



Quarterly Report on Federal Reserve Balance Sheet Developments

August 2016

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.

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

Note: 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 efforts to meet the requirements of 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	MBS	Mortgage-backed securities
CMO	Collateralized mortgage obligations	ML	Maiden Lane LLC
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
LSAP	Large-scale asset purchase program		

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 July 27, 2016.

Federal Reserve Board Publishes Quarterly Financial Report

- On August 19, 2016, the Federal Reserve Board published the “Federal Reserve Banks Combined Quarterly Financial Report” for the second quarter of 2016, which includes summary information on the combined financial position and results of operations of the 12 Reserve Banks and a limited liability company consolidated by the Federal Reserve Bank of New York (FRBNY), Maiden Lane LLC (ML). All financial information included in the report is unaudited. The report is

available on the Federal Reserve Board's website at www.federalreserve.gov/monetarypolicy/bst_fedfinancials.htm#quarterly.

Federal Reserve System Selected Assets, Liabilities, and Total Capital

Table 1 reports selected assets and 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 balance 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

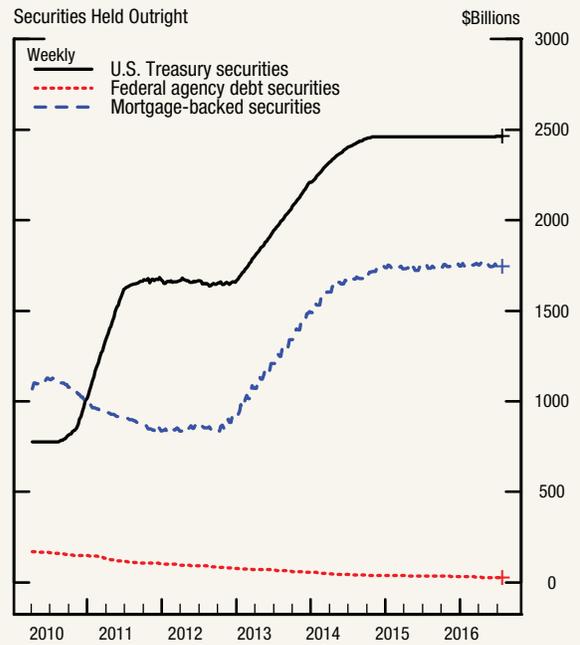
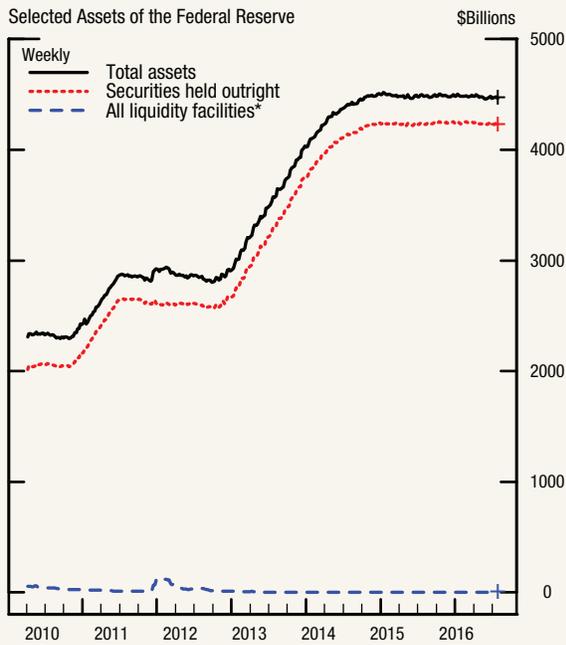
Item	Current July 27, 2016	Change from April 27, 2016	Change from July 29, 2015
Total assets	4,464	-10	-21
Selected assets			
Securities held outright	4,226	-7	-5
U.S. Treasury securities ¹	2,463	+1	+1
Federal agency debt securities ¹	22	-5	-13
Mortgage-backed securities ²	1,741	-4	+6
Memo: Overnight securities lending ³	22	+3	+12
Memo: Net commitments to purchase mortgage-backed securities ⁴	31	+5	+2
Unamortized premiums on securities held outright ⁵	180	-4	-17
Unamortized discounts on securities held outright ⁵	-16	+	+2
Lending to depository institutions ⁶	*	+	+
Central bank liquidity swaps ⁷	*	+	-
Net portfolio holdings of Maiden Lane LLC ⁸	2	-	+
Foreign currency denominated assets ⁹	21	+	+1
Total liabilities	4,424	-10	-3
Selected liabilities			
Federal Reserve notes in circulation	1,417	+14	+89
Reverse repurchase agreements ¹⁰	309	+42	+67
Foreign official and international accounts ¹⁰	241	+6	+85
Others ¹⁰	68	+36	-19
Term deposits held by depository institutions	0	0	0
Other deposits held by depository institutions	2,332	-21	-301
U.S. Treasury, General Account	316	-56	+113
Other deposits ¹¹	38	+11	+30
Total capital	40	+	-18

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

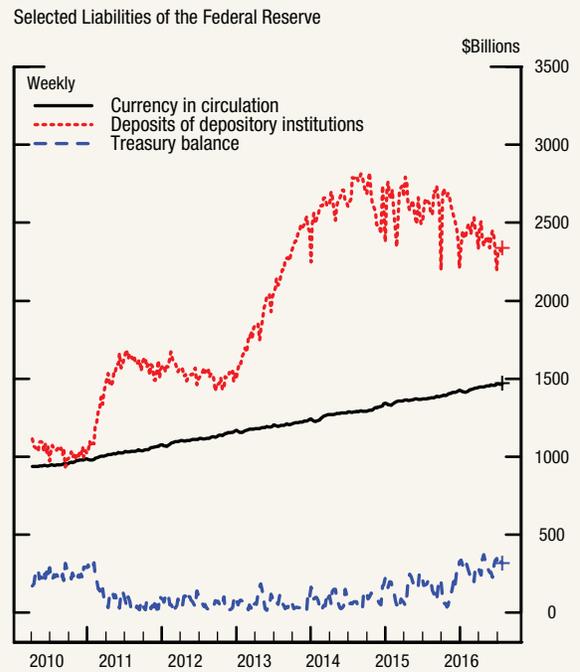
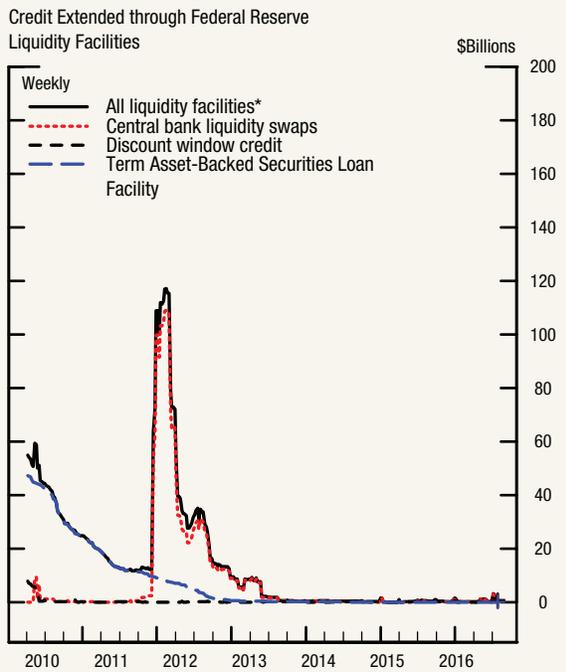
* Less than \$500 million.

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 and federal agency debt securities, amortization is on a straight-line basis. For 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, reflecting values as of June 30, 2016. 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. Fair values are updated 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, and designated financial market utilities. 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.



+ Indicates most recent data point. Data are shown through 7/27/2016.

* 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 open market operations (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 mortgage-backed securities (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 Federal Open Market Committee (FOMC). The FRBNY's traditional counterparties for OMOs are the primary dealers with which the FRBNY trades U.S. government and select other securities.¹ 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.

The Federal Reserve provides short-term liquidity to domestic banks and other depository institutions

¹ A current list of primary dealers is available on the FRBNY's website at www.newyorkfed.org/markets/pridealers_current.html. Information on the FRBNY's administration of its relationships with primary dealers—including requirements for business standards, financial condition and supervision, and compliance and controls—is available at www.newyorkfed.org/markets/pridealers_policies.html and www.newyorkfed.org/markets/pridealers_faq_100111.html.

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

- Between April 27, 2016, and July 27, 2016, the System Open Market Account's (SOMA) holdings of Treasury securities were little changed as a result of the FOMC's policy of rolling over maturing Treasury securities at auction.
- The SOMA's holdings of agency debt declined between April 27, 2016, and July 27, 2016, because of bond maturities. Holdings of agency MBS decreased because of the timing difference between agency MBS principal paydowns and settlement of the reinvestment of principal payments from agency debt and agency MBS into agency MBS under the FOMC's reinvestment program announced on September 21, 2011.

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, the expansion of SOMA securities holdings was driven by a series of large-scale asset purchase programs (LSAPs) that were conducted to support the housing market, improve conditions in private credit markets, and promote a stronger pace of economic recovery.² In 2011 and 2012, permanent OMOs were also used to extend the

² 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 July 27, 2016	Total par value as of April 27, 2016
U.S. Treasury bills	0	0
U.S. Treasury notes and bonds, nominal	2,338	2,342
U.S. Treasury floating rate notes	4	*
U.S. Treasury notes and bonds, inflation-indexed ¹	121	119
Federal agency debt securities ²	22	27
MBS ³	1,741	1,745
Total SOMA securities holdings	4,226	4,233

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.

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. 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 and outright sales of MBS, 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

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.

available at www.newyorkfed.org/markets/OMO_transaction_data.html.

From 2013 to 2015, the FRBNY conducted two pilot programs for a few small broker-dealers to act as new counterparties in FRBNY operations to conduct outright purchases or sales of U.S. Treasury securities and agency MBS along with primary dealers. Four firms participated in the Treasury securities counterparties pilot program, and three firms participated in the MBS counterparties pilot program. Each program ran for about one year—a period long enough for the FRBNY to evaluate the benefits and costs of a wider range of participants in its SOMA operations. The FRBNY's intent in conducting these pilot programs was to explore ways to broaden access to monetary policy operations and to determine the extent to which additional counterparties beyond the primary dealers can augment the FRBNY's operational capacity and resiliency in its monetary policy operations.

Temporary Open Market Operations and Other Reserve Management Tools

Recent Developments

- On July 27, 2016, outstanding reverse repurchase agreements (reverse repos or RRP) conducted under open market operations totaled \$67.7 billion. This amount is shown in table 1 as reverse repurchase agreements with others. Outstanding RRP from these operations ranged from \$17.1 billion to \$278.8 billion during the period from April 28, 2016, to July 27, 2016.
- As part of ongoing test operations, the Federal Reserve conducted a Term Deposit Facility (TDF) offering on August 11, 2016. The operation offered seven-day floating rate deposits with an early withdrawal feature, maximum individual award amounts of \$5 billion, 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. The Federal Reserve plans to conduct a similar routine TDF test operation each quarter in 2016. Results of the operations and technical details regarding the early withdrawal fea-

ture are available at www.frb.services.org/centralbank/term_deposit_facility.html.

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 repos 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. On December 16, 2015, the FOMC authorized the FRBNY to conduct open market operations, including overnight reverse repos and previously authorized term reverse repos, as necessary to maintain the federal funds rate in a target range of 1/4 to 1/2 percent to implement its monetary policy stance announced that day. Additional information is available at www.newyorkfed.org/markets/rrp_op_policies.html and www.newyorkfed.org/markets/rrp_fa.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 (up to a maximum bid 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

Since late 2009, the FRBNY has taken steps to expand the types of counterparties for reverse repos to include entities other than primary dealers. This initiative is intended to enhance the Federal Reserve's capacity to conduct large-scale reverse repo operations to drain reserves beyond what could likely be conducted through primary dealers. The additional counterparties are not eligible to participate in transactions conducted by the FRBNY other than reverse repos.

In 2010 and 2011, the FRBNY initiated three waves of counterparty expansions aimed at domestic money market funds. With each wave, the set of eligibility criteria was broadened to allow more and smaller money market funds to participate as counterparties. In addition, in July 2011, the FRBNY announced that it had accepted two GSEs—Freddie Mac and Fannie Mae—as reverse repo counterparties. In December 2011 and April 2012, the FRBNY announced that several banks had been accepted as reverse repo counterparties. In August 2012 and November 2014, the FRBNY released additional rounds of criteria for the acceptance of banks, savings associations, GSEs, and domestic money market funds as counterparties; institutions accepted under these criteria were announced in January 2013 and in January 2015. Although firms that meet the eligibility criteria are allowed to submit applications, the FRBNY does not anticipate increasing the total number of expanded RRP counterparties after the last wave unless the addition of new counterparties is deemed necessary to support the implementation of monetary policy. The FRBNY may amend the list of counterparties at its discretion.

Acceptance as a counterparty does not constitute a public endorsement by the FRBNY of any listed counterparty and should not substitute for prudent counterparty risk management and due diligence. Further information on reverse repo counterparties is available on the FRBNY's website at www.newyorkfed.org/markets/rrp_announcements.html

and www.newyorkfed.org/markets/expanded_counterparties.html.

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.⁴ Under this 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 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 is a program through which the Federal Reserve Banks offer interest-bearing term deposits to eligible institutions. A term deposit is a deposit 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; they 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.frb services.org/centralbank/term_deposit_facility.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/securitieslending.html.

Discount Window Lending

Recent Developments

- Credit provided to depository institutions through the discount window remains generally around its historically usual level. As presented in [table 5](#), discount window credit outstanding on July 27, 2016, was \$0.3 billion, and the lendable value of collateral pledged by borrowing institutions on that date was \$0.9 billion.

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.

⁴ Analogous services are offered by other major central banks.

Table 3. Discount window credit outstanding to depository institutions

Daily average borrowing for each class of borrower from April 28, 2016, to July 27, 2016

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	5	**
Assets: less than \$250 million	33	0.1
Thrift institutions and credit unions	4	**
Total	42	0.1

Note: Unaudited. Includes primary, secondary, and seasonal credit. Size categories based on total domestic assets from Call Report data as of March 31, 2016. 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 354 institutions borrowed.

² Average daily borrowing by all depositories in each category.

³ Includes branches and agencies of foreign banks.

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

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

April 28, 2016, to July 27, 2016

Rank by amount of borrowing	Number of borrowers	Daily average borrowing (\$ billions)
Top five	5	0.1
Next five	5	*
Other	32	0.1
Total	42	0.1

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.

www.federalreserve.gov/newsevents/reform_quarterly_transaction.htm.

During the financial crisis, 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_lendingdepository.htm and www.frbdiscountwindow.org.

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

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

Billions of dollars, as of July 27, 2016

Type of collateral	Lendable value
Loans	
Commercial	0.2
Residential mortgage	*
Commercial real estate	0.1
Consumer	0.3
Securities	
U.S. Treasury/agency	0.1
Municipal	*
Corporate market instruments	*
MBS/CMO: agency-guaranteed	0.1
MBS/CMO: other	0
Asset-backed	*
International (sovereign, agency, municipal, and corporate)	0
Other	
Term Deposit Facility deposits	0
Total	0.9

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 \$0.3 billion. The lendable value of collateral pledged by all depository institutions, including those without any outstanding loans, was \$1,602 billion. Lendable value is value after application of appropriate haircuts. Components may not sum to total because of rounding.

* Less than \$50 million.

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.⁵ Having identified institutions that pose a higher risk, the Federal Reserve then puts in place a standard set of risk controls that 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 by "acceptable collateral." 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. When a market price is not available, a haircut is applied to an internally modeled fair

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

As of July 27, 2016

Percent of collateral used	Number of borrowers	Total borrowing (\$ billions)
More than 0 and less than 25	17	*
25 to 50	13	*
50 to 75	14	*
75 to 90	13	0.2
More than 90	7	*
Total	64	0.3

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

* Less than \$50 million.

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/files/regulations/pdf/operating_circular_10.pdf.

Discount window loans are generally 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 mortgage-backed securities, 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. 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.

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

As of July 27, 2016

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	0.2	0.2	7/21/2016	7-day	0.89%
European Central Bank	0	0	—	—	—
Swiss National Bank	0	0	—	—	—
Total	0.2	0.2	—	—	—

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

The Federal Reserve periodically reviews its collateral margins and valuation practices. The current lending margins on discount window collateral took effect on August 1, 2016, and reflect the results from the most recent such review, as well as the incorporation of updated market data. Additional information on collateral margins is available on the Discount Window and Payments System Risk public website, www.frbdiscountwindow.org.

Liquidity Arrangements with Foreign Central Banks

Recent Developments

- As presented in table 7, as of July 27, 2016, dollar liquidity extended under the central bank liquidity swap arrangements totaled \$0.2 billion. Detailed information about swap operations is available at www.newyorkfed.org/markets/fxswap/fxswap.cfm.

Background

Because of the global character of bank funding markets, the Federal Reserve has at times coordinated with other central banks to provide liquidity. In December 2007, the Federal Reserve entered into agreements to establish temporary currency arrangements (central bank liquidity swap lines) with the European Central Bank and the Swiss National Bank in order to provide liquidity in U.S. dollars. Subsequently, the FOMC authorized swap lines with the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Canada, the Bank of Japan, Danmarks Nationalbank, the Bank of England, the Bank of Korea, the Banco de Mexico, the Reserve

Bank of New Zealand, Norges Bank, the Monetary Authority of Singapore, and Sveriges Riksbank. Two types of temporary swap lines were established: U.S. dollar liquidity swap lines and foreign currency liquidity swap lines. 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 arrangements 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 January 2014, the Federal Reserve and FCBs converted 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 any foreign currency. 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/liquidity_swap.html 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 www.newyorkfed.org/markets/fxswap/fxswap.cfm.

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. The combined information includes the accounts and results of operations of the 12 Reserve Banks and ML. Annual audited financial statements are available on the Federal Reserve Board's website at www.federalreserve.gov/monetarypolicy/bst_fedfinancials.htm, and quarterly unaudited financial reports are available at www.federalreserve.gov/monetarypolicy/bst_fedfinancials.htm#quarterly.

Recent Developments

- On August 19, 2016, the Federal Reserve Board published the "Federal Reserve Banks Combined Quarterly Financial Report" for the second quarter of 2016, which includes summary information on the combined financial position and results of operations of the 12 Reserve Banks and ML. All financial information included in the report is unaudited. The report is available on the Federal Reserve Board's website at www.federalreserve.gov/monetarypolicy/bst_fedfinancials.htm#quarterly.
- The average daily balance of the Federal Reserve SOMA holdings was approximately \$4.1 trillion during the first half of 2016. Net earnings from the portfolio were approximately \$58.1 billion (inclusive of \$56.6 billion of net interest income and \$1.5 billion of foreign currency translation gains); most of the earnings were attributable to interest income on Treasury securities and federal agency and GSE MBS.
- Total net loss for ML was \$14.5 million during the first half of 2016.
- After providing for the payment of dividends, the Reserve Banks remitted \$49.2 billion to the Treasury during the first half of 2016.

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 was signed into law.⁶ The act included 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 act modified the Federal Reserve's authority to provide emergency liquidity to nondepository institutions under section 13(3) of the Federal Reserve Act and prohibits (with certain exceptions) lending through the discount window to institutions that are registered as swap dealers or major swap participants.

Disclosure Requirements

As provided by the Dodd-Frank Act, 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 includes 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.

⁶ The full text of the Dodd-Frank Act is available at www.gpo.gov/fdsys/pkg/BILLS-111hr4173enr/pdf/BILLS-111hr4173enr.pdf.

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 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.

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.⁷ The provisions of section 716

⁷ See 78 FR 34545 (June 10, 2012). On June 5, 2013, the Federal Reserve Board issued an interim final rule to clarify that uninsured U.S. branches and agencies of foreign banks are treated as

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.

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.

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