



February 2017

FEDERAL RESERVE SYSTEM

Potential Implications of Modifying the Capital Surplus Account and Stock Ownership Requirement

Accessible Version

GAO Highlights

Highlights of [GAO-17-243](#), a report to the Chairman, Committee on Financial Services, House of Representatives

Why GAO Did This Study

Member banks of the Federal Reserve must purchase stock in their regional Reserve Bank, but historically received a 6 percent dividend annually on paid-in stock. A provision of the 2015 FAST Act modified the dividend rate formula for 85 larger member banks—and currently reduces the amount these banks receive. The FAST Act also capped the surplus capital the Reserve Banks could hold and directed that any excess be transferred to Treasury's general fund. Congress offset payments into the Highway Trust Fund by, among other things, instituting the Reserve Bank surplus account cap.

GAO was asked to report on the effects of these changes and the policy implications of modifying the stock ownership requirement. Among its objectives, this report (1) examines the effects of capping the Reserve Banks' aggregate surplus account and reducing the Reserve Bank stock dividend rate, and (2) evaluates the potential policy implications of modifying the stock ownership requirement for member banks under three scenarios.

GAO reviewed legislative history and relevant literature about the Federal Reserve, prior GAO reports, and interviewed academics and current and former officials of the Board of Governors, Reserve Bank, other banking regulators, and industry associations. In addition, GAO conducted structured interviews with 17 commercial banks, selected based on bank size and regulator.

GAO makes no recommendations in this report. GAO requested comments from the banking regulators and Treasury, but none were provided.

View [GAO-17-243](#). For more information, contact Lawrence L. Evans, Jr., at (202) 512-8678 or evansl@gao.gov

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What GAO Found

According to Federal Reserve System (Federal Reserve) officials, capping the surplus account had little effect on Federal Reserve operations, and GAO found that modifying the stock dividend rate formula had no immediate effect on membership. Reserve Banks fund operations, pay dividends to member banks, and maintain a surplus account before remitting excess funds to the Department of the Treasury (Treasury). Whether the transfers to Treasury's General Fund in the Fixing America's Surface Transportation Act (FAST Act) when the act also funds specific projects should be viewed any differently than the recurring transfers of Reserve Bank earnings to Treasury is debatable. Some stakeholders raised concerns about setting a precedent—future transfers could affect the Federal Reserve's independence and, consequently, autonomy in monetary policymaking. Dividend payments to 85 banks decreased by nearly two-thirds (first half of 2016 over first half of 2015), but GAO found no shifts in Reserve Bank membership as of December 2016. Some member banks affected by the rate change told GAO they had a few concerns with it and some said they might try to recoup the lost revenue, but none indicated they would drop membership.

Assuming that the policy goals—independence, balance of power, and geographical diversity—reflected in the original private-public Federal Reserve structure remain important, the implications of modifying the stock ownership requirement and therefore the Federal Reserve structure could be considerable. The scenarios discussed in this report are illustrative and do not represent all the ways in which the Federal Reserve structure might be altered. Also, the discussion of effects is limited because exact replacement structures are unknown. Retiring the stock could result in changes to the existing corporate structure of the 12 Reserve Banks. These changes could

- diminish Reserve Bank autonomy in relation to the Board of Governors of the Federal Reserve System (Board of Governors) by removing or changing Reserve Banks' boards of directors, which could limit the diversity of economic viewpoints in monetary policy discussions and centralize monetary policy decision making in the hands of the Board of Governors,
- eliminate the private corporate characteristics of Reserve Banks and convert them to government entities (such as field offices of the Board of Governors), which could lead to less private sector involvement and reduced financial independence of the Federal Reserve, and
- remove the authority the Reserve Banks currently have to conduct activities critical to the Federal Reserve, such as executing monetary policy through open market operations and those related to the Reserve Banks' role as fiscal agents for the federal government.

Making stock ownership voluntary could increase fluctuations in outstanding shares, affecting Federal Reserve governance and complicating the Reserve Banks' processes for managing their balance sheets. While modifying the stock ownership requirement could give member banks greater control of the capital tied to the stock, member and nonmember banks with which GAO spoke indicated that they likely would not change their membership in response to any modifications discussed in this report.

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Abbreviations

FAST Act	Fixing America’s Surface Transportation Act
FDIC	Federal Deposit Insurance Corporation
Board of Governors	Board of Governors of the Federal Reserve System
FOMC	Federal Open Market Committee
OCC	Office of the Comptroller of the Currency
Federal Reserve	Federal Reserve System
Treasury	Department of the Treasury

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February 24, 2017

The Honorable Jeb Hensarling Chairman Committee on Financial
Services House of Representatives

Dear Mr. Chairman,

The Federal Reserve System (Federal Reserve) consists of the Board of Governors of the Federal Reserve System (Board of Governors), 12 regional Reserve Banks that are federally chartered corporations with boards of directors, and the Federal Open Market Committee (FOMC). To become a member of the Federal Reserve, a commercial bank (that is, one offering banking services to the general public or to businesses) is required to subscribe to stock in its regional Reserve Bank. Only one-half of the stock subscription is paid to the Reserve Bank upon joining the Federal Reserve and the remainder is subject to call and payable on demand by the Reserve Bank. Membership, and thus stock ownership, in the Federal Reserve is required of all nationally chartered banks, while state-chartered banks may become members if they opt to and meet certain requirements. By statute, historically each member bank received a fixed 6 percent dividend annually on the amount of paid-in stock, an illiquid investment which cannot be sold or pledged as collateral.

In addition to the amount of the paid-in stock, the capital accounts of each Reserve Bank include a capital surplus account that is intended to ensure adequate capital is available to absorb possible losses. After paying its operating expenses and dividends, each Reserve Bank funds the capital surplus account, which, prior to December 2015, was equivalent to the amount of paid-in capital from member banks. Any remaining earnings are transferred to the Department of the Treasury (Treasury).

In December 2015, the Fixing America's Surface Transportation Act (FAST Act) (which reauthorized the Highway Trust Fund) modified the formula for dividends paid to certain large member banks by the Reserve Banks. The FAST Act changed the rate from 6 percent to the lesser of 6 percent or the highest accepted yield at the most recent auction of 10-year Treasury notes prior to the dividend payment date.¹ This new

¹Fixing America's Surface Transportation Act, Pub. L. No. 114-94, § 32203, 129 Stat. § 1312, 1739 (2015). Treasury notes (a form of obligation of debt issued by the government) are sold at auction and the competitive bids submitted in an auction determine the notes' yield, or interest rate, and price.

dividend rate formula only applies to member banks with assets of more than \$10 billion and currently results in dividend payments to these institutions that are significantly lower than 6 percent.² The FAST Act also capped the aggregate of the Reserve Banks' surplus accounts at \$10 billion and directed that any amounts of the surplus funds of the Reserve Banks that exceed, or would exceed, that amount be transferred to Treasury's General Fund. The Federal Reserve transferred a total of \$117 billion to Treasury's General Fund during 2015. Of that amount, \$19 billion was the amount necessary to reduce the Reserve Bank surplus accounts to the aggregate \$10 billion surplus cap specified in the FAST Act. Under the Board of Governors' previous policy of retaining surplus accounts in an amount equal to paid-in capital, the aggregate of the surplus accounts was approximately \$29 billion in December 2015. The FAST Act also authorized the transfer of \$70 billion from Treasury's General Fund to the Highway Trust Fund, and the transfer was offset, in part, by instituting the Reserve Bank surplus account cap.

You requested that we report on the implications of the dividend rate change and modifying or eliminating the existing requirement that all member banks purchase Reserve Bank stock.³ In this report, we (1) examine the historical rationale for the Reserve Banks' stock purchase requirement and 6 percent dividend, (2) assess the potential implications of capping the aggregate Reserve Bank surplus account and modifying the Reserve Bank stock dividend rate, and (3) analyze the potential policy implications of modifying the Reserve Bank stock ownership requirement for member banks under three scenarios.

For our first objective, we conducted a literature search on the history of the Federal Reserve, including the legislative history of the Federal Reserve Act. We also conducted a literature search on rates of return on selected investment products dating back to the 1850s. See appendix II for a selected bibliography of historical accounts we reviewed for this report. We determined that the sources of the rates of return data were sufficiently reliable for the purposes of our reporting objectives. In

²The Board of Governors must annually adjust the \$10 billion amount of total consolidated assets to reflect the change in the Gross Domestic Product Price Index, published by the Bureau of Economic Analysis. 12 U.S.C. § 289(a)(1)(C).

³A national bank is a commercial bank that is issued a charter by the Office of the Comptroller of the Currency. A state bank is issued a charter from a state of the United States.

addition, we interviewed a past Federal Reserve historian and selected academics.

To assess the potential implications of capping the aggregate surplus account, we reviewed past GAO, Congressional Research Service, and Congressional Budget Office reports and Board of Governors financial documents on the status of the surplus account. We interviewed Federal Reserve officials, including from the Board of Governors and the 12 Reserve Banks; former members of the Board of Governors who had written about the changes in the FAST Act; academics who had written extensively about the Federal Reserve; other federal bank regulators, including the Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency (OCC); and, banking industry associations. To assess the potential implications of modifying the Reserve Bank stock dividend rate, we reviewed Board of Governors financial documents as of June 30, 2016, for dividend payment information. We also conducted structured interviews with 17 commercial banks (14 members and 3 nonmembers) to gain their perspectives on the dividend rate modification and if it would affect their decision to be a member of the Federal Reserve. We selected the commercial banks to ensure representation for all size categories and primary federal banking regulator, using data from SNL Financial.⁴ We assessed the reliability of the data by reviewing information about the data and systems that produced them, and by reviewing assessments for previous GAO studies. We determined that the data we used remain sufficiently reliable for the purposes of our reporting objectives.

To assess the potential implications of modifying the stock ownership requirement, we reviewed academic literature on the structure and independence of central banks. We also interviewed selected academics and economists who had written extensively on central bank independence; the chairpersons of the board of directors for each Reserve Bank, who may not be affiliated with commercial banks; staff from FDIC and OCC; and banking industry associations. In the structured interviews with commercial banks (described above), we also sought to learn what factors might influence the banks' choice to become a member of the Federal Reserve and if potential modifications to the Reserve

⁴S&P Global Market Intelligence is a leading provider of financial data, news, and analytics. The data sourced in this report are from S&P Global Market Intelligence's SNL Financial database of publicly filed financial regulatory information. For this report, we refer to the source of the data for our analysis as SNL Financial.

Banks' stock ownership structure would affect their choice. We presented three scenarios (of changes to the stock ownership requirement and therefore the Federal Reserve structure) in the interviews to which respondents could react and discuss implications. The scenarios are illustrative and do not represent all of the ways in which the Federal Reserve structure might be altered nor does our analysis account for all of the potential consequences of stock ownership modifications. Furthermore, our discussion of the range of consequences is limited without knowledge of the mechanisms that could be put in place to retain the benefits of the current structure or mitigate any negative effects of the changes. See appendix I for more information on our scope and methodology.

We conducted this performance audit from February 2016 to February 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Overview of the Federal Reserve System

The Federal Reserve Act established the Federal Reserve to operate collectively as the country's central bank.⁵ The Federal Reserve Act established the Federal Reserve as an independent agency with a decentralized structure to ensure that monetary policy decisions would be based on a broad economic perspective from all regions of the country. The Federal Reserve's monetary policy decisions do not have to be approved by the President, the executive branch of the government, or Congress. However, the Federal Reserve is subject to oversight by Congress and conducts monetary policy so as to promote the long-run objectives of maximum employment, stable prices, and moderate long-term interest rates in the United States, as specified by law.

⁵Federal Reserve Act, Pub. L. No. 63-43, 38 Stat. 251 (1913).

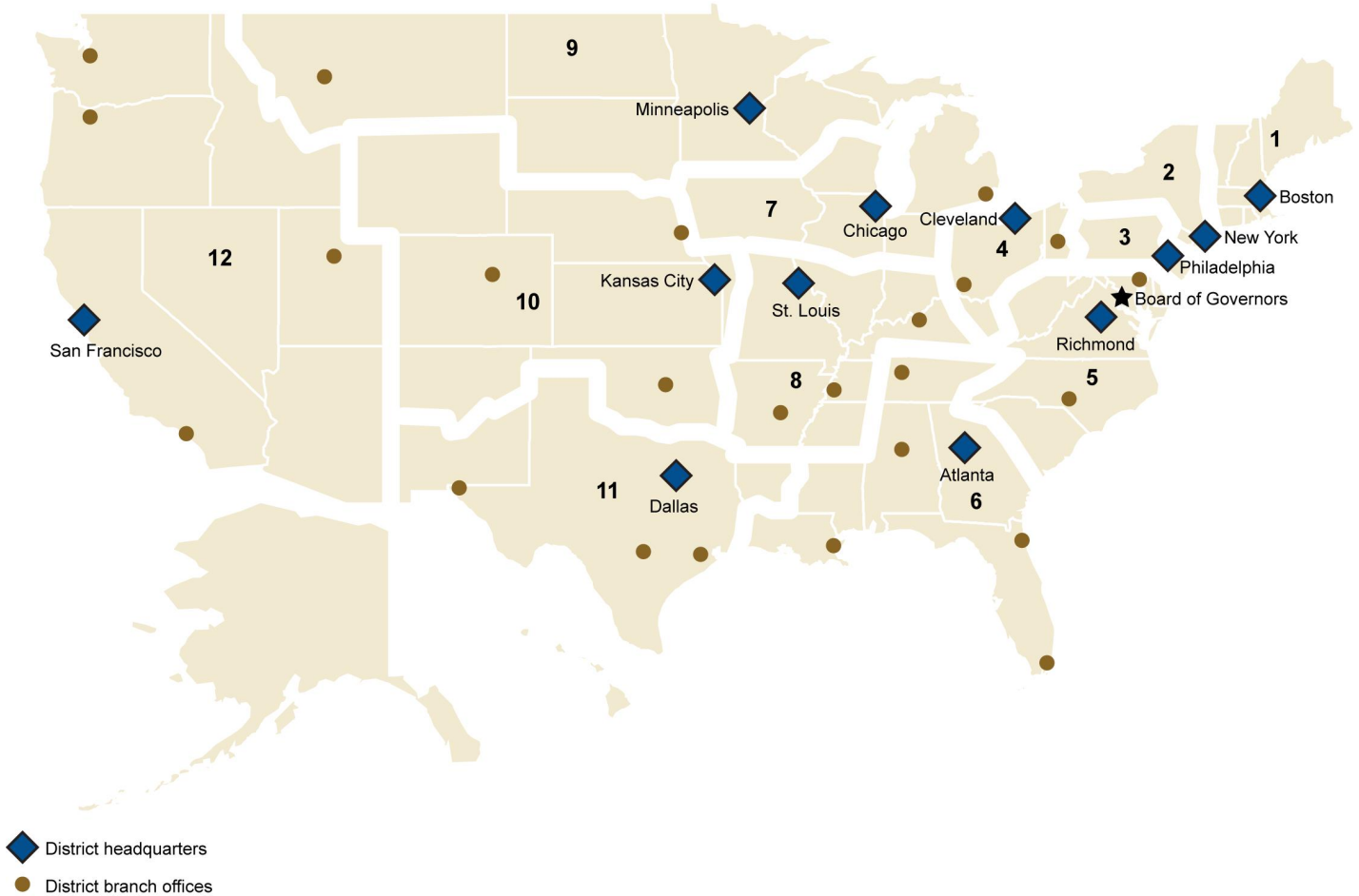
The Federal Reserve operates in a unique public and private structure. It consists of the Board of Governors (a federal agency), the 12 Reserve Banks (federally chartered corporations), and FOMC.

Board of Governors. The Board of Governors is an independent regulatory federal agency located in Washington, D.C., and has broad interest in monitoring and promoting the stability of financial markets. The Board of Governors' authorities include: supervising bank and thrift holding companies, state-chartered banks that are members of the Federal Reserve, and the U.S. operations of foreign banking organizations; reviewing and determining discount rates for lending to depository institutions; conducting monetary policy (in cooperation with FOMC); and providing general supervision over the operations of the Reserve Banks.⁶ The top officials of the Board of Governors are the seven members who are appointed by the President and confirmed by the Senate. Moreover, the Federal Reserve Act requires the Board of Governors to submit written reports to Congress twice each year containing discussions of the conduct of monetary policy and economic developments and prospects for the future. The act also requires the Chair of the Board of Governors to testify on the conduct of monetary policy twice each year in connection with the monetary policy report, as well as economic development and prospects for the future.

Reserve Banks. The Federal Reserve is divided into 12 districts, with each district served by a regional Reserve Bank. In most cases, each regional Reserve Bank also operates one or more branch offices (see fig. 1). The Reserve Banks are not federal agencies; rather, each Reserve Bank is a federally chartered corporation with a board of directors and member banks that are stockholders.

⁶The Dodd-Frank Wall Street Reform and Consumer Protection Act includes provisions that expanded the roles and responsibilities of the Federal Reserve. For instance, the act authorizes the Board of Governors to supervise nonbank financial companies designated as systemically significant by the Financial Stability Oversight Council and to supervise savings and loan holding companies.

Figure 1: Twelve Federal Reserve Districts, Board of Governors, and Reserve Banks and Their Branch Locations, as of December 2016



Sources: Board of Governors of the Federal Reserve System (data); Map Resources (map). | GAO-17-243

Under the Federal Reserve Act, Reserve Banks are subject to the general supervision of the Board of Governors. The Reserve Banks were established by Congress as the operating arms of the Federal Reserve, and they combine both public and private elements in performing a variety of services and operations. These functions include

- participating in formulating and conducting monetary policy;
- providing payment services to depository institutions, including transfers of funds, automated clearinghouse services, and check collection;
- distributing coin and currency;

- performing fiscal agency functions for Treasury, certain federal agencies, and other entities;
- providing short-term loans to depository institutions;
- serving consumers and communities by providing educational materials and information on financial consumer protection rights and laws and information on community development programs and activities; and
- supervising bank holding companies, state member banks, savings and loan holding companies, U.S. offices of foreign banking organizations, and designated financial market utilities pursuant to authority delegated by the Board of Governors.

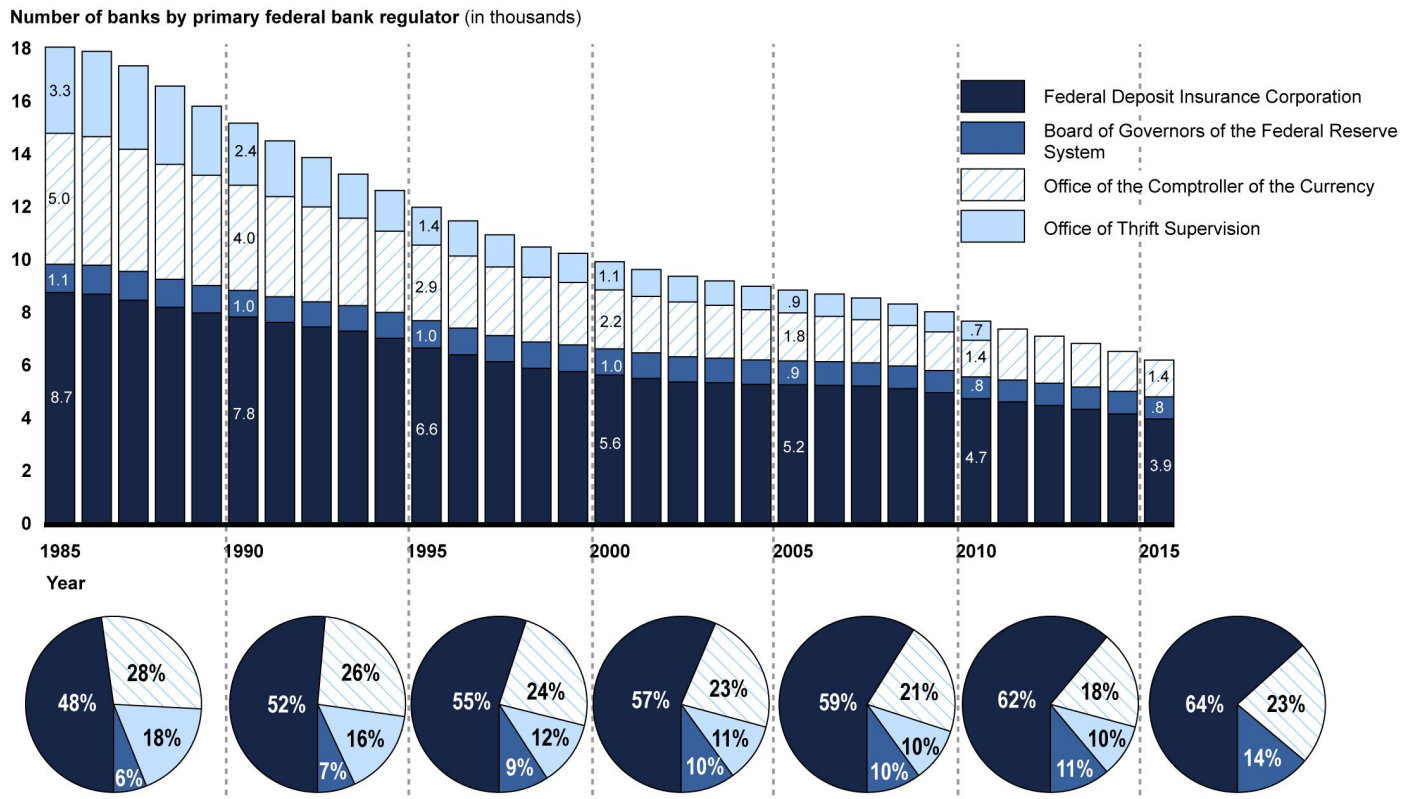
In addition, certain services are provided to foreign and international monetary authorities, primarily by the Federal Reserve Bank of New York.⁷

State-chartered member banks are subject to supervision by the state in which they are chartered and the Board of Governors (through a regional Reserve Bank) as a condition of membership. National banks are chartered and supervised by OCC.⁸ State nonmember banks are supervised by the state in which they are chartered and by FDIC. See figure 2 for a chart displaying the number and percentage of commercial banks supervised by each prudential regulator.

⁷For example, the Federal Reserve Bank of New York maintains dollar deposits of numerous foreign central banks. In addition, FOMC has authorized and directed the Federal Reserve Bank of New York to execute foreign exchange transactions in 14 foreign currencies, to hold balances in those currencies, and to invest such foreign currency holdings. In addition, FOMC has authorized and directed the Federal Reserve Bank of New York to establish swap lines with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank.

⁸Based on Board of Governors data, national banks account for the bulk of total combined commercial bank assets.

Figure 2: Number and Percentage of Commercial Banks and Savings and Loans Supervised, by Regulator (1985—2015)



Source: GAO analysis of Federal Deposit Insurance Corporation data. | GAO-17-243

Note: The Dodd-Frank Wall Street Reform and Consumer Protection Act eliminated the Office of Thrift Supervision and transferred its oversight responsibilities for federal savings and loans to the Office of the Comptroller of the Currency, for state-chartered savings and loans to the Federal Deposit Insurance Corporation, and for savings and loan holding companies to the Board of Governors of the Federal Reserve System.

FOMC. FOMC plays a central role in the execution of the Federal Reserve’s monetary policy mandate to promote price stability, maximum employment, and moderate long-term interest rates in the United States.⁹ FOMC is responsible for directing open market operations—the purchase and sale of securities in the open market by a central bank—to influence the total amount of money and credit available in the economy. FOMC has authorized and directed the Federal Reserve Bank of New York to conduct open market operations by engaging in purchases or sales of

⁹FOMC consists of the seven members of the Board of Governors, the Federal Reserve Bank of New York president, and four other Reserve Bank presidents who serve on a rotating basis. All presidents participate in FOMC deliberations although not all vote.

certain securities, typically U.S. government securities, in the secondary market. FOMC also plays a central role in monetary policy strategy and communication.

Federal Reserve Income, Surplus Account, and Remittances to Treasury

Reserve Banks derive income from various sources, maintain surplus accounts, and remit earnings in excess of expenses to Treasury. The Reserve Banks derive income primarily from the interest on their holdings of U.S. government securities, agency mortgage-backed securities, and agency debt acquired through open market operations. Other sources of income are the interest on foreign currency investments held by the Reserve Banks; interest on loans to depository institutions; reimbursements for services performed as fiscal agent for Treasury and other agencies; and fees received for payment services provided to depository institutions, such as check clearing, funds transfers, and automated clearinghouse operations. However, Reserve Banks are not operated for profit. The Reserve Banks use earnings to pay operational expenses and dividends to member banks and to fund their capital surplus accounts.¹⁰

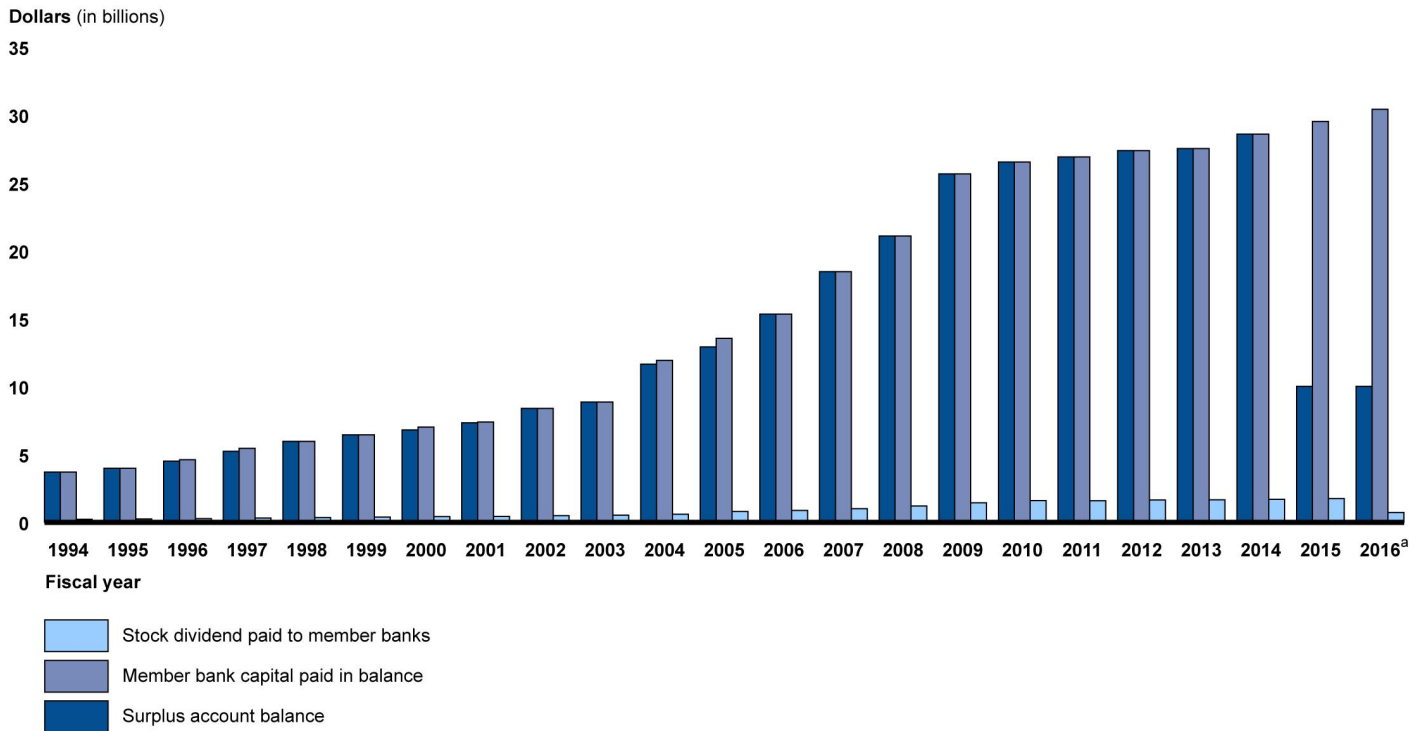
The surplus account is primarily intended to cushion against the possibility that total Reserve Bank capital would be depleted by losses incurred through Federal Reserve operations.¹¹ Until enactment of the FAST Act, Federal Reserve policy as established in the Financial Accounting Manual for Federal Reserve Banks required the Reserve Banks to retain a surplus balance equal to the 3 percent that commercial banks pay in to purchase Reserve Bank stock. Due to this matching provision, as the value of member banks' capital and surplus increased

¹⁰Each Reserve Bank is required by Board of Governors policy to transfer to the government its residual (or excess) earnings, after providing for the cost of operations, payment of dividends, and surplus funds not to exceed a Reserve Bank's allocated portion of an aggregate of \$10 billion.

¹¹GAO, *Federal Reserve System: The Surplus Account*, [GAO-02-939](#) (Washington, D.C.: Sept. 18, 2002).

over time, so did the values of the Federal Reserve’s surplus account (see fig. 3).¹²

Figure 3: Growth in Reserve Banks’ Aggregate Surplus Account Balance, Member Bank Capital Paid In, and Federal Reserve Stock Dividend Paid to Member Banks (dollars in billions) (1994—2016)



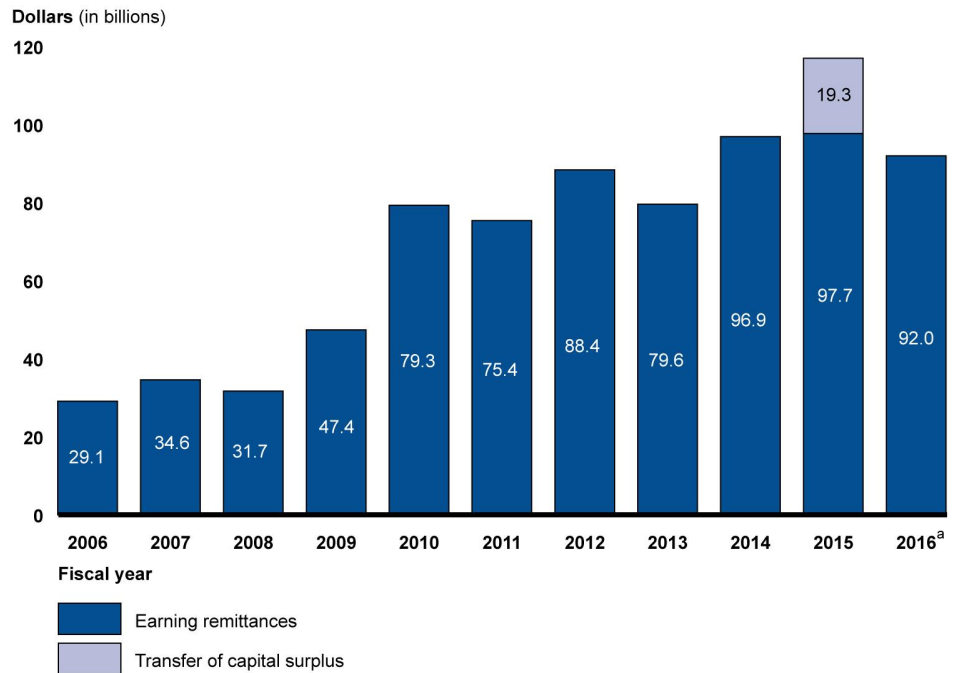
Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-17-243

^aPreliminary unaudited result as of February 2017.

The Reserve Banks then transfer earnings in excess of expenses to Treasury. About 95 percent of the Reserve Banks’ net earnings have been transferred to Treasury since the Federal Reserve began operations in 1914. The transfers, known as remittances, have been above historic levels since the 2007—2009 financial crisis (see fig. 4).

¹²Each Reserve Bank holds an undistributed net income account that reflects the amount of net earnings for the current year that has not been distributed. Each week, the sum of the balance in the capital surplus account and undistributed net income is compared with the paid-in capital account. If the amount of the capital surplus account and undistributed net income combined is greater than capital paid-in, the excess is paid to Treasury a week later. If significant losses over the following week would cause this planned payment to Treasury to exceed the undistributed net income, the payment amount would be lowered to avoid reducing the capital surplus account.

Figure 4: Remittances from the Federal Reserve System to the Department of the Treasury (2006—2016)



Source: GAO analysis of Board of Governors of the Federal Reserve System data. | GAO-17-243

Note: The Reserve Banks transferred to Treasury \$19.3 billion from their capital surplus on December 28, 2015, which was the amount necessary to reduce aggregate Reserve Bank surplus to the \$10 billion surplus limitation in the Fixing America’s Surface Transportation Act.

^aPreliminary unaudited result as of January 2017.

Stock Purchase Requirement for Member Banks and Membership Benefits

Under the Federal Reserve Act, a member bank (a national bank or state-chartered bank that applies and is accepted to the Federal Reserve) must subscribe to capital stock of the Reserve Bank of its district in an amount equal to 6 percent of the member bank’s capital and surplus.¹³ The member bank will pay for one-half of this subscription upon approval by

¹³12 U.S.C. § 287 and 12 C.F.R. § 209.4. See also 12 C.F.R. § 209.1(d)(1), which defines “capital stock and surplus” as the paid-in capital stock and paid-in surplus of the bank, less any deficit in the aggregate of its retained earnings, gains (losses) on available for sale securities, and foreign currency translation accounts, all as shown on the bank’s most recent report of condition.

the Reserve Bank of its application for capital stock (with the remaining half of the subscription subject to call by the Reserve Bank). The capital stock of each Reserve Bank is valued at \$100 per share. When a member bank increases its capital stock or surplus, it must subscribe for an additional amount of Reserve Bank stock equal to 6 percent of the increase with half of the stock paid in. Conversely, when a member bank reduces its capital stock or surplus it is to surrender the same amount of stock to its regional Reserve Bank. Shares of the capital stock of Reserve Banks owned by member banks do not carry with them the typical features of control and financial interest conveyed to holders of common stock in for-profit organizations. For example, member banks cannot transfer or sell Reserve Bank stock or pledge it as collateral; voting rights do not change with the number of shares held; and each member bank has only a single vote in those director elections in which they are eligible to vote.

Currently, stock ownership provides a dividend payment and the right to vote for two classes of Reserve Bank directors, as discussed later. Under the original Federal Reserve Act, the annual dividend rate was 6 percent on paid-in capital stock and was cumulative. Therefore, member banks would earn a dividend of 0.5 percent per month on the amount of their paid-in capital stock. The Reserve Banks' long-standing practice is to make dividend payments on the last business days of June and December (that is, a dividend payment of 3 percent twice a year).

Provisions in the FAST Act effective January 1, 2016, altered the dividend rate that some member banks receive on paid-in capital. For banks with more than \$10 billion in consolidated assets, the dividend rate was reduced from 6 percent per annum to the lesser of 6 percent or the highest accepted yield at the most recent auction of 10-year Treasury notes before the dividend payment date.¹⁴ The high yield of the 10-year Treasury note auctioned on June 30, 2016 (the last auction before the dividend payment) was 1.702 percent, and on December 30, 2016, was 2.233 percent. The dividend rate for member banks with less than \$10 billion in consolidated assets remains at 6 percent. The Reserve Banks continue to make dividend payments semiannually.

¹⁴Federal Reserve member banks with more than \$10 billion in assets totaled 85 as of December 31, 2015, compared to 1,811 member banks with less than \$10 billion in assets.

Reserve Bank Boards of Directors

The composition of boards of directors for Reserve Banks is statutorily determined and intended to ensure that each board represents both the public and member banks in its district. The Federal Reserve Act established nine-member boards of directors to govern all 12 Reserve Banks. Each board is split equally into three classes of directors. Class A directors represent the member banks, while Class B and C directors represent the public. For Class B and C directors, the Federal Reserve Act requires “due but not exclusive consideration to the interests of agriculture, commerce, industry, services, labor, and consumers.”¹⁵ The Federal Reserve Act also requires that member banks elect Class A and Class B directors and that the Board of Governors appoints Class C directors. The Federal Reserve Act provides that the chairman of the board, like all Class C directors, cannot be an officer, director, employee, or stockholder of any bank. The principal functions of Reserve Bank directors are to play a role in the conduct of monetary policy; oversee the general management of the Reserve Bank, including its branches; and act as a link between the Reserve Bank and the community.¹⁶

The boards of directors of Reserve Banks play a role in the conduct of monetary policy in three primary ways: (1) by providing input on economic conditions to the Reserve Bank president (all 12 Reserve Bank presidents attend and participate in deliberations at each FOMC meeting); (2) by participating in establishing discount rate recommendations (interest rate charged to commercial banks and other depository institutions on loans received from their regional Reserve Bank’s discount window) for Board of Governors’ review and determination; and (3) for the Class B and C directors, by appointing Reserve Bank presidents with the approval of the Board of Governors.¹⁷

¹⁵12 U.S.C. § 302.

¹⁶See Federal Reserve System, “Roles and Responsibilities of Federal Reserve Directors,” available online at www.federalreserve.gov/publications/

¹⁷Until July 2010, the Federal Reserve Act provided that Reserve Bank presidents were appointed by all directors on their boards of directors, with Board of Governors’ approval. However, pursuant to section 1107 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, only Class B and Class C directors are authorized to appoint Reserve Bank presidents (with the approval of the Board of Governors). Because the Federal Reserve Act requires the first vice president to be appointed in the same manner as the president, this requirement also applies to first vice presidents (who serve as the chief operating officer in each Reserve Bank).

Central Bank Independence

A large amount of research has been produced on the attributes and effects of central bank independence.¹⁸ According to the research, a high level of central bank independence is generally considered to be desirable. The research has generally found that countries with high central bank independence have been able to maintain lower levels of inflation.¹⁹ Central bank independence can be divided into three categories (political, instrument, and financial independence), as described in the following bullets.

- Political independence is based on a central bank's capacity to define monetary policy strategy (goals) without political interference. Political independence encompasses appointing procedures, relationships with the government, and formal responsibilities.
- Instrument independence is based on a central bank's capacity to define monetary policy instruments without political interference. Instrument independence for a central bank includes the ability to avoid financing public spending by money creation, autonomy in

¹⁸For example, see Alberto Alesina and Lawrence H. Summers, *Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence*, *Journal of Money, Credit and Banking*, vol. 25, no. 2 (May 1993); Marco Arnone, Bernard J. Laurens, and Jean-Francois Segalotto, "The Measurement of Central Bank Autonomy: Survey of Models, Indicators, and Empirical Evidence," International Monetary Fund Working Paper 06/227 (October 2006); Alex Cukierman, *Central Bank Finances and Independence – How Much Capital Should a Central Bank Have?* in *The Capital Needs of Central Banks*, eds. Sue Milton and Peter Sinclair (London, England and New York, NY: Routledge, 2011); Alex Cukierman, Steven B. Webb, Bilin Neyapti, *Measuring the Independence of Central Banks and Its Effect on Policy Outcomes*, *World Bank Economic Review*, vol. 6, no. 3 (September 1992); Donato Masciandaro, "More Than the Human Appendix: Fed Capital and Central Bank Financial Independence," BAFFI CAREFIN Centre Research Paper 2016-35 (September 2016); and Peter Stella and Ake Lönnberg, "Issues in Central Bank Finance and Independence," International Monetary Fund Working Paper 08/37 (February 2008).

¹⁹The literature on central bank independence generally uses two different strategies to capture the degree of independence of a central bank: (1) indexes based on central bank legislation known as de jure or legal independence or (2) indexes based on the turnover rate of the central bank governor known as de facto or actual independence. While research generally shows that a high level of central bank independence is tied to low levels of inflation, there are some exceptions. Specifically, de jure independence is more predictive when looking at developed countries but less useful when studying central banks of developing countries. Studies also suggest that research on central bank independence and inflation may be sensitive to outliers; that is, data values that differ greatly from the majority of a set of data.

setting interest rates, and ability to conduct monetary policy without banking sector oversight responsibilities.

- Financial independence is based on a central bank's capacity to govern its own budget. Financial independence encompasses conditions for capitalization and recapitalization, determination of the central bank budget, and arrangements for profit distribution and loss coverage.

Independence in the implementation of monetary policy can be a function of the degree of independence in all three categories: political, instrument, and financial. Lower degrees of independence in any of these areas can affect monetary policy independence. Existing research shows that the Federal Reserve is relatively independent overall compared to central banks in other advanced economies.²⁰ The level of political independence is lower for the Federal Reserve than its instrument or financial independence due in part to existing appointment procedures for the Board of Governors, whose members are appointed by the President and confirmed by the Senate. However, Board of Governors officials stated that Federal Reserve political independence is strengthened by the fact that Reserve Bank presidents are not political appointees. In addition, the instrument independence of the Federal Reserve is high, and the financial independence of the Federal Reserve is also relatively high.

Rationales for Stock Purchase Requirement and Dividend Rates

According to legislative history and historical accounts that we reviewed, the stock purchase requirement in the Federal Reserve Act established an ownership and control arrangement at Reserve Banks to facilitate a balance of power between the Board of Governors and private interests, capitalized the Reserve Banks, and helped support the new national currency created by the act. Based on our interview with a past Federal Reserve historian and historical accounts, the dividend rate of 6 percent was intended to compensate member banks for the requirement to provide funds to the Reserve Banks to begin operations and the risk of the Federal Reserve not succeeding, as well as to attract state-chartered banks to the Federal Reserve.

²⁰Comparatively, Germany and France are considered to have central banks with very high levels of independence, while Singapore and New Zealand have central banks that are considered to have low independence.

Stock Purchase Requirement Established an Ownership and Control Structure for Reserve Banks as a Counterbalance in the Federal Reserve

According to the legislative history and historical accounts related to the Federal Reserve Act, debate over the creation of the Federal Reserve focused on the balance of power among economic regions of the United States and between the private sector and government.²¹ The resultant corporate structure of Reserve Banks was intended to help balance the influence of government over the central bank, of different regions, and of small versus large banks, as well as to help fund the Federal Reserve. Many Americans were resistant to the creation of a central bank (dating back to the nation's founding); thus, early drafts of proposals for a central bank did not include the term "central bank." However, there was strong recognition that the nation needed a central bank to forestall and mitigate financial panics. There was considerable disagreement about how it should be structured, including considerations about the role of private bankers versus government officials, how centralized the new bank should be, and the extent of its powers.

The Federal Reserve Act as proposed in January 1913 by Representative Carter Glass generally was viewed as occupying the middle ground between positions advocating for government control over the Federal Reserve and positions advocating for more control by private commercial banks. The Glass bill proposed creating up to 15 Reserve Banks and the Board of Governors.²² The Reserve Banks were modeled after clearinghouses or "banker's banks" and some European central banks in that they would be funded by selling stock shares to commercial banks. In particular, the design adopted for the Federal Reserve was federated, with independent Reserve Banks overseen by the Board of Governors.

Under the bill, each Reserve Bank was required to have minimum capital to begin business. According to a past historian of the Federal Reserve, proponents in Congress of a central bank did not want to fund it, but needed to raise cash for capital and gold to back Federal Reserve notes

²¹See appendix II for a selected bibliography of historical accounts we reviewed for this report.

²²The Federal Reserve Act ultimately provided for not less than 8 or more than 12 Reserve Banks. The intent of the reduction in Reserve Banks from 15 was to centralize more control of the Federal Reserve in the Board of Governors.

that would serve as the national currency. The original proposal required member banks to purchase stock equal to 20 percent of their paid-in and unimpaired capital, with one-half paid on joining the Reserve Bank and one-half callable from the member bank. The Senate and conference committees agreed to change the capital of the Federal Reserve to 6 percent of member banks' capital and surplus rather than 20 percent of capital alone as provided in the Glass bill.²³ This change yielded almost the same total capital but satisfied small banks claiming that the Glass bill discriminated against them. Member banks had to pay for the stock in gold or gold certificates, which concentrated gold deposits in the Reserve Banks to support Federal Reserve notes.

The bill also required that each national bank subscribe to the stock of the Reserve Bank in its district. Only national banks were compelled to subscribe because their charters were issued by the federal government. State-chartered banks were not required to purchase Reserve Bank stock but were permitted to join the Federal Reserve if they met certain requirements. State-chartered banks opposed mandatory membership because they did not want to be subject to supervision by a federal regulator. The mandatory nature of national bank membership and stock ownership was controversial when the Federal Reserve Act was under debate. But for Glass, "the compulsory and pro rata capital contribution were 'means to the achievement of a democratic organization constituted by the democratic representation of the several institutions which are members and stockholders of a reserve bank'" and also "considered necessary for the establishment of corporate entities that would act 'primarily in the public interest.'"²⁴ In addition, Senator Robert Owen, primary sponsor of the Federal Reserve Act in the Senate, supported the stock purchase requirement because he believed it would ensure that commercial banks would have an incentive to safeguard the Federal Reserve.²⁵

²³A conference committee is appointed by the House of Representatives and Senate to resolve disagreements on a particular bill. Conference committees exist to draft a compromise bill that both houses can accept.

²⁴See Clifford, A. Jerome, *The Independence of the Federal Reserve System* (Philadelphia, Penn.: University of Pennsylvania Press, 1965), citing House of Representatives, Committee on Banking and Currency, *Changes in the Banking and Currency System of the United States*, 63rd Cong., 1st sess., report No. 69 (Sept. 9, 1913).

²⁵Senate, Committee on Banking and Currency, *Banking and Currency*, 63rd Cong., 1st sess., report No. 133, part 1 (Nov. 22, 1913.)

Dividend Rate of 6 Percent Was Intended to Compensate for Bank Costs and Risks and Attract State Banks

The rationales for paying a 6 percent dividend rate included compensating banks for opportunity costs for providing capital and reserves to the Reserve Banks and attracting state-chartered banks to Federal Reserve membership. According to the legislative history and other information we reviewed, notable proposals for creating a central bank included stock and dividend payments. One of the early proposals for a central bank was written in 1910 by Paul Warburg and included dividends on central bank stock of 4 percent. The original Federal Reserve Act proposed by Representative Glass provided for a dividend rate of 5 percent. Glass stated in his report on the 1913 bill that 5 percent represented the normal rate of return from current bank investments “considering the high character of the security offered.” Debate in the Senate and conference committee resulted in a 6 percent dividend rate on Reserve Bank stock. This rate was comparable to those of European central banks of the time.

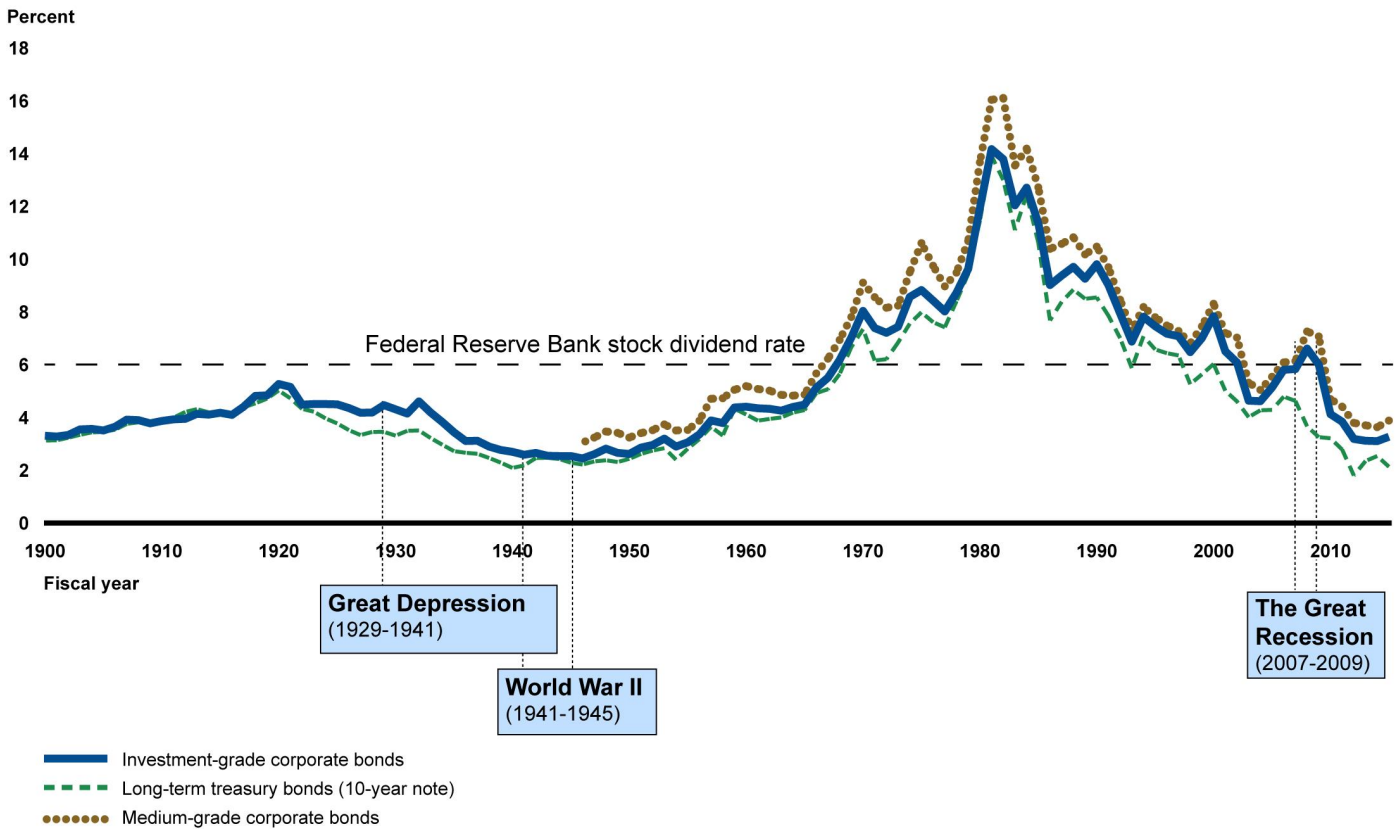
Based on our interviews with a past Federal Reserve historian, one of the rationales for creation of the 6 percent dividend rate was to compensate member banks for the opportunity costs of the capital they invested in the Reserve Bank stock. National banks and state-chartered banks that chose to join the Federal Reserve were required to purchase the stock and therefore could not invest this capital in other instruments that might earn a higher return. Also, the 6 percent dividend rate included a risk premium associated with the stock of this new institution. While the Reserve Banks are seen as safe today, during the debates over the Federal Reserve Act there was worry that they would fail, particularly smaller Reserve Banks in rural regions of the country that had less initial capital. However, concerns were raised about making the dividend rate so attractive that member banks would pull too much bank capital away from the local community. Lastly, the dividend was intended to help induce state-chartered banks to join the Federal Reserve. As noted earlier, state-chartered banks were not required to join the Federal Reserve and purchase Reserve Bank stock and therefore would not be subject to supervision by the Federal Reserve. As a result, a low percentage of state-chartered banks initially joined the Federal Reserve and there was a gap in the Board’s knowledge of the safety and soundness of the banking system. Thus, the 6 percent dividend rate was

intended as an incentive for state-chartered banks to voluntarily join the Federal Reserve.²⁶

To examine the comparative value of a dividend rate of 6 percent since the enactment of the Federal Reserve Act, we examined rate of return information on Treasury and certain corporate bonds. (See appendix I for information about our data sources and methodology.) As shown in figure 5, returns on investment-grade and medium-grade corporate bonds and Treasury bonds varied widely from 1900 through 2015. Before enactment of the Federal Reserve Act in 1913, returns for investment-grade corporate bonds and Treasury bonds were around 4 percent and stayed in that range until about 1960, when they began to rise dramatically. Returns for each of the instruments (medium-grade corporate bond data were recorded from the mid-1940s) were consistently above 6 percent from the early 1970s to the early 1990s, and peaked around 1980 at about 16 percent. Returns for each of the bond categories above are now below 6 percent. In addition, we reviewed U.S. stock data and found total returns to average about 6.5 percent over more than a century. However, stocks can pose higher variability in returns than corporate bonds and Treasury securities.

²⁶The dividend did not initially serve to attract many state-chartered banks, as less than 8 percent of all state-chartered banks chose to join the Federal Reserve during its first decade in operation. See Charles Calomiris, Matthew Jaremski, Haelim Park, and Gary Richardson, "Liquidity Risk, Bank Networks, and the Value of Joining the Federal Reserve System," National Bureau of Economic Research Working Paper 21684 (Cambridge, Mass.: October 2015); available at <http://www.nber.org/papers/w21684>. State-chartered members constituted 15 percent of all insured U.S. commercial banks as of December 2015.

Figure 5: Annual Rates of Return on Investment-Grade Corporate Bonds, Long-Term Treasury Bonds, and Medium-Grade Corporate Bonds Compared with the 6 Percent Dividend Rate for Federal Reserve Bank Stock (1900—2015)



Source: GAO. | GAO-17-243

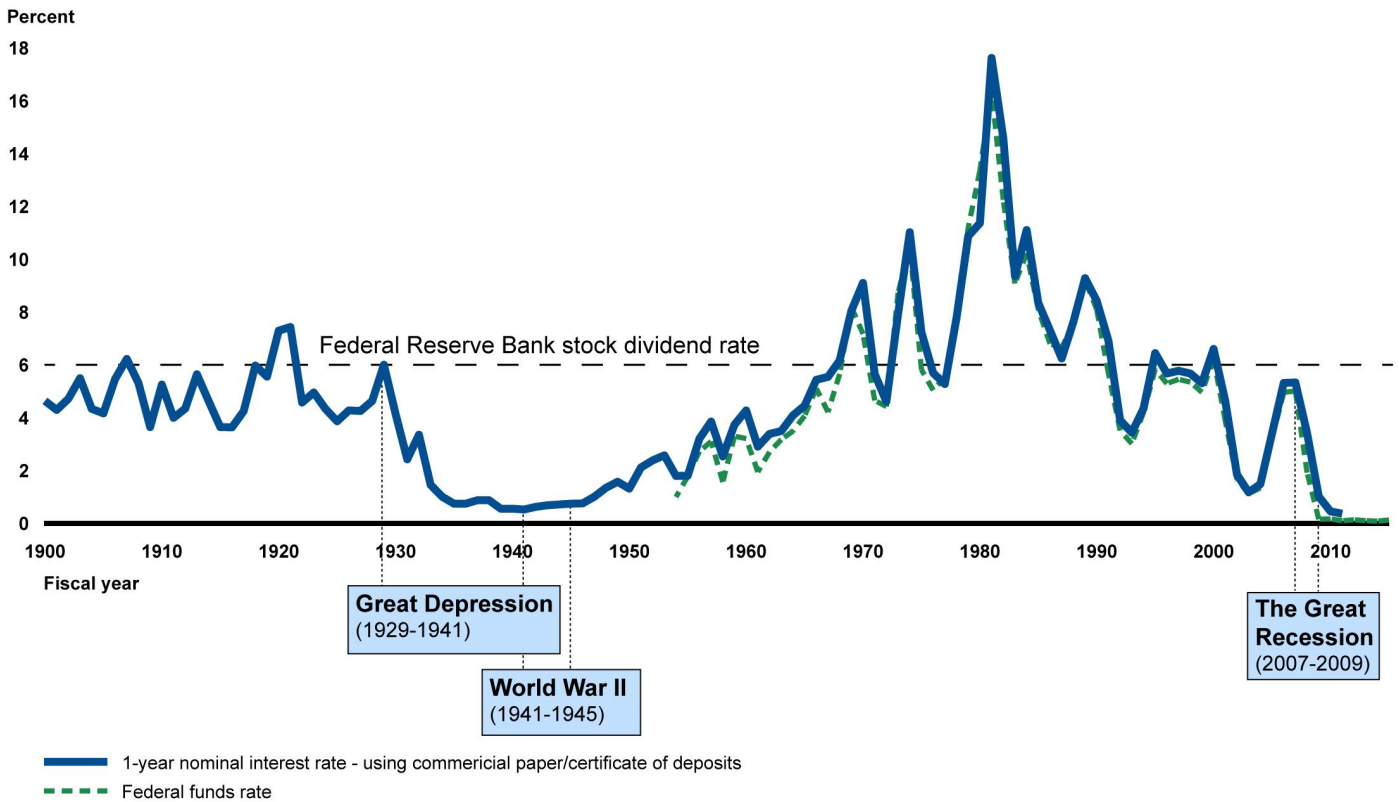
We also compared the 6 percent Reserve Bank dividend rate to the federal funds rate and 1-year nominal interest rates.²⁷ We analyzed the federal funds rate—the interest rate at which depository institutions trade federal funds (balances held at Reserve Banks) to other depository institutions overnight—to consider a member bank’s opportunity costs of holding a share of Reserve Bank stock. The federal funds rate represents a market of interbank lending at low risk. We collected data on the federal funds rate since 1954. In addition, we analyzed a nominal interest rate

²⁷Nominal interest rate is the rate of interest before adjustment for inflation.

series to understand opportunity costs prior to 1954.²⁸ As shown in figure 6, nominal interest rates were between 4 percent and 6 percent in 1913, but dipped dramatically during the Great Depression and World War II. Rates reached 6 percent again in the late 1960s and then peaked around 18 percent in the early 1980s. The federal funds rate has been near zero since the 2007—2009 financial crisis.

²⁸The nominal interest rate series is computed as the total return of reinvesting the 6-month prime commercial paper rate twice a year. Commercial paper consists of short-term, promissory notes issued primarily by corporations that mature, on average, in about 30 days with a range up to 270 days. The 6-month prime commercial paper rate is the average of offering rates on commercial paper placed by several leading dealers for firms with bond ratings of AA or equivalent. In 1998, the 6-month prime commercial paper rate was replaced by the 6-month certificate of deposit rate. A certificate of deposit is a savings account that holds a fixed amount of money for a fixed period, such as 6 months, 1 year, or 5 years. In exchange, the issuing bank pays interest. The 6-month certificate of deposit rate is a 6-month rate for certificates of deposit in the secondary market.

Figure 6: Federal Funds Rate and 1-Year Nominal Interest Rate Compared with the 6 Percent Dividend Rate for Federal Reserve Bank Stock (1900—2015)



Source: GAO. | GAO-17-243

Potential Implications of Modifying the Capital Surplus Account and Dividend Rate

Based on our interviews with Federal Reserve officials, the cap on the aggregate Reserve Banks' surplus account had little effect on Federal Reserve operations, and we found that the modification to the Reserve Bank stock dividend rate has had no immediate effect on membership. While it is debatable whether transferring funds from the Federal Reserve to Treasury when the FAST Act also funded specific projects should be viewed any differently than the recurring transfers that occur on a regular basis, some stakeholders raised concerns about future transfers that could ultimately affect, among other things, the Federal Reserve's financial independence and consequently, autonomy in monetary policy decision making (instrument independence). Although commercial banks

and Federal Reserve officials we interviewed raised a number of concerns about the stock dividend rate change, it appears to have had no effect on Reserve Bank membership as of December 2016.

Surplus Account Cap Has Not Impeded Federal Reserve's Operations but Raises Other Questions for Some

According to Board of Governors officials, the statutory requirement to cap the surplus account and transfer excess funds has not impeded Federal Reserve operations as of December 2016. However, according to current and former Federal Reserve officials we interviewed, the nature of the transfer of funds, which were added to Treasury's General Fund and used as an offset to make up a shortfall in the Highway Trust Fund, raises questions about the possibility of future transfers. They also raised questions that the cap could negatively affect the Federal Reserve's independence in monetary policy decision making by rendering it dependent on Treasury for recapitalization in the event that total Reserve Bank capital is depleted.

The FAST Act, which authorized the Highway Trust Fund for fiscal year 2016 through fiscal year 2020, requires that the aggregate of the Reserve Banks' surplus funds not exceed \$10 billion and directed that amounts in excess of \$10 billion be transferred to Treasury's General Fund. The excess of Reserve Bank surplus over the \$10 billion limitation as of the December 4, 2015, enactment date of the FAST Act was \$19.3 billion, which was transferred to Treasury on December 28, 2015. The \$19.3 billion transferred from the surplus account was part of \$117 billion in earnings the Federal Reserve transferred to Treasury in 2015. The FAST Act transferred a total of \$70 billion from Treasury's General Fund to make up a projected shortfall in the Highway Trust Fund through fiscal year 2020. In addition to its annual remittances, the Congressional Budget Office estimates that the Federal Reserve's transfers to Treasury will be increased by a total of \$53.3 billion from 2016 to 2025 as a result of capping the surplus account balance at \$10 billion.²⁹

²⁹See Congressional Budget Office, *Cost estimate for the conference agreement on H.R. 22, the FAST Act, as posted on the website of the House Committee on Rules on December 1, 2015* (Washington, D.C.: Dec. 2, 2015).

As we found in our 2002 report on the surplus account, reducing the Federal Reserve capital surplus account creates a one-time increase in federal receipts, but the transfer by itself will have no significant long-term effect on the federal budget or the economy.³⁰ Because the Federal Reserve is not included in the federal budget, amounts transferred to Treasury from reducing the capital surplus account are treated as a receipt under federal budget accounting but do not produce new resources for the federal government as a whole. The surplus account cap reduces future Reserve Banks' earnings because the Reserve Banks would hold a smaller portfolio of securities. As a result, the cap reduces their transfers to Treasury in subsequent periods. Since the one-time transfer from the Federal Reserve also increases Treasury's cash balance over time, Treasury would sell fewer securities to the public and thus pay less interest to the public. Over time, the lower interest payments to the public approximately offset the lower receipts from Federal Reserve earnings.

According to Board of Governors officials, the cap on the surplus account had little effect on Federal Reserve operations as of December 2016, and the chances of the cap impeding operations in the long term appear to be small. This is because Federal Reserve operations are funded before remaining excess funds are transferred to the surplus account. In addition, if Reserve Bank earnings during the year are not sufficient to provide for the costs of operations, payment of dividends, and maintaining the \$10 billion surplus account balance, remittances to Treasury are suspended. A deferred asset is recorded in the Federal Reserve's accounts to represent the amount of net earnings a Reserve Bank will need to realize before remittances to Treasury resume. In our September 2002 report, we found no widely accepted, analytically based criteria to show whether a central bank needs capital as a cushion against losses or how the level of such an account should be determined.³¹ However, according to Board of Governors officials, if a central bank exhausts its capital cushion or its capital position is negative, realized losses that result from asset sales or draining of monetary liabilities would further exacerbate the capital deficiency.

According to Federal Reserve officials and academics we interviewed, transferring Federal Reserve funds to address a budgetary shortfall might

³⁰[GAO-02-939](#).

³¹[GAO-02-939](#).

lead the public and financial markets to question if the Federal Reserve was independent from the executive and legislative branches. In their view, if these actions set a precedent, the public and financial markets might conclude that the central bank was not conducting monetary policy aimed solely at achieving the monetary policy objectives set forth in the Federal Reserve Act (price stability, maximum employment, and moderate long-term interest rates in the United States). Instead, some might believe that the Federal Reserve had been directed to take policy actions that would help fund government spending.

Whether transferring funds from the Federal Reserve to address budgetary shortfalls should be viewed any differently than the annual remittances is debatable. Congress has transferred money from the surplus account to Treasury's General Fund on other occasions, most recently with the Consolidated Appropriations Act of 2000 that directed the Reserve Banks to transfer to Treasury additional surplus funds of \$3.752 billion during fiscal year 2000. These transfers are deposited in Treasury's General Fund and available for appropriation and use for general support of the government.³² Nevertheless, Federal Reserve officials, an industry association, and some commercial banks we interviewed believed the requirement to transfer funds from the surplus account, which many see as specifically intended to support the Highway Trust Fund, was different and set a worrying precedent. In particular, Board of Governors officials stated that prior transfers from the Reserve Banks to Treasury did not place a cap on the amount of the surplus accounts that could be retained by the Reserve Banks.

Several academic experts with whom we spoke noted that countries with independent central banks have strict provisions against transfers of central bank funds by the legislative branch. However, as long as rules regarding the transfer of central bank earnings to the government are clearly defined, such transfers are consistent with best practices associated with central bank financial independence.³³ As we discuss later, concerns may arise if subsequent transfers reduce the capital surplus to zero, which could lead to dependence on Treasury for capital

³²Once funds are deposited into a receipt account in Treasury's General Fund, an appropriation by Congress can begin the process of spending these funds. Appropriations from Treasury General Fund accounts are amounts appropriated by law for the general support of federal government activities.

³³See Cukierman (2011).

integrity.³⁴ Since capital integrity is required to support monetary policy autonomy, reliance on Treasury could diminish the independence of the Federal Reserve. As we discuss later in this report, there are ways to preserve Federal Reserve independence under varying capital structures.

Dividend Rate Modification Raises Potential Implications but Has Had No Immediate Effect on System Membership

The FAST Act's modification of the Reserve Banks' stock dividend rate for large member banks from 6 percent to a rate pegged at the lesser of 6 percent or the 10-year Treasury rate, which was below 6 percent in June 2016, increased federal receipts and reduced revenues for large member banks, but has had no immediate effect on Federal Reserve membership. In 2015, the Federal Reserve made dividend payments to member banks totaling more than \$1.7 billion. Board of Governors officials told us that dividend payments to member banks in 2016 totaled \$711 million.

- The modified dividend rate for the larger member banks reduced the dividend payment for the first half of 2016 by nearly two-thirds from the payment for the first half of 2015 (from approximately \$850 million to approximately \$300 million).
- More specifically, the difference between what larger member banks received at June 30, 2015, and what they received at June 30, 2016, ranged from about \$185,000 to about \$112 million less.

While the current interest rate environment is historically low, the difference in dividend income earned by large banks due to the dividend rate modification would decline in a higher interest rate environment, because the 10-year Treasury rate could increase over time to 6 percent (the ceiling on the dividend rate for member banks with more than \$10 billion in consolidated assets).³⁵

Commercial banks and Federal Reserve officials we interviewed expressed some concerns about the dividend rate modification. We interviewed 17 member and nonmember commercial banks, including 6 of the 85 Federal Reserve member banks that held more than \$10 billion in assets as of December 31, 2015, and 11 smaller member banks. Four

³⁴That is, funding to ensure that the Federal Reserve balance sheet remains stable.

³⁵See figure 5 for historical trend information on the 10-year Treasury note's interest rate since 1900.

of the 6 large member banks stated that they would likely act to recoup this lost revenue. For example, some mentioned employee layoffs and increased fees on consumers as potential options to recoup the lost revenue. Two large member banks noted that the dividend rate modification was made at a time when these institutions were adjusting to changes in the regulatory and financial environment, and incorporating the revenue cut made adjusting to these changes even more challenging.³⁶ However, these factors also make it difficult to link the dividend rate modification to any specific effects on employees or consumers.

Most of the member and nonmember banks we interviewed argued that the selection of the 10-year Treasury note as a benchmark for the dividend rate does not appropriately compensate member banks. Several commercial banks noted that the decision to use the 10-year Treasury note did not account for the illiquidity of Reserve Bank stock (it cannot be traded while 10-year Treasury notes can). They added that this illiquidity should be accounted for by the addition of a premium to the rate paid on Reserve Bank stock (an illiquidity premium). Additionally, several commercial banks reported that shifting from a fixed dividend rate to a floating rate determined during the month when dividends are paid increased the uncertainty surrounding their business decisions.

Several commercial banks also stated that they would have preferred that the dividend rate modification were considered on its own merits rather than utilized to help pay for transportation projects. The American Bankers Association stated in a comment letter on the interim final rule implementing the dividend rate modification that the change represented a breach of contract between the Federal Reserve and member banks and amounted to “an unconstitutional taking of member banks’ property without compensation.” It further stated that the “Takings Clause of the Fifth Amendment provides that ‘private property’ shall not ‘be taken for public use, without just compensation’” and the dividend rate change was in violation of the Fifth Amendment.³⁷ On February 9, 2017, the American

³⁶These banks referred to the 2007--2009 financial crisis, the implementation of the Dodd-Frank Wall Street Reform and Consumer Protection Act, devaluation of bank stock prices, and other factors that affected bank profitability.

³⁷See “ABA Comment Letter on FRB Interim Final Rule on Dividends on Stock - April 28, 2016,” available at www.aba.com/advocacy/commentletters/pages/default.aspx

Bankers Association filed a lawsuit against the United States which included a Fifth Amendment Taking Clause claim.³⁸

Certain Federal Reserve officials with whom we spoke were concerned about increased membership attrition as a result of the dividend rate modification. However, as of December 2016 there was no evidence that banks had dropped their Federal Reserve membership as a result of lower dividend payments. According to data provided by the Board of Governors and Reserve Banks, membership in the Reserve Banks dropped by about 2 percent (46 banks) from December 31, 2015, to June 30, 2016. The Reserve Banks generally attributed this drop to normal attrition and consolidation in the industry. This decrease is consistent with the general decline in the number of banks supervised by the Federal Reserve from 2010 through 2015 (as shown in fig. 2).

FDIC officials stated in May 2016 that they had seen no impact of the dividend rate modification on state-chartered member and nonmember banks. OCC officials stated that it was too early to determine the impact of the dividend rate modification on national banks. However, OCC officials noted that the costs associated with changing membership can be significant and can be a decision-making factor. For example, industry association officials said that such costs could include those associated with changing the institution's name. Furthermore, of the 14 member banks with which we spoke, including 6 banks with assets of more than \$10 billion, none indicated that they would drop Federal Reserve membership as a result of the dividend rate modification. But several of the banks with less than \$10 billion in assets stated that they were worried that the dividend rate modification would set a precedent for future transfers from the Reserve Banks, and that they would reconsider Federal Reserve membership if the dividend rate threshold were reduced to include banks in their asset range.

³⁸On February 9, 2017, the American Bankers Association and Washington Federal, N.A. filed a class action lawsuit against the United States in the United States Court of Federal Claims on behalf of banks with more than \$10 billion in assets affected by the FAST Act. See Class Action Complaint, American Bankers Ass'n v. United States, No. 17-00194-SGB (Fed. Cl.). The lawsuit seeks approximately \$1 billion in damages and asserts claims including breach of contract and violations of the Takings Clause of the Fifth Amendment of the United States Constitution stemming from the FAST Act's change to the annual dividend rate. We do not make any factual or legal findings in this report regarding matters likely to be at issue in the litigation, and GAO did not evaluate such matters.

Modifications to Stock Ownership Requirement Would Have Implications for the Federal Reserve's Public and Private Balance and Reserve Bank Operations

Modifying the Reserve Bank stock ownership requirement could have a number of wide-ranging policy implications on the structure of the Federal Reserve. We examined potential implications of three scenarios for modifying the purchase requirement: (1) permanently retiring Reserve Bank stock and eliminating the stock ownership requirement, (2) making ownership of Reserve Bank stock voluntary for member banks, and (3) modifying the capital requirement associated with the stock to allow member banks to hold the entire 6 percent capital contribution as callable capital.

- In scenario 1, permanently retiring Reserve Bank stock could change the existing corporate structure of the Reserve Banks.
- In scenario 2, Federal Reserve membership would not require stock ownership; however, Reserve Bank stock would remain available for purchase by member banks.
- In scenario 3, the full capital contribution would be retained by member banks, could be called at any time by the Reserve Banks, and could be available for use by the member bank.

The primary benefit to making any of the changes to the stock purchase requirement is that member banks would gain more control over the capital currently committed to ownership of Reserve Bank stock. Banking associations that we interviewed said that the capital contribution for the stock places a burden on member banks. Specifically, the capital is illiquid and cannot be used as collateral, so it represents a significant opportunity cost to member banks. Despite the cost associated with the capital requirement, 11 of the 17 banks we interviewed indicated that the capital requirement is either not an important factor or only somewhat of an important factor in their decision on Federal Reserve membership. More frequently, familiarity with their Reserve Bank as a supervisor was more important to their decision to join the Federal Reserve.

The three scenarios are not an exhaustive representation of possible modifications to the structure of the Federal Reserve, nor does our analysis account for all of the potential consequences of such

modifications. Our discussion of the implications of each scenario should not be interpreted as a judgment on how or whether the Federal Reserve should be restructured. Instead, our intent is to identify policy implications that warrant full consideration and additional research should changes to the Federal Reserve stock requirement and therefore, the Federal Reserve's structure, be made. Furthermore, the discussion of the impacts of the three scenarios is limited without identification of the exact replacement structures, which is beyond the scope of this study. As each scenario has a number of potential structures, each structure would have to be evaluated on its own merits to assess its ability to better ensure the benefits Congress seeks to achieve in the central bank, such as price stability and maximum employment.³⁹ This discussion assumes that the goals reflected in the original construction of the Federal Reserve remain (independence, balance of power, and geographical diversity).

Reserve Bank and Board of Governors officials with whom we spoke said that changes to the stock ownership requirement should not be evaluated in isolation because any changes would have ripple effects on the governance structure, financial independence, and Reserve Bank operations that would warrant consideration in any discussion. In the following discussion, we focus on the impacts of modifying the purchase requirement that were of primary concern to regulators, commercial banks, and academics. Many were concerned that such modifications could undermine the governance of a central bank with a combined private and public structure—key attributes of the current structure designed to construct some barriers to political pressures and provide nationwide input for monetary policies. Nevertheless, these governance elements could be maintained through legislation and other mechanisms if the current Federal Reserve structure were altered.

Retiring Reserve Bank Stock and Making Reserve Banks Field Offices

Retiring Reserve Bank stock could have a number of implications, including disrupting the Federal Reserve's public and private balance, but other mechanisms could be used to preserve the structure's key attributes. As discussed previously, the stock purchase requirement

³⁹Retaining the benefits associated with the current structure could be possible; however, the alternative structures or mechanism designed to recapture these benefits would need to be identified for consideration.

reflects the desire of the founders of the Federal Reserve to strike a balance between control by commercial banks and government control of the Federal Reserve. Under the Federal Reserve Act, the Reserve Banks were established as corporate entities after national banks subscribed to the minimum amount of Reserve Bank stock.⁴⁰ Therefore, a structural change could result if Congress decided to retire the stock and the corporate structure of the Reserve Banks were not preserved. The corporate structure, which includes a board of directors to oversee operations, enables the Reserve Banks to maintain a degree of autonomy from the Board of Governors. Furthermore, the stock ownership requirement enables the Federal Reserve to maintain financial independence from the federal government because it allows the Reserve Banks to maintain a capital base that is not funded at the discretion of the government. Retirement of Reserve Bank stock could have implications for the autonomy of the Reserve Banks, the independence of the Federal Reserve, and the operations of the Reserve Banks, all of which would warrant consideration.

Diminished Reserve Bank autonomy. One of the policy goals of the Federal Reserve's structure is to provide Reserve Banks with a degree of autonomy or regional authority in relation to the Board of Governors. Eliminating Reserve Bank stock would have implications for this goal. According to Reserve Bank officials, all else being equal, retirement of the stock coupled with elimination of the current corporate structure of the Reserve Banks could result in removal of Reserve Bank boards of directors or limit the benefits currently provided by their participation. The existence of the boards of directors is tied to member banks' equity ownership in their regional Reserve Bank. Specifically, this action could limit the diversity of views in monetary policy by weakening the link to regional input in FOMC discussions. Reserve Bank officials said that Reserve Bank boards serve an important function in the Federal Reserve, including providing important business advice and perspectives to the Reserve Banks.⁴¹ In our 2011 report on Federal Reserve governance, we found that directors of the Reserve Bank boards provide a link to the regions that the Reserve Banks serve, and give information on economic

⁴⁰Federal Reserve Act, Pub. L. No. 63-43, § 4, 38 Stat. 251, 254 (1913).

⁴¹For more information on the responsibilities of directors and Bank presidents, see GAO, *Federal Reserve Bank Governance: Opportunities Exist to Broaden Director Recruitment Efforts and Increase Transparency*, [GAO-12-18](#) (Washington, D.C.: Oct. 19, 2011).

conditions to the Reserve Bank presidents who may use it to inform FOMC discussions about regional conditions.⁴²

With the loss of member bank equity ownership and the absence of Reserve Bank boards, advisory boards or advisory councils are mechanisms that could be used to serve the same function. However, according to Reserve Bank officials and directors, this approach might not be as effective as a formal corporate board. They said that, as appointed directors of a Reserve Bank board, they have a fiduciary responsibility to perform their duties and place the interests of the Reserve Bank and the nation ahead of personal interests. They noted that it may be difficult to attract high-caliber members to an advisory council or board in a different, more removed relationship. However, we found in our 2011 report that existing Reserve Bank branch boards and advisory councils are sometimes a source of director candidates for the Reserve Banks. Reserve Bank officials and directors also said that the level of commitment and engagement from members of an advisory board or council would be less than that of directors of a formal corporate board. Many different mechanisms could be employed to mitigate the effects of eliminating Reserve Bank boards, but without further analysis on specific mechanisms it is difficult to determine whether those mechanisms would be feasible.

Reserve Bank officials, academics, and banks said that another potential consequence of retiring Reserve Bank stock and eliminating the incorporated entities could be diminished Reserve Bank autonomy in relation to the Board of Governors. For example, retirement of Reserve Bank stock could result in eliminating the current corporate structure, and one structural option that we examined was to convert the Reserve Banks into field offices of the Board of Governors—that is, Reserve Banks would become part of a federal agency. Reserve Bank presidents currently are appointed by and accountable to Reserve Bank boards of directors.⁴³

⁴²As mentioned earlier, each Reserve Bank board is split equally into three classes. Class A directors represent the member banks, while Class B and C directors represent the public. For Class B and C directors, the Federal Reserve Act requires “due but not exclusive consideration to the interests of agriculture, commerce, industry, services, labor, and consumers.”

⁴³Class B and Class C directors appoint, subject to approval by the Board of Governors, the Reserve Bank president and first vice president. The Federal Reserve Act also authorizes the Federal Reserve Board to remove any officer or director of a Reserve Bank.

Some officials we interviewed believed that Reserve Bank presidents might feel less comfortable voicing dissenting opinions in FOMC meetings if they were leading field offices directly accountable to the Board of Governors. Therefore, a loss of autonomy could limit the diversity of views in FOMC meetings. More importantly, it could concentrate power and influence within the Board of Governors—for example, by centralizing FOMC decision making in the hands of the Board of Governors. The diversity of economic views that Reserve Bank presidents bring to FOMC meetings is illustrated by dissenting votes at FOMC meetings from July 1996 to July 2016. In that time, Reserve Bank presidents cast 80 dissenting votes while members of the Board of Governors cast 2 dissenting votes.

Some academics with whom we spoke pointed out that eliminating the Reserve Bank stock purchase requirement could remove the perception of undue influence from member banks. For example, such perceptions might be removed if member banks (shareholders) no longer vote on Class A and B directors of Reserve Bank boards. We previously reported that the requirement to have representatives of member banks on the Federal Reserve Bank boards creates an appearance of a conflict of interest because the Federal Reserve has supervisory authority over state-chartered member banks and bank holding companies.⁴⁴

Conflicts of interest involving directors historically have been addressed through both federal law and Federal Reserve policies and procedures, such as by defining roles and responsibilities and implementing codes of conduct to identify, manage, and mitigate potential conflicts.⁴⁵ Federal Reserve officials said that the Board of Governors already restricts Reserve Bank directors' participation in banking supervision and, therefore, a field-office structure would address perception, not practice. For example, Reserve Bank directors cannot access member banks' confidential supervisory information. Any application of a Class A director's financial institution that requires Federal Reserve approval may not be approved by the director's Reserve Bank, but instead is acted on by the Secretary of the Board of Governors. Class A directors cannot be involved in the selection, appointment, or compensation of Reserve Bank officers whose primary duties involve banking supervision. And Class B

⁴⁴See [GAO-12-18](#).

⁴⁵See, for example, 18 U.S.C. § 208; 5 C.F.R. Parts 2635, 2640; 5 C.F.R. § 2635.402(c)-(e); and, 5 C.F.R. § 2640.203(h).

directors with certain financial company affiliations are subject to the same prohibition. Class A directors are also not involved in the selection of the Reserve Bank President or First Vice President.

To the extent that Congress values the benefits conferred by the current structure characterized by the balance of power and Reserve Bank autonomy, mechanisms would need to be devised to provide assurance these benefits remained if the Reserve Bank stock were retired. Eight of the 14 member banks that we interviewed said that Reserve Bank autonomy is either important or very important. For example, one bank stated that Reserve Bank autonomy is “hyper-important” because it creates a system of checks and balances, limits politicization of monetary policy, and ensures that viewpoints from across the nation are considered. Five of the member banks that we interviewed said that the structural option of converting the Reserve Banks to field offices would diminish the Reserve Banks’ autonomy and some said that the change would harm connections to the local communities. But only 1 of the 14 member banks with which we spoke said that they would be likely or very likely to drop membership if the Reserve Banks became field offices of the Board of Governors.

Diminished Federal Reserve financial independence. One of the policy goals of the Federal Reserve System’s structure was to provide it with independence within the federal government. As noted earlier, financial independence supports monetary policy autonomy, which research has shown is important to low levels of inflation. Eliminating Reserve Bank stock, without a mechanism to re-establish financial autonomy, would have implications for this goal. The Reserve Banks’ income is generated primarily through interest on their investments and loans and through fees received for services provided to depository institutions. Reserve Bank officials said that historically the Federal Reserve has received enough income to fund its operations and therefore would be able to capitalize itself. According to the Federal Reserve, if losses were incurred remittances to Treasury would be suspended and a deferred asset would be recorded that represents the amount of net earnings a Reserve Bank would need to realize before remittances to Treasury could resume. Therefore, Reserve Banks do not need capital to fund operations. However, operating without a capital base could exacerbate negative perceptions that the Federal Reserve is insolvent. Alternatively, Treasury could capitalize the Federal Reserve through Treasury-owned stock, which would allow the Reserve Banks to maintain a corporate structure but would result in a central bank dependent, in part, on government funding.

Depending on how it is structured, dependence on Treasury for capitalization could diminish the financial independence of the Federal Reserve. In particular, Federal Reserve independence would be diminished if recapitalization (in the event of capital base depletion) were at the discretion of Treasury. One academic we interviewed said that the \$10 billion surplus cap introduced under the FAST Act increased the likelihood of the depletion of the Federal Reserve's capital. Some academics have written that if Treasury capitalized the Federal Reserve, Congress could include provisions for automatic recapitalization of the Federal Reserve in the event that its capital were depleted and provide stronger capital buffers by increasing the surplus account cap.⁴⁶ These provisions would preserve the independence of the Federal Reserve by removing the discretion of Treasury in recapitalizing the Federal Reserve. Moreover, according to research, 8 of 166 central banks are capitalized, in whole or in part, by private shareholders.⁴⁷ The remaining 158 central banks, some of which are considered to be highly independent, are capitalized by their governments.

None of the 17 member and nonmember banks that we interviewed said they would be likely or very likely to change their membership status if Reserve Bank stock were permanently retired. The banks said that the stock ownership is not a major factor in membership considerations. Member banks cited familiarity with and reputation of their regulator, consistency of regulation across the holding company, and their bank structure as the most important factors for making a membership choice.⁴⁸

Hindered ability to conduct Reserve Bank operations. The Federal Reserve Act authorized the Federal Reserve Banks to act as depositories

⁴⁶Alex Cukierman, *Central Bank Finances and Independence*. Donato Masciandaro, *More than the Human Appendix*. Peter Stella and Ake Lönnberg, *Issues in Central Bank Finance and Independence*.

⁴⁷Jannie Rossouw and Adele Breytenbach, *Identifying Central Banks with Shareholding: a Review of Available Literature*, *Economic History of Developing Regions*, vol. 26, 2011, pp. 123-130, and Masciandaro, *More than the Human Appendix*.

⁴⁸Congress previously made efforts to eliminate the Reserve Banks or change their ownership arrangement. Specifically, proposals to eliminate the Reserve Banks were put forward in debate over the Banking Act of 1935, which created and consolidated power in the Board of Governors. In addition, different congressional committees issued reports recommending changes to the stock ownership requirement of the Reserve Banks in 1938, 1964, and 1975, and issued a report in 1952 that considered changes to the stock ownership requirement.

and fiscal agents of the United States government, at the direction of the Secretary of the Treasury. Eliminating Reserve Bank stock could have implications for the Reserve Banks' ability to perform these functions, depending on how the Reserve Banks' structures and authorities were revised. For example, converting the Reserve Banks to field offices could preclude them from conducting critical banking functions, and the activities they could undertake as fiscal agents for the government if they were to become government entities are unclear. Banking activities conducted by the Reserve Banks, including executing monetary policy through open market operations and providing short-term loans to institutions, are essential to the functioning of the Federal Reserve.

Some Reserve Bank officials said that without the stock, the Reserve Banks would no longer be corporations and might not be able to conduct certain banking activities, depending on how the replacement structure and authorities were configured. If the Reserve Banks were to become field offices of the Board of Governors, they would no longer be able to perform certain activities related to their function as Treasury's fiscal agent because the Board of Governors currently is not authorized to provide these services. Some also said that having the Board of Governors act as Treasury's fiscal agent could present a conflict of interest. However, other Reserve Bank officials said that the current corporate structure could be maintained without the stock, but would at least require legislation amending the Federal Reserve Act to allow continuing conduct of banking activities. Reserve Bank officials noted that Treasury directs the Reserve Banks, as fiscal agents, to conduct auctions on its behalf and it is unclear whether Treasury could direct another federal agency to do so. Reserve Bank officials also pointed out that the Reserve Banks hold accounts for foreign central banks and it is unclear whether the federal government could hold an account for another government. As discussed earlier, capitalization by Treasury would allow the Reserve Banks to maintain their current corporate structure, through Treasury-owned stock. This could preserve the ability of Reserve Banks to conduct banking operations; however, as discussed earlier, this involves many issues that would need to be considered.

Eliminating the current corporate structure and converting the Reserve Banks into field offices of the Board of Governors could lead to more centralized functions, which could further improve the net efficiency of Reserve Bank operations. However, Reserve Bank officials said that innovation often comes from having private-sector voices on their boards. Moreover, Reserve Bank officials said that despite their autonomous structure they have been able to achieve efficiencies in their operations

by consolidating certain activities such as retail payment (check and Automated Clearing House) processing, which is conducted through the Federal Reserve Bank of Atlanta; wholesale payment operations (Fedwire funds and securities services) and open-market operations, which are primarily conducted through the Federal Reserve Bank of New York, or information technology and payroll services, which are primarily conducted by the Federal Reserve Bank of Richmond.⁴⁹ In contrast, we have reported that some efficiencies in Reserve Bank operations were achieved partly because of external factors such as legislation.⁵⁰

Voluntary Stock Ownership

Making stock ownership voluntary could have a number of policy implications. Voluntary ownership likely would not significantly affect Federal Reserve membership, but according to Reserve Bank officials, the implications could include concentration of stock ownership and voting rights and a need for more resources to plan for and manage increased fluctuations in paid-in capital. Voluntary ownership of Reserve Bank stock could take many forms. Currently, only nationally chartered banks and state-chartered banks that opt to join the Federal Reserve are required to purchase stock. Such a scenario could entail no ownership requirement for membership and an option for member banks to purchase (or redeem) stock in their regional Reserve Bank at any time.

As with permanent retirement of the stock, we did not find evidence that voluntary stock purchase would have a significant impact on Federal Reserve membership. Member banks that we interviewed suggested that making stock ownership voluntary would not affect their Federal Reserve membership decision, but stock ownership could become volatile in certain interest rate environments, as the following examples illustrate.

- Thirteen of the 14 member banks that we interviewed said that they likely would not change their Federal Reserve membership status if the ownership of stock became voluntary for member banks.

⁴⁹Automated Clearing House is the primary system used for electronic funds transfer.

⁵⁰For example, we found that Reserve Banks achieved operational efficiencies as a result of the Check Clearing for the 21st Century Act. See GAO, *Check 21 Act: Most Consumers Have Accepted and Banks Are Progressing Toward Full Adoption of Check Truncation*, [GAO-09-8](#) (Washington, D.C.: Oct. 28, 2008).

- Of these 13, all 6 member banks with more than \$10 billion in assets also said that they likely would not purchase stock if ownership were voluntary for members.
- Of those 13, 6 of the 7 member banks with assets below \$10 billion indicated they likely would (ranging between somewhat likely, likely, and very likely) purchase the stock if it were voluntary. They added that if they could make a better return than 6 percent on the capital committed to the stock in a higher interest-rate environment, they would redeem the stock.⁵¹
- Two of the three nonmember banks that we interviewed said that they likely would not change their Federal Reserve membership status if the ownership of stock became voluntary for member banks.
- The remaining banks (one member, one nonmember) said that they would be somewhat likely to change their membership status.

In a high interest rate environment stock ownership by member banks could be low, because banks could receive a higher return by investing the capital in securities other than the Reserve Bank stock. This would result in a high concentration of voting rights; however, this might not differ much from current practices. Reserve Bank officials stated that if voting rights remained with stock ownership, not membership, and if stock ownership among member banks were low, then the votes to elect board members would be concentrated in just a few banks. Some Reserve Bank officials said that the concentration of votes could lead to undue influence from a few banks. We previously found that, under the current mandatory stock ownership structure, member bank voter turnout was often low during some Reserve Banks' elections.⁵² In these cases, assuming current participation rates persist, voting patterns under voluntary stock ownership might not significantly differ from those of the current arrangement.

Reserve Bank officials also said that high volatility of stock ownership would require a higher level of management of the stock. Officials said that the processes for issuing, monitoring, and redeeming the stock would

⁵¹Under the FAST Act, Federal Reserve member banks with total consolidated assets of less than \$10 billion will continue to receive a dividend of 6 percent on Reserve Bank stock.

⁵²[GAO-12-18](#). Although the Federal Reserve Act sets forth specific procedures and voting requirements for director elections, shareholder elections of Reserve Bank directors do not have a requirement for a minimum number of votes.

become significantly more complex as a result of a likely increase in the volume of transactions and require additional personnel. While a voluntary stock ownership structure is more complicated than the current structure, it would involve similar stock ownership characteristics as publicly traded stocks and publicly traded companies have systems to manage stock ownership.

Reserve Bank officials pointed out that volatility in stock ownership among member banks also would result in fluctuation in the level of paid-in capital held at the Reserve Banks, which could make it more difficult for Reserve Banks to predict and manage their capital. If a large number of member banks chose not to purchase the stock, which member banks suggested would be likely in a high-interest rate environment, then the potential public perception issues associated with having a low capital base, as discussed previously, could apply. However, as we have discussed, the Reserve Banks could operate without capital, or Treasury could capitalize the Reserve Banks.

Callable Stock Purchase Requirement

Allowing member banks to hold the full capital contribution on call could have a number of implications. For instance, allowing member banks to hold the entire capital contribution on call would allow Reserve Banks to maintain their current corporate structure, since the member banks would retain their equity stakes. However, this scenario would eliminate the dividend payment to member banks because there would be no Reserve Bank stock outstanding for which dividend payments would be owed. Also, it could cause public perception problems and, in theory, exacerbate financial distress in stressful economic times.

Currently, member banks are required to purchase stock in their regional Reserve Bank equal to 6 percent of their capital and surplus, with 3 percent paid-in and 3 percent on call by the Reserve Bank. This scenario would make the entire 6 percent purchase requirement callable, so that member banks would not have to contribute any capital to the Reserve Banks on joining the Federal Reserve. This modification would allow the Reserve Banks to keep their current corporate structure and preserve their ability to conduct banking operations. The change would also eliminate the dividend payment to member banks since the capital associated with the Reserve Bank stock would no longer be paid-in, so there would no longer be a basis to pay member banks a dividend. Similar to the scenario of retiring the stock or making its purchase

voluntary for members, the Reserve Banks' capital base would be reduced—in this case, to the amount of capital held in each Reserve Bank's surplus account.

Reserve Bank officials and some academics said that Reserve Banks can operate without a capital base but, as discussed previously this could cause a public perception problem. Specifically, Reserve Bank officials said that if Reserve Banks incurred losses and called in capital from member banks, the call could send a signal to the broader markets that the Reserve Banks were insolvent. In turn, this perception could lead to negative ripple effects throughout the economy. That is, Reserve Bank officials said that situations in which Reserve Banks would incur losses and need to call capital likely would be situations of economic stress for banks. If banks could not quickly raise sufficient funds to meet the Reserve Bank's capital call, their lending capacity could fall and a credit crunch could follow. Calling in capital from member banks at such a time could have a procyclical effect; that is, the call would exacerbate financial distress experienced by the member banks.

Reserve Bank officials added that because of the potentially severe systemic effects such a capital call would be highly unlikely. Officials pointed out that the Reserve Banks have never called in the 3 percent capital at member banks and that Reserve Banks currently do not have procedures for calling the 3 percent capital held at member banks. As discussed earlier, if losses were incurred remittances to Treasury would be suspended. If the Reserve Banks incurred losses over multiple periods and their capital base were depleted, then the method for recapitalization would need to be addressed (which, as discussed earlier, involves many issues that would need to be considered).

Based on our interview responses, most banks would be unlikely to change their membership status as a result of making the entire capital contribution callable. All three of the nonmember banks that we interviewed said that they likely would not become members or would be only somewhat likely to become members in response to this change. Member banks likely would not drop membership as a result of this modification because, as some banks noted, it removes a potential barrier to membership (paying in 3 percent of capital).

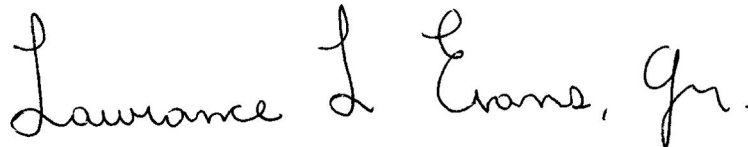
Agency Comments

We provided a draft of this report to FDIC, the Federal Reserve, OCC, and Treasury for review and comment. None of the agencies provided written comments on the draft report. FDIC and the Federal Reserve provided technical comments, which we have incorporated, as appropriate.

We are sending copies of this report to FDIC, the Federal Reserve, OCC, and Treasury. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or evansl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.

Sincerely yours,

A handwritten signature in cursive script that reads "Lawrence L. Evans, Jr." The signature is written in black ink and is positioned above the typed name.

Lawrence L. Evans, Jr. Director, Financial Markets and Community Investment

Appendix I: Scope and Methodology

In this report, we (1) examine the historical rationale for the Reserve Banks' stock purchase requirement and 6 percent dividend, (2) assess the potential implications of capping the Reserve Banks' aggregate surplus account and modifying the Reserve Bank stock dividend rate, and (3) analyze the potential policy implications of modifying the Reserve Bank stock ownership requirement for member banks under three scenarios.

To address our first objective, we conducted a literature search on the history of the Federal Reserve System (Federal Reserve), including a review of the legislative history of the Federal Reserve Act. See appendix II for a selected bibliography of literature we reviewed. We interviewed a past Federal Reserve historian and selected academics. We also conducted a literature search on rates of return on selected investment products. We specifically identified the following data sources:

- Roger Ibbotson, 2013 Ibbotson SBBI Classic Yearbook: Market Results for Stocks, Bonds, Bills, and Inflation 1926–2012 (Chicago, Ill.: Morningstar, 2013).—We reviewed information describing the rates of return for a number of basic asset classes including large company stocks, small company stocks, long-term corporate bonds, long-term government bonds, intermediate-term government bonds, and Treasury bills. The return rate data include information from 1926 through 2012.
- Robert Shiller, *Market Volatility* (Cambridge, Mass.: MIT Press, 1989).—We reviewed annual data on the U.S. stock market specifically concerning prices, dividends, and earnings from 1871 to the present with associated interest rate, price level and consumption data.
- Frederick R. Macaulay, *The Movements of Interest Rates, Bond Yields and Stock Prices in the United States since 1856* (New York: National Bureau of Economic Research, 1938).—We reviewed commercial paper rates in New York City from January 1857 to January 1936.
- Sidney Homer and Richard Sylla, *A History of Interest Rates*, 4th ed. (Hoboken, N.J.: John Wiley & Sons, 2005).—We reviewed data on interest rates and yields from prime corporate bonds, medium-grade corporate bonds, and long-term government securities from 1899 to 1989.

We determined that these sources were sufficiently reliable for the purposes of our reporting objectives. Our data reliability assessment included reviewing the methodologies employed by the authors of each source and cross-checking certain data from the sources against each other. First, we analyzed return data on investment-grade and medium-grade corporate bonds, and Treasury bonds. We selected these instruments for comparison with Reserve Bank stock because they generally present low risk of default and have relatively long maturity periods.¹ Corporate bonds can be classified according to their credit quality. Medium-grade corporate bonds can indicate a strong capacity to meet financial commitments but also can still be vulnerable to a changing economy. Investment grade corporate bonds are considered more likely than noninvestment grade bonds to be paid on time and have lower investment risk. Treasury bonds are obligations by the U.S. government and are considered to have low investment risk.²

Second, we analyzed return data on interest rates based on commercial paper and certificates of deposit, and the federal funds rate. We selected these return data for analysis because they are common measures of the value of money in the markets. Commercial paper consists of short-term, promissory notes issued primarily by corporations that mature in about 30 days on average, with a range up to 270 days. A certificate of deposit is a savings account that holds a fixed amount of money for a fixed period of time, such as 6 months, 1 year, or 5 years, and in exchange, the issuing bank pays interest. The federal funds rate is the central interest rate in the U.S. financial market and is the interest rate at which depository institutions trade federal funds with each other overnight.³

We determined not to include rate of return information on stocks and agency mortgage-backed securities. Stock is a more volatile investment product than Reserve Bank stock, with wide variation in prices from year to year. In addition, stock is a relatively liquid investment product compared to Reserve Bank stock, which cannot be sold or otherwise posted as collateral. Agency mortgage-backed securities are debt obligations that represent claims to the cash flows from pools of mortgage loans, most commonly on residential property. We found that agency

¹The maturity date is when the company has to pay back the principal to investors.

²Data on Treasury bonds that mature in 10 years were available from 1953 to present. Data on long-term U.S. government bonds were available prior to 1953.

³Federal funds are balances that commercial banks hold at Federal Reserve Banks.

mortgage-backed securities generally return higher yields than Treasury bonds, but not as high as corporate bonds, which have higher risk. Therefore, by discussing Treasury and corporate bonds, we are illustrating a complete range of possible returns.

To assess the potential implications of capping the aggregate Reserve Banks' surplus account, we reviewed past GAO, Congressional Research Service, and Congressional Budget Office reports and Federal Reserve financial documents on the status of the surplus account. We interviewed Federal Reserve officials, including from the Board of Governors and the Reserve Banks; former members of the Board of Governors who had written about the changes in the Fixing America's Surface Transportation Act (FAST Act); academics who had written extensively about the Federal Reserve; other federal bank regulators, including the Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency (OCC); and, banking industry associations. To assess the potential implications of modifying the Reserve Bank stock dividend rate, we reviewed Board of Governors financial documents as of June 30, 2016, for dividend payment information. We conducted structured interviews with 17 commercial banks (including 14 member and 3 nonmember banks) to obtain their perspectives on the dividend rate modification and if it would affect their membership decisions or status. We selected commercial banks for these interviews to ensure representation for all size categories and primary federal banking regulator, using data from SNL Financial.⁴ We assessed the reliability of the data by reviewing information about the data and systems that produced them, and by reviewing assessments we did for previous studies. We determined that the data we used remain sufficiently reliable for the purposes of our reporting objectives.

To assess the potential implications of modifying the stock ownership requirement, we reviewed academic literature on the structure and independence of central banks. We also interviewed selected academics and economists who had written extensively on central bank independence; the chairpersons of all the Reserve Banks' boards of directors, who may not be affiliated with commercial banks; officials from FDIC and OCC; and banking industry associations. In the structured

⁴S&P Global Market Intelligence is a leading provider of financial data, news, and analytics. The data sourced in this report are from S&P Global Market Intelligence's SNL Financial database of publicly filed financial regulatory information. For this report, we refer to the source of the data for our analysis as SNL Financial.

interviews with selected commercial banks described above, we also sought to learn what factors might influence the banks' choice to become a member of the Federal Reserve, and whether potential modifications to the Reserve Banks' stock ownership structure would affect their choice. We presented three scenarios (of changes to the stock ownership requirement and therefore the Federal Reserve's structure) in the interviews to which respondents could react and discuss implications. The scenarios are illustrative and do not represent all of the ways in which the Federal Reserve structure might be altered nor does our analysis account for all of the potential consequences of stock ownership modifications. Furthermore, our discussion of the range of consequences is limited to the respondents' responses and the strategy in the interview, without knowledge of the mechanisms that could be put in place to retain the benefits of the current structure or mitigate any negative effects of the changes.

We conducted this performance audit from February 2016 to February 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Lawrance L. Evans, Jr., (202) 512-8678, or evansl@gao.gov

Acknowledgments

GAO staff who made major contributions to this report include Karen Tremba (Assistant Director), Philip Curtin (Analyst-in-Charge), Farrah Graham, Cody Knudsen, Risto Laboski, Barbara Roesmann, Christopher Ross, Jessica Sandler, Jena Sinkfield, and Stephen Yoder.

Appendix IV: Accessible Data

Data Tables

Data Table for Figure 2: Number and Percentage of Commercial Banks and Savings and Loans Supervised, by Regulator (1985—2015)

Year	FDIC	FED	OCC	OTS
1985	8.741	1.07	4.96	3.262
1986	8.678	1.094	4.872	3.232
1987	8.45	1.092	4.624	3.159
1988	8.18	1.059	4.354	2.967
1989	7.969	1.034	4.176	2.617
1990	7.811	1.009	3.981	2.357
1991	7.606	0.974	3.792	2.11
1992	7.431	0.955	3.596	1.871
1993	7.277	0.969	3.307	1.668
1994	7.008	0.976	3.078	1.542
1995	6.633	1.042	2.86	1.436
1996	6.375	1.016	2.728	1.335
1997	6.117	0.993	2.599	1.214
1998	5.867	0.994	2.458	1.145
1999	5.743	1.01	2.366	1.103
2000	5.616	0.99	2.231	1.067
2001	5.486	0.97	2.138	1.02
2002	5.353	0.95	2.077	0.974
2003	5.319	0.935	1.999	0.928
2004	5.264	0.919	1.907	0.886
"2005	5.245	0.907	1.818	0.863
2006	5.22	0.901	1.715	0.844
2007	5.198	0.878	1.632	0.826
2008	5.097	0.861	1.537	0.81
2009	4.941	0.845	1.461	0.765
2010	4.715	0.829	1.383	0.731
2011	4.598	0.828	1.931	
2012	4.46	0.843	1.78	
2013	4.312	0.85	1.65	

Year	FDIC	FED	OCC	OTS
2014	4.138	0.858	1.513	
"2015	3.947	0.839	1.396	

Percentage of Commercial Banks and Savings and Loans Supervised, by Regulator (1985-2015)

Regulator	1985	1990	1995	2000	2005	2010	2015
FDIC	48	52	55	57	59	62	64
Board of Governors of the Federal Reserve System	28	26	24	23	21	18	23
Office of the Comptroller of the Currency	18	16	12	11	10	10	
Office of Thrift Supervision	6	7	9	10	10	11	14

Data Table for Figure 3: Growth in Reserve Banks' Aggregate Surplus Account Balance, Member Bank Capital Paid In, and Federal Reserve Stock Dividend Paid to Member Banks (dollars in billions) (1994—2016)

Year	Surplus account	Capital paid	Dividends paid
1994"	3.683	3.683	0.212
1995"	3.966	3.966	0.231
1996"	4.496	4.602	0.256
1997"	5.22	5.433	0.3
1998"	5.952	5.952	0.343
1999"	6.431	6.431	0.374
2000"	6.794	6.997	0.41
2001"	7.312	7.373	0.428
2002"	8.38	8.38	0.484
2003"	8.847	8.847	0.518
2004"	11.63	11.914	0.582
2005"	12.901	13.536	0.781
2006"	15.324	15.324	0.871
2007"	18.45	18.45	0.992
2008"	21.076	21.076	1.19
2009"	25.64	25.64	1.428
2010"	26.524	26.524	1.583

Year	Surplus account	Capital paid	Dividends paid
2011"	26.899	26.899	1.577
2012"	27.36	27.36	1.637
2013"	27.507	27.507	1.65
2014"	28.572	28.572	1.686
2015"	10	29.508	1.743

Data Table for Figure 4: Remittances from the Federal Reserve System to the Department of the Treasury (2006—2016)

Year	Earning remittances	Transfer of capital surplus
"2006	29.1	
"2007	34.6	
"2008	31.7	
"2009	47.4	
"2010	79.3	
"2011	75.4	
"2012	88.4	
"2013	79.6	
"2014	96.9	
"2015	97.7	19.3
"2016	92.0	

Data Table for Figure 5: Annual Rates of Return on Investment-Grade Corporate Bonds, Long-Term Treasury Bonds, and Medium-Grade Corporate Bonds Compared with the 6 Percent Dividend Rate for Federal Reserve Bank Stock (1900—2015)

Year	IG Corporate Bonds	Long-Term Treasury Bonds	Med grade Corporate Bonds
1900"	3.31	3.12708	NA
1901	3.28	3.13667	NA
1902	3.34	3.235	NA
1903	3.55	3.34583	NA
1904	3.57	3.43667	NA
1905	3.51	3.45708	NA
1906	3.65	3.54	NA
1907	3.92	3.76167	NA

Appendix IV: Accessible Data

Year	IG Corporate Bonds	Long-Term Treasury Bonds	Med grade Corporate Bonds
1908	3.9	3.81958	NA
1909	3.78	3.82875	NA
1910"	3.87	3.94208	NA
1911	3.93	3.99375	NA
1912	3.95	4.21167	NA
1913	4.14	4.31708	NA
1914	4.11	4.19667	NA
1915	4.18	4.15292	NA
1916	4.1	4.1325	NA
1917	4.41	4.38583	NA
1918	4.82	4.53792	NA
1919	4.84	4.71542	NA
1920"	5.27	5.025	NA
1921	5.16	4.72792	NA
1922	4.49	4.3275	NA
1923	4.51	4.2225	NA
1924	4.51	3.96833	NA
1925	4.5	3.7775	NA
1926	4.36	3.52417	NA
1927	4.18	3.33542	NA
1928	4.19	3.45375	NA
1929	4.47	3.45792	NA
1930"	4.31	3.31292	NA
1931	4.15	3.49583	NA
1932	4.61	3.51042	NA
1933	4.19	3.22292	NA
1934	3.83	2.96875	NA
1935	3.44	2.72583	NA
1936	3.11	2.66375	NA
1937	3.12	2.625	NA
1938	2.9	2.46833	NA
1939	2.77	2.29125	NA
1940"	2.7	2.09083	NA
1941	2.59	2.18375	NA
1942	2.66	2.46458	NA
1943	2.55	2.47458	NA

Appendix IV: Accessible Data

Year	IG Corporate Bonds	Long-Term Treasury Bonds	Med grade Corporate Bonds
1944	2.54	2.42958	NA
1945	2.54	2.2875	NA
1946	2.45	2.2175	3.05
1947	2.61	2.33708	3.24
1948	2.82	2.38042	3.47
1949	2.66	2.31458	3.42
1950"	2.62	2.43458	3.24
1951	2.86	2.62042	3.41
1952	2.96	2.74875	3.52
1953	3.2	2.83938	3.74
1954	2.9	2.40167	3.51
1955	3.06	2.81667	3.53
1956	3.36	3.1825	3.88
1957	3.89	3.6475	4.71
1958	3.79	3.31583	4.73
1959	4.38	4.33333	5.05
1960"	4.41	4.11667	5.19
1961	4.35	3.8825	5.08
1962	4.33	3.94583	5.02
1963	4.26	4.0025	4.86
1964	4.4	4.18667	4.83
1965	4.49	4.2825	4.87
1966	5.13	4.92333	5.67
1967	5.51	5.07333	6.23
1968	6.18	5.64583	6.94
1969	7.03	6.67083	7.81
1970"	8.04	7.34833	9.11
1971	7.39	6.15917	8.56
1972	7.21	6.21	8.16
1973	7.44	6.8425	8.24
1974	8.57	7.5575	9.5
1975	8.83	7.9875	10.61
1976	8.43	7.61167	9.75
1977	8.02	7.41917	8.97
1978	8.73	8.41	9.49
1979	9.63	9.4425	10.69

Appendix IV: Accessible Data

Year	IG Corporate Bonds	Long-Term Treasury Bonds	Med grade Corporate Bonds
1980"	11.94	11.46	13.67
1981	14.17	13.9108	16.04
1982	13.79	13.0017	16.11
1983	12.04	11.105	13.55
1984	12.71	12.4383	14.19
1985	11.37	10.6233	12.72
1986	9.02	7.6825	10.39
1987	9.38	8.38417	10.58
1988	9.71	8.84583	10.83
1989	9.26	8.49833	10.18
1990"	9.80781	8.55	10.4753
1991	9.01916	7.85833	9.69437
1992	7.94345	7.01	8.46483
1993	6.87685	5.87333	7.28997
1994	7.81625	7.08	8.18851
1995	7.46029	6.58	7.80093
1996	7.17568	6.43833	7.4868
1997	7.08027	6.3525	7.27919
1998	6.47721	5.26417	6.80828
1999	7.00874	5.63667	7.45552
2000"	7.83772	6.02917	8.3106
2001	6.50916	5.0175	7.20284
2002	6.08601	4.61083	7.0284
2003	4.63833	4.015	5.3188
2004	4.61826	4.27417	5.04722
2005	5.13702	4.29	5.54525
2006	5.80837	4.79167	6.08896
2007	5.83661	4.62917	6.14001
2008	6.61224	3.66667	7.26206
2009	6.00466	3.25667	7.07021
2010"	4.12783	3.21417	4.69703
2011	3.84184	2.78583	4.41296
2012	3.18737	1.8025	3.79828
2013	3.11982	2.35083	3.70475
2014	3.10575	2.54083	3.63451
2015	3.27142	2.13583	3.88461

Data Table for Figure 6: Federal Funds Rate and 1-Year Nominal Interest Rate Compared with the 6 Percent Dividend Rate for Federal Reserve Bank Stock (1900—2015)

Year	1-year Nominal Interest Rates - Using commercial paper / cert of deposits	Federal funds
1900"	4.64	NA
1901	4.3	NA
1902	4.72	NA
1903	5.5	NA
1904	4.34	NA
1905	4.17	NA
1906	5.47	NA
1907	6.23	NA
1908	5.32	NA
1909	3.65	NA
1910"	5.26	NA
1911	4	NA
1912	4.35	NA
1913	5.65	NA
1914	4.64	NA
1915	3.65	NA
1916	3.64	NA
1917	4.25	NA
1918	5.98	NA
1919	5.56	NA
1920"	7.3	NA
1921	7.44	NA
1922	4.58	NA
1923	4.96	NA
1924	4.34	NA
1925	3.87	NA
1926	4.28	NA
1927	4.26	NA
1928	4.64	NA
1929	6.01	NA
1930"	4.15	NA
1931	2.43	NA
1932	3.36	NA

Appendix IV: Accessible Data

Year	1-year Nominal Interest Rates - Using commercial paper / cert of deposits	Federal funds
1933	1.46	NA
1934	1.01	NA
1935	0.75	NA
1936	0.75	NA
1937	0.88	NA
1938	0.88	NA
1939	0.56	NA
1940"	0.56	NA
1941	0.53	NA
1942	0.63	NA
1943	0.69	NA
1944	0.72	NA
1945	0.75	NA
1946	0.76	NA
1947	1.01	NA
1948	1.35	NA
1949	1.58	NA
1950"	1.32	NA
1951	2.12	NA
1952	2.39	NA
1953	2.58	NA
1954	1.8	1.00667
1955	1.81	1.785
1956	3.21	2.72833
1957	3.86	3.105
1958	2.54	1.5725
1959	3.74	3.305
1960"	4.28	3.21583
1961	2.91	1.955
1962	3.39	2.70833
1963	3.5	3.17833
1964	4.09	3.49667
1965	4.46	4.0725
1966	5.44	5.11083
1967	5.55	4.22
1968	6.17	5.65667

Year	1-year Nominal Interest Rates - Using commercial paper / cert of deposits	Federal funds
1969	8.05	8.20417
1970"	9.11	7.18083
1971	5.66	4.66083
1972	4.62	4.43083
1973	7.93	8.7275
1974	11.03	10.5025
1975	7.24	5.82417
1976	5.7	5.045
1977	5.28	5.5375
1978	7.78	7.93083
1979	10.88	11.1942
1980"	11.37	13.3558
1981	17.63	16.3783
1982	14.6	12.2583
1983	9.37	9.08667
1984	11.11	10.225
1985	8.35	8.10083
1986	7.31	6.805
1987	6.25	6.6575
1988	7.63	7.56833
1989	9.29	9.21667
1990"	8.43	8.09917
1991	6.92	5.6875
1992	3.91	3.52167
1993	3.44	3.0225
1994	4.35	4.20167
1995	6.45	5.83667
1996	5.68	5.29833
1997	5.78	5.46
1998	5.68	5.35333
1999	5.31	4.97
2000"	6.61	6.23583
2001	4.63	3.8875
2002	1.85	1.66667
2003	1.18	1.1275
2004	1.49	1.34917

Appendix IV: Accessible Data

Year	1-year Nominal Interest Rates - Using commercial paper / cert of deposits	Federal funds
2005	3.41	3.21333
2006	5.32	4.96417
2007	5.34	5.01917
2008	3.42	1.9275
2009	1.02	0.16
2010"	0.46	0.175
2011	0.37	0.101667
2012	NA	0.14
2013	NA	0.1075
2014	NA	0.089167
2015	NA	0.1325

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