through the discount window. In addition, because of the global nature of bank funding markets, the Federal Reserve has established liquidity arrangements with foreign central banks (FCBs) as part of coordinated international efforts.

Permanent Open Market Operations

Recent Developments

- On September 26, 2018, the FOMC directed the FRBNY to roll over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing during each calendar month that exceeds \$30 billion and to reinvest in agency MBS the amount of principal payments from the Federal Reserve's holdings of agency debt and agency MBS received during each calendar month that exceeds \$20 billion, effective in October 2018. Small deviations from these amounts for operational reasons are acceptable. Additional information is available at www.federalreserve.gov/newsevents/pressreleases/monetary20180926a1.htm.
- Between July 25, 2018, and October 24, 2018, the System Open Market Account's (SOMA) holdings of Treasury securities and agency MBS declined under the FOMC's balance sheet normalization program initiated in October 2017.

Background

Permanent OMOs are outright purchases or sales of securities for the SOMA, the Federal Reserve's portfolio. Traditionally, permanent OMOs have been used to accommodate the longer-term factors driving the expansion of the Federal Reserve's balance sheet, principally the trend growth of currency in circulation. From 2009 to 2014, permanent OMOs were used to expand SOMA securities holdings through a

series of large-scale asset purchase programs (LSAPs) and to extend the average maturity of securities held in the SOMA.³

Currently, permanent OMOs are used to implement the FOMC's policy of reinvesting principal payments from its holdings of agency debt and MBS in agency MBS and of rolling over maturing Treasury securities at auction. As described in more detail below, beginning in October 2017 these reinvestments are being reduced under the FOMC's program to normalize the size of the Federal Reserve's balance sheet. In addition, as a matter of prudent planning the FRBNY Trading Desk occasionally conducts small-value exercises, including outright purchases and sales of Treasury securities, outright purchases and sales of MBS, and MBS coupon swaps, for the purpose of testing operational readiness.

The composition of the SOMA is presented in table 2. The Federal Reserve's outright holdings of securities are reported weekly in tables 1, 2, 3, 5, and 6 of the H.4.1 statistical release.

On September 28, 2012, the Federal Reserve began the regular publication of transaction-level information on individual open market transactions. In accordance with the Dodd-Frank Act, this information will be made available on a quarterly basis and with an approximately two-year lag. The transaction-level detail supplements the extensive aggregate information the Federal Reserve has previously provided in weekly, monthly, and quarterly reports, and is available at www.newyorkfed.org/markets/OMO_transaction_data.html.

Balance Sheet Normalization

From 2009 to 2014, the FOMC undertook a large expansion of SOMA securities holdings through a series of LSAPs that were conducted in order to support the housing market, improve conditions in private credit markets, and promote a stronger pace of economic recovery.⁴ In October 2017, the FOMC initiated a balance sheet normalization program that will gradually reduce the size of these holdings by

³ Information on the maturity extension program is available at www.federalreserve.gov/monetarypolicy/maturityextensionprogram.htm and www.newyorkfed.org/markets/opolicy/operating_policy_110921.html.

⁴ Additional information on LSAPs is available at www.federalreserve.gov/monetarypolicy/bst_openmarketops.htm and www.newyorkfed.org/markets/funding_archive/lsap.html.

Table 2. Domestic SOMA securities holdings

Billions of dollars

Security type	Total par value as of October 24, 2018	Total par value as of July 25, 2018
U.S. Treasury bills	*	0
U.S. Treasury notes and bonds, nominal	2,138	2,207
U.S. Treasury floating rate notes	18	18
U.S. Treasury notes and bonds, inflation-indexed ¹	138	135
Federal agency debt securities ²	2	2
MBS ³	1,677	1,710
Total SOMA securities holdings	3,974	4,072

Note: Unaudited. Components may not sum to total because of rounding. Does not include investments denominated in foreign currencies or unsettled transactions.

* Less than \$500 million.

¹ Includes inflation compensation.

² Direct obligations of Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.

³ Guaranteed by Fannie Mae, Freddie Mac, and Ginnie Mae. Current face value of the securities, which is the remaining principal balance of the securities.

decreasing the reinvestment of the principal payments received from securities held in the SOMA.⁵ Such principal payments will be reinvested only to the extent that they exceed gradually rising caps.

Initially, for October 2017 to December 2017, the decline in SOMA securities holdings was capped at \$6 billion per month for Treasury securities and \$4 billion per month for agency debt and agency MBS. These caps were anticipated to gradually rise at three-month intervals to maximums of \$30 billion per month for Treasury securities and \$20 billion per month for agency debt and agency MBS. Once the caps reached their respective maximums, they were anticipated to remain in place so that the Federal Reserve's securities holdings will continue to decline in a gradual and predictable manner until the Committee judges that the Federal Reserve is holding no more securities than necessary to implement monetary policy efficiently and effectively.

Gradually reducing the Federal Reserve's securities holdings will result in a declining supply of reserve balances. The FOMC anticipates reducing the quantity of reserve balances, over time, to a level appre-

⁵ Under the FOMC's previous reinvestment policies all maturing Treasury securities were rolled over at auction, and all principal payments from the SOMA's holdings of agency debt and agency MBS were reinvested in agency MBS (the latter policy was announced in September 2011). These previous policies prevented the Federal Reserve's balance sheet from shrinking when Treasury securities matured and principal payments on agency debt and agency MBS were received.

ciably below that seen in recent years but larger than before the financial crisis; the level will reflect the banking system's demand for reserve balances and the FOMC's decisions about how to implement monetary policy most efficiently and effectively in the future. In addition, decreasing the size of the balance sheet in a gradual and predictable manner will limit the volume of securities that private investors will have to absorb and will guard against outsized moves in interest rates and other potential market strains. Additional information on the balance sheet normalization program is available at www.federalreserve.gov/monetarypolicy/policy-normalization.htm.

Temporary Open Market Operations and Other Reserve Management Tools

Recent Developments

- To implement its monetary policy stance announced on September 26, 2018, the FOMC directed the FRBNY to conduct OMOs, including overnight reverse repurchase operations, as necessary to maintain the federal funds rate in a target range of 2 to 2-1/4 percent.
- On October 24, 2018, outstanding reverse repurchase agreements (RRPs or reverse repos) conducted under OMOs totaled \$6.4 billion. This amount is shown in [table 1](#) as reverse repurchase agreements with others. Outstanding RRP from these operations ranged from less than \$0.01 billion to \$48.4 billion during the period from July 25, 2018, to October 24, 2018. Additional information is available at www.newyorkfed.org/markets/rrp_op_policies.html and www.newyorkfed.org/markets/rrp_faq.html, and the results of the operations are available at www.newyorkfed.org/markets/omo/dmm/temp.cfm.
- As part of ongoing test operations, the Federal Reserve conducted a Term Deposit Facility (TDF) offering on August 23, 2018. The operation offered seven-day floating rate deposits with an early withdrawal feature, maximum individual award amounts of \$250 million, and rates set equal to the sum of the interest rate on excess reserves plus a fixed spread of 1 basis point. The ongoing TDF test operations are a matter of prudent planning and have no implications for the near-term conduct of monetary policy. Results of the operation

are available at www.federalreserve.gov/monetarypolicy/tdf.htm.

Repos and Reverse Repos

Temporary OMOs are typically used to address reserve needs that are deemed to be transitory in nature. These operations are either repurchase agreements (repos) or reverse repos. Under a repo, the FRBNY Trading Desk buys a security under an agreement to resell that security in the future. A repo is the economic equivalent of a collateralized loan from the Federal Reserve to a primary dealer (the Federal Reserve counterparty in repo operations) and increases bank reserves while the trade is outstanding. The difference between the purchase and sale prices reflects the interest on the loan. Other than occasional test operations, the FRBNY has not conducted a repo since December 2008.

Under a reverse repo, the Trading Desk sells a security from the SOMA under an agreement to repurchase that security in the future. A reverse repo is the economic equivalent of collateralized borrowing by the Federal Reserve from a reverse repo counterparty and reduces bank reserves while the trade is outstanding. The securities temporarily sold under the agreement continue to be shown as assets held by the SOMA in accordance with generally accepted accounting principles. Reverse repos are a tool that is used to manage money market interest rates and provide the Federal Reserve with greater control over short-term rates.

In December 2009, the FRBNY began conducting small-scale reverse repo test operations with primary dealers as a matter of prudent advance planning. Reverse repo test operations were gradually expanded to include a larger group of counterparties (which is described in more detail below), and terms varying from overnight up to about four weeks. From September 2013 to December 2015, the FRBNY conducted a series of overnight reverse repos as a technical exercise for the purpose of further assessing the appropriate structure of such operations in supporting the implementation of monetary policy during normalization. Since the commencement of the monetary policy normalization process in December 2015, the FOMC has authorized the FRBNY to conduct OMOs, including reverse repos, as necessary to maintain the federal funds rate in its target range. Additional information is available at www.newyorkfed.org/markets/

[rrp_op_policies.html](#) and www.newyorkfed.org/markets/rrp_faq.html, and the results of the operations are available at www.newyorkfed.org/markets/omo/dmm/temp.cfm.

Repo and reverse repo operations are conducted as competitive auctions or as full-allotment operations in which participants' bids are awarded in full up to a maximum amount at a fixed rate. Amounts outstanding under repos and reverse repos are reported weekly in tables 1, 2, 5, and 6 of the H.4.1 statistical release.

Expanded Counterparties for Reverse Repos

The FRBNY conducts reverse repos with an expanded set of counterparties that includes entities other than primary dealers. This enhances the Federal Reserve's capacity to conduct large-scale reverse repo operations to drain reserves. The additional counterparties are not eligible to participate in transactions conducted by the FRBNY other than reverse repos. The set of expanded counterparties includes domestic money market funds, GSEs, and banks, and is expected to remain around 150 in number. The FRBNY may amend the list of counterparties at its discretion.

Acceptance as a counterparty is not an endorsement of the firm by the FRBNY and should not be used as a substitute for independent analysis and due diligence by other parties considering a business relationship with the firm. Further information on reverse repo counterparties is available on the FRBNY's website at www.newyorkfed.org/markets/rrp_announcements.html, www.newyorkfed.org/markets/rrp_counterparties.html, and www.newyorkfed.org/markets/counterparties/policy-on-counterparties-for-market-operations.

Reverse Repos with Foreign Official and International Accounts

The Federal Reserve has long operated an overnight reverse repo facility as a service for FCBs and international account holders that choose to hold a portion of their dollar assets at the FRBNY.⁶ Facility participants invest their cash balances with the FRBNY using securities in the SOMA as collateral, at an interest rate that is derived from comparable market-based rates. While reverse repos conducted under this facility are separate from monetary policy

⁶ Analogous services are offered by other major central banks.

operations such as the overnight and term reverse repo operations described above, they also result in a corresponding decrease in reserves. Amounts outstanding under reverse repos to foreign official and international accounts are shown in [table 1](#). Additional information is available at www.newyorkfed.org/aboutthefed/fedpoint/fed20.

Term Deposit Facility

The Term Deposit Facility (TDF) is a program through which the Federal Reserve Banks offer interest-bearing term deposits to eligible institutions. A term deposit is a deposit at a Federal Reserve Bank with a specific maturity date. The TDF was established to facilitate the conduct of monetary policy by providing a tool that may be used to manage the aggregate quantity of reserve balances held by depository institutions and, in particular (as with reverse repos), to support a reduction in monetary accommodation at the appropriate time. An increase in term deposits outstanding drains reserve balances because funds to pay for them are removed from the accounts of participating institutions for the life of the term deposit.

Term deposits may be awarded either through (1) a competitive single-price auction with a noncompetitive bidding option (which allows institutions to place small deposits at the rate determined in the competitive portion of the operation), (2) a fixed-rate format with full allotment up to a maximum tender amount at an interest rate specified in advance, or (3) a floating-rate format with full allotment up to a maximum tender amount at an interest rate set equal to the sum of the interest rate paid on excess reserves plus a fixed spread. Since September 2014, term deposits have incorporated an early withdrawal feature that allows depositors to obtain a return of funds prior to the maturity date subject to an early withdrawal penalty.

Beginning in June 2010, the Federal Reserve has periodically conducted TDF test offerings as a matter of prudent planning. These offerings are designed to ensure the operational readiness of the TDF and to provide eligible institutions with an opportunity to gain familiarity with term deposit procedures; the operations have no implications for the near-term conduct of monetary policy. Additional information about term deposits, auction results, and future test operations is available through the TDF Resource Center at www.frbservices.org/central-bank/reserves-central/term-deposit-facility/index.html.

Securities Lending Program

The Federal Reserve has long operated an overnight securities lending facility as a vehicle to address market pressures for specific Treasury securities. Since July 9, 2009, this facility has also lent housing-related GSE debt securities that are particularly sought after. Amounts outstanding under this facility are reported weekly in table 1A of the H.4.1 statistical release. Additional information on the Securities Lending program is available at www.newyorkfed.org/markets/sec_faqs.html.

Discount Window Lending

Recent Developments

- Credit provided to depository institutions through the discount window generally remained around its usual level. As presented in table 5, discount window credit outstanding on October 24, 2018, was \$0.2 billion, and the lendable value of collateral pledged by borrowing institutions on that date was \$1.7 billion.
- Effective September 27, 2018, the Board approved a 1/4 percentage point increase in the primary credit rate, to 2.75 percent.

Background

The discount window helps to relieve liquidity strains for individual depository institutions and for the banking system as a whole by providing a source of funding in times of need. Much of the statutory framework that governs lending to depository institutions is contained in section 10B of the Federal Reserve Act, as amended. The general policies that govern discount window lending are set forth in the Federal Reserve Board's Regulation A.

Depository institutions have, since 2003, had access to three types of discount window credit: primary credit, secondary credit, and seasonal credit. Primary credit is available to depository institutions in generally sound financial condition with few administrative requirements, at an interest rate that is 50 basis points above the FOMC's target rate for federal funds. Secondary credit may be provided to depository institutions that do not qualify for primary credit, subject to review by the lending Reserve Bank, at an interest rate that is 50 basis points above the rate on primary credit. Seasonal credit provides

short-term funds to smaller depository institutions that experience regular seasonal swings in loans and deposits. The interest rate on seasonal credit is a floating rate based on market funding rates.

On September 28, 2012, the Federal Reserve began the regular publication of detailed information on individual discount window loans. In accordance with the Dodd-Frank Act, this information will be made available on a quarterly basis and with an approximately two-year lag. The disclosure includes the name and identifying details of the depository institution, the amount borrowed, the interest rate paid, and information identifying the types and amount of collateral pledged. This detailed information supplements the extensive aggregate information the Federal Reserve has previously provided in weekly, monthly, and quarterly reports, and is available on the Federal Reserve's public website at www.federalreserve.gov/newsevents/reform_quarterly_transaction.htm.

During the financial crisis that began in 2007, the Federal Reserve modified the terms and conditions of the discount window lending programs in order to promote orderly market functioning. Information about these actions is available on the Federal Reserve's public website at www.federalreserve.gov/monetarypolicy/bst_crisisresponse.htm and www.frbdiscountwindow.org.

Table 3. Discount window credit outstanding to depository institutions

Daily average borrowing for each class of borrower July 26, 2018, to October 24, 2018

Type and size of borrower	Average number of borrowers ¹	Average borrowing (\$ billions) ²
Commercial banks³		
Assets: more than \$50 billion	*	**
Assets: \$5 billion to \$50 billion	*	**
Assets: \$250 million to \$5 billion	9	0.1
Assets: less than \$250 million	37	0.2
Thrift institutions and credit unions	6	**
Total	52	0.3

Note: Unaudited. Includes primary, secondary, and seasonal credit. Size categories based on total domestic assets from Call Report data as of June 30, 2018. Components may not sum to totals because of rounding.

* Fewer than one borrower.

** Less than \$50 million.

¹ Average daily number of depository institutions with credit outstanding. Over this period, a total of 614 institutions borrowed.

² Average daily borrowing by all depositories in each category.

³ Includes branches and agencies of foreign banks.

Table 4. Concentration of discount window credit outstanding to depository institutions

July 26, 2018, to October 24, 2018

Rank by amount of borrowing	Number of borrowers	Daily average borrowing (\$ billions)
Top five	5	0.1
Next five	5	*
Other	42	0.1
Total	52	0.3

Note: Unaudited. Amount of primary, secondary, and seasonal credit extended to the top five and other borrowers on each day, as ranked by daily average borrowing. Components may not sum to totals because of rounding.

* Less than \$50 million.

In extending credit through the discount window, the Federal Reserve closely monitors the financial condition of depository institutions using a four-step process designed to minimize the risk of loss to the Federal Reserve posed by weak or failing borrowers. The first step is monitoring, on an ongoing basis, the safety and soundness of all depository institutions that access or may access the discount window and the payment services provided by the Federal Reserve. The second step is identifying institutions whose condition, characteristics, or affiliation would present higher-than-acceptable risk to the Federal Reserve in the absence of controls on their access to Federal Reserve lending facilities and other Federal Reserve services. The third step is communicating—to staff within the Federal Reserve System and to other supervisory agencies, if and when necessary—relevant information about those institutions identified as posing higher risk. The fourth step is implementing appropriate measures to mitigate the risks posed by such entities.

At the heart of the condition-monitoring process is an internal rating system that provides a framework for identifying institutions that may pose undue risks to the Federal Reserve. The rating system relies mostly on information from each institution's primary supervisor, including CAMELS ratings, to identify potentially problematic institutions and classify them according to the severity of the risk they pose to the Federal Reserve.⁷ Having identified institutions that pose a higher risk, the Federal Reserve then puts in place a standard set of risk controls that

⁷ CAMELS (Capital, Assets, Management, Earnings, Liquidity, and Sensitivity) is a rating system employed by banking regulators to assess the soundness of commercial banks and thrifts. Similar rating systems are used for other types of depository institutions.

Table 5. Lendable value of collateral pledged by borrowing depository institutions

Billions of dollars, as of October 24, 2018

Type of collateral	Lendable value
Loans	
Commercial	0.2
Residential mortgage	0.1
Commercial real estate	0.1
Consumer	0.6
Securities	
U.S. Treasury/agency	0.3
Municipal	0.1
Corporate market instruments	*
MBS/CMO: agency-guaranteed	0.2
MBS/CMO: other	0
Asset-backed	*
International (sovereign, agency, municipal, and corporate)	0
Other	
Term Deposit Facility deposits	0
Total	1.7

Note: Unaudited. Collateral pledged by borrowers of primary, secondary, and seasonal credit as of the date shown. Total primary, secondary, and seasonal credit on this date was \$0.2 billion. The lendable value of collateral pledged by all depository institutions, including those without any outstanding loans, was \$1,584 billion. Lendable value is value after application of appropriate haircuts. Components may not sum to total because of rounding.

* Less than \$50 million.

become increasingly stringent as the risk posed by an institution grows; individual Reserve Banks may implement additional risk controls to further mitigate risk if they deem it necessary.

Collateral

All extensions of discount window credit by the Federal Reserve must be secured to the satisfaction of the lending Reserve Bank. Discount window loans are made with recourse to the borrower beyond the pledged collateral. Nonetheless, collateral plays an important role in mitigating the credit risk associated with these extensions of credit. The Federal Reserve generally accepts as collateral for discount window loans any assets that meet regulatory standards for sound asset quality. This category of assets includes most performing loans and most investment-grade securities, although for some types of securities (including commercial MBS, collateralized debt obligations, collateralized loan obligations, and certain non-dollar-denominated foreign securities) only very high-quality securities are accepted. An institution may not pledge as collateral any instruments that the institution or its affiliates have issued.

Assets accepted as collateral are assigned a lendable value deemed appropriate by the Reserve Bank; lendable value is determined as the market price of the asset, less a haircut. Securities are valued using market prices supplied by external vendors. Securities for which a price is not available from the Federal Reserve's pricing vendors receive zero collateral value. Loans pledged as collateral are valued using an internally modeled fair market value estimate. Haircuts reflect credit risk and, for traded assets, the historical volatility of the asset's price and the liquidity of the market in which the asset is traded; the Federal Reserve's haircuts are generally in line with typical market practice.

A borrower may be required to pledge additional collateral if its financial condition weakens. Collateral is pledged by depository institutions under the terms and conditions specified in the Federal Reserve Banks' standard lending agreement, Operating Circular No. 10, available at www.frbservices.org/assets/resources/rules-regulations/071613-operating-circular-10.pdf.

To ensure that they can borrow from the Federal Reserve should the need arise, many depository institutions that do not have an outstanding discount window loan nevertheless routinely pledge collateral. As presented in [table 6](#), depository institutions that borrow from the Federal Reserve generally maintain collateral in excess of their current borrowing levels.

The Federal Reserve periodically reviews its collateral margins and valuation practices. The current lending margins on discount window collateral took effect on August 1, 2018, and reflect the results from the most recent such review, as well as the incorporation of updated market data. Additional information

Table 6. Discount window credit outstanding to borrowing depository institutions—percent of collateral used

As of October 24, 2018

Percent of collateral used	Number of borrowers	Total borrowing (\$ billions)
More than 0 and less than 25	24	*
25 to 50	7	0.1
50 to 75	14	0.1
75 to 90	5	*
More than 90	6	*
Total	56	0.2

Note: Unaudited. Components may not sum to totals because of rounding.
* Less than \$50 million.

on collateral margins is available on the Discount Window and Payment System Risk public website, www.frbdiscountwindow.org.

Liquidity Arrangements with Foreign Central Banks

Recent Developments

- As presented in [table 7](#), as of October 24, 2018, dollar liquidity extended under the central bank liquidity swap arrangements totaled \$0.1 billion. Detailed information about swap operations is available at <https://apps.newyorkfed.org/markets/autorates/fxswap>.

Background

Because of the global character of bank funding markets, the Federal Reserve has at times coordinated with other central banks to provide liquidity. Starting in December 2007, the Federal Reserve entered into agreements to establish temporary currency arrangements (central bank liquidity swap lines) with several FCBs in order to provide liquidity in U.S. dollars. Later, foreign currency liquidity swap lines were established with a few FCBs. These temporary arrangements expired on February 1, 2010.

In May 2010, temporary U.S. dollar liquidity swap lines were reestablished with the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, and the Swiss National Bank in order to address the reemergence of strains in global U.S. dollar short-term funding markets. The FOMC authorized extensions of these temporary arrange-

Table 7. Amounts outstanding under U.S. dollar liquidity swaps

As of October 24, 2018

Central bank	Total amount outstanding (\$ billions)	Individual transaction amount (\$ billions)	Settlement date	Term	Interest rate
Bank of Canada	0	0	—	—	—
Bank of England	0	0	—	—	—
Bank of Japan	0	0	—	—	—
European Central Bank	0.1	0.1	10/18/2018	7-day	2.69%
Swiss National Bank	0	0	—	—	—
Total	0.1	0.1	—	—	—

Note: Unaudited. Components may not sum to totals because of rounding.
* Less than \$50 million.

ments in December 2010 and June 2011. On November 30, 2011, as a contingency measure, the FOMC agreed to establish temporary foreign currency liquidity swap arrangements that would allow for the Federal Reserve to access liquidity, if necessary, in any of these FCBs' respective currencies. In December 2012, the FOMC and these five FCBs authorized an extension of the temporary U.S. dollar and foreign currency liquidity swap arrangements through February 1, 2014.

The temporary swap arrangements helped to ease strains in financial markets and mitigate their effects on economic conditions. In October 2013 the Federal Reserve and FCBs announced the conversion of these temporary swap lines to standing arrangements that will remain in place until further notice and will continue to serve as a prudent liquidity backstop. The standing arrangements constitute a network of bilateral swap lines among the six central banks that allow provision of liquidity in each jurisdiction in any of the five currencies foreign to that jurisdiction. Additional information is available at www.federalreserve.gov/newsevents/press/monetary/20131031a.htm.

Since the establishment of the central bank liquidity swap lines in 2007, the Federal Reserve has at times provided U.S. dollar liquidity to FCBs but, except for pre-arranged small-value test operations, has not drawn on any foreign currency liquidity swap lines. The FRBNY operates the swap lines under the authority granted under section 14 of the Federal Reserve Act and in compliance with authorizations, policies, and procedures established by the FOMC. Additional information is available at www.newyorkfed.org/markets/international-market-operations/central-bank-swap-arrangements and www.federalreserve.gov/monetarypolicy/bst_swapfaqs.htm.

U.S. dollar liquidity swaps consist of two transactions. When an FCB draws on its swap line with the FRBNY, the FCB transfers a specified amount of its

currency to the FRBNY in exchange for dollars at the prevailing market exchange rate. The FRBNY holds the foreign currency in an account at the FCB. The dollars that the FRBNY provides are then deposited in an account that the FCB maintains at the FRBNY. At the same time, the FRBNY and the FCB enter into a binding agreement for a second transaction that obligates the FCB to return the U.S. dollars and the FRBNY to return the foreign currency on a specified future date at the same exchange rate as the initial transaction. Because the swap transactions will be unwound at the same exchange rate used in the initial transaction, the recorded value of the foreign currency amounts is not affected by changes in the market exchange rate. At the conclusion of the second transaction, the FCB compensates the FRBNY at a market-based interest rate.

When the FCB lends the dollars it obtained by drawing on its swap line to institutions in its jurisdiction, the dollars are transferred from the FCB account at the FRBNY to the account of the bank that the borrowing institution uses to clear its dollar transactions. The FCB is obligated to return the dollars to the FRBNY under the terms of the agreement. Neither the FRBNY nor the Federal Reserve is counterparty to the loan extended by the FCB. The FCB bears the credit risk associated with the loans it makes to institutions in its jurisdiction.

The foreign currency that the Federal Reserve acquires in these transactions is recorded as an asset on the Federal Reserve's balance sheet and is shown in tables 1, 5, and 6 of the weekly H.4.1 statistical release in the line entitled "Central bank liquidity swaps." U.S. dollar liquidity swaps have maturities ranging from overnight to three months. Table 2 of the H.4.1 statistical release reports the maturity distribution of the outstanding U.S. dollar liquidity swaps. Detailed information about drawings on the swap lines by the participating FCBs is presented on the FRBNY's website at <https://apps.newyorkfed.org/markets/autorates/fxswap>.

Federal Reserve Banks' Financial Information

The Federal Reserve publishes annual audited financial statements and quarterly unaudited financial reports presenting summary information on the combined financial position and results of operations of the Reserve Banks. Annual audited financial statements are available on the Federal Reserve Board's website at www.federalreserve.gov/aboutthefed/audited-annual-financial-statements.htm, and quarterly unaudited financial reports are available at www.federalreserve.gov/aboutthefed/combined-quarterly-financial-reports-unaudited.htm.

Recent Developments

- On November 16, 2018, the Federal Reserve Board published the “Federal Reserve Banks Combined Quarterly Financial Report” for the third quarter of 2018, which includes summary information on the combined financial position and results of operations of the 12 Reserve Banks. All financial

information included in the report is unaudited. The report is available on the Federal Reserve Board's website at www.federalreserve.gov/aboutthefed/combined-quarterly-financial-reports-unaudited.htm.

- The average daily balance of the Federal Reserve SOMA holdings was approximately \$4.0 trillion during the first three quarters of 2018. Net earnings from the portfolio were approximately \$81.2 billion (inclusive of \$81.7 billion of net interest income and \$0.5 billion of foreign currency translation losses); most of the earnings were attributable to interest income on Treasury securities and federal agency and GSE MBS.
- After providing for the cost of operations and payment of dividends, the Reserve Banks remitted \$51.6 billion to the Treasury during the first three quarters of 2018.

Appendix

Federal Reserve Disclosure Requirements and Other Provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) was signed into law.⁸ The Dodd-Frank Act included legislative changes designed to promote transparency while protecting monetary policy independence and the efficacy of the Federal Reserve's liquidity programs and OMOs. In addition, the Dodd-Frank Act modified the Federal Reserve's authority to provide emergency liquidity to nondepository institutions under section 13(3) of the Federal Reserve Act and also specifically prohibits (with certain exceptions) lending through the discount window to institutions that are registered as swap dealers or major swap participants.

Disclosure Requirements

On December 1, 2010, the Federal Reserve posted to its public website detailed information about entities that received loans or other financial assistance under a section 13(3) credit facility between December 1, 2007, and July 21, 2010, and about persons or entities that participated in the agency MBS purchase program, used foreign currency liquidity swap lines, or borrowed through the Term Auction Facility (TAF) during that time frame. This disclosure, required by the Dodd-Frank Act, included more than 21,000 individual credit and other transactions conducted to stabilize markets during the financial crisis, restore the flow of credit to American families and businesses, and support economic recovery and

job creation in the aftermath of the crisis. The Federal Reserve's disclosure about these transactions is available at www.federalreserve.gov/newsevents/reform_transaction.htm.

As required by the Dodd-Frank Act, the Federal Reserve also posted an audit webpage, available at www.federalreserve.gov/newsevents/reform_audit.htm. This page is updated as reports and other information become available.

The Dodd-Frank Act also established a framework for the delayed disclosure of information on entities that, after July 21, 2010, received a loan from the discount window under section 10B of the Federal Reserve Act or from a section 13(3) facility, or participated in OMO transactions. Generally, this framework requires the Federal Reserve to publicly disclose certain information about these discount window borrowers and OMO counterparties approximately two years after the relevant loan or transaction; information about borrowers under future section 13(3) facilities will be disclosed one year after the authorization for the facility is terminated. Information to be disclosed will include the names and identifying details of each borrower or counterparty, the amount borrowed, the interest rate paid, and information identifying the types and amounts of collateral pledged or assets transferred in connection with the borrowing or transaction. The disclosures of discount window borrowers and OMO counterparties commenced in September 2012; the information is available at www.federalreserve.gov/newsevents/reform_quarterly_transaction.htm and www.newyorkfed.org/markets/OMO_transaction_data.html.

Other Provisions

The Dodd-Frank Act modified the Federal Reserve's authority to provide emergency liquidity to nondepository institutions under section 13(3) of the Federal Reserve Act in light of other amendments that provide the U.S. government with new authority to

⁸ The full text of the Dodd-Frank Act is available at www.gpo.gov/fdsys/pkg/BILLS-111hr4173enr/pdf/BILLS-111hr4173enr.pdf.

resolve failing, systemically important nonbank financial institutions in an orderly manner. Going forward, any emergency lending programs and facilities authorized by the Federal Reserve under section 13(3) of the Federal Reserve Act must have broad-based eligibility and must be approved by the Secretary of the Treasury, among several other limitations.

Section 716 of the Dodd-Frank Act prohibits the Federal Reserve from extending discount window credit to “swaps entities,” subject to certain exceptions. A swaps entity includes a person that is registered as a swap dealer, security-based swap dealer, major swap participant, or major security-based swap participant under the Commodity Exchange Act or Securities Exchange Act of 1934, other than an insured depository institution that is registered as a major swap participant or major security-based swap participant.⁹ The provisions of section 716

⁹ In June 2013, the Federal Reserve Board issued an interim final rule to clarify that uninsured U.S. branches and agencies of for-

became effective on July 16, 2013. Accordingly, in early July 2013 the Federal Reserve amended its Operating Circular No. 10, the standard lending agreement under which institutions borrow from the discount window, in order to comply with the requirements of section 716. Under the amended Operating Circular No. 10, each time that a borrower requests an advance, it must be, and is deemed to represent, that it is not a swaps entity (as defined above), or it is a swaps entity that is eligible to receive the advance pursuant to one or more subsections of section 716 of the Dodd-Frank Act.

foreign banks are treated as insured depository institutions for purposes of section 716. The interim final rule also set out the process for state member banks and uninsured state branches and agencies of foreign banks to apply to the Board for the compliance transition period provided for in section 716. See 78 Fed. Reg. 34545 (June 10, 2013).

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