# 2015 Annual Report





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The **Federal Reserve Bank of Philadelphia**, serving eastern and central Pennsylvania, southern New Jersey, and Delaware, **promotes a stronger economy** and **job creation**. We work with banks, nonprofits, and government agencies that help low- and moderate-income people and communities. We also serve as a source of information about the regional and national economy for policymakers and the public.

**Patrick T. Harker** President and Chief Executive Officer Federal Reserve Bank of Philadelphia The year 2015 was a time of transition. Charles I. Plosser, president and chief executive officer of the Federal Reserve Bank of Philadelphia since 2006, retired on March 1, 2015. The subsequent search for a new leader culminated in the appointment of Patrick T. Harker, a Third District native. He stepped into his new post as the 11th president and CEO on July 1, 2015, ready to engage with the community and showcase the Bank's cutting-edge research to the world.

Previously, Harker had been the 26th president of the University of Delaware, professor of business administration at the university's Alfred Lerner College of Business and Economics, and a professor of civil and environmental engineering at the College of Engineering. Before his tenure at the University of Delaware, Harker had been dean and Reliance Professor of Management and Private Enterprise at the Wharton School of the University of Pennsylvania. He was also a fellow of the Institute for Operations Research and the Management Sciences; a charter fellow of the National Academy of Inventors; a White House fellow, appointed by President George H. W. Bush in 1991; and a special assistant to FBI Director William S. Sessions from 1991 to 1992.

In the following interview, Harker shares some of the highlights from his first months at the helm, the trends he is seeing, and his insights into monetary policy.

## The First Months at the Helm

Since you have been president and CEO of the Federal Reserve Bank of Philadelphia, what is your primary focus?

As a native son of the Third District, I care about the economic growth of its communities. I grew up in South Jersey, and I have spent most of my career in Pennsylvania and Delaware. I know the region's many unique economic strengths and its potential for growth.

Our job at the Federal Reserve Bank of Philadelphia is to help shine a light on what's working well, to provide our research, to define areas where more can be done, and to foster collaboration to grow jobs and the economy throughout the Third District, which includes southern New Jersey, Delaware, and eastern and central Pennsylvania.

The Bank is also committed to contributing to the national economy through our role in shaping monetary policy. I have met with community leaders across a broad range of sectors to inform my understanding of how issues such as social mobility, economic inclusion, and equitable growth are playing out in the Third District. The Federal Reserve Bank of Philadelphia adds value to local communities by bringing these insights about the national economy to the conversation. Are there any aspects of your new position of president and CEO that surprised you?

The Federal Reserve's role in the nonmonetary policy world is often misunderstood. We conduct a tremendous amount of research on economic and community development trends to share with stakeholders in our District and across the country. We conduct research on issues ranging from the challenges and opportunities for community banks in small business lending to the effectiveness of pre-purchase homeownership counseling.

Each Federal Reserve Bank works with local bankers, community development organizations, and local businesses, among other groups. This structure gives Reserve Banks a unique perspective on the economy that is more nuanced than from just looking at the data. It also ensures that the voices of all citizens are reflected in policy decisions.

## **Growth Across the Region**

How can the Federal Reserve Bank of Philadelphia support job growth in the region?

The strength of our economy depends on the skills, ability, and financial stability of our workforce. Local business owners tell me that they need trained workers to grow their businesses. There must be more investment in human capital to meet this demand. Investing in our region's workers can lead to an improved quality of life and economic growth across the board. For this reason, the Federal Reserve Bank of Philadelphia has been particularly focused on workforce-related issues for young people. In recent years, there has been about a 10 percent decrease in labor force participation among young people between the ages of 16 and 24. So, we are looking at strategies to bring this demographic back into the workforce in a productive way. I recently toured the YouthBuild Philadelphia Charter School, Philadelphia Works, and District 1199C Training & Upgrading Fund. These organizations are focused on reengaging the region's young people and helping them learn job skills and meaningful work. The work that these groups and others are doing has a positive impact on the future of the regional economy.

"Our job at the Federal Reserve Bank of Philadelphia is to help shine a light on what's working well, to provide our research, to define areas where more can be done, and to foster collaboration to grow jobs and the economy throughout the Third District."



How can the Philadelphia Fed ensure that economic growth is shared across the region?

A Equitable economic growth has been a long-standing priority for the Philadelphia Fed. I'm meeting with people who drive our regional economy and asking what we can do to help grow the economy. Monetary policy does not grow the economy. That's the job of great mayors, great business leaders, and great community organizers. The role of the Federal Reserve is to facilitate critical conversations among these key stakeholders.

## **Relying on Data to Formulate Policy**

What is your approach to monetary policy?

A I would characterize my approach as data dependent. I formulate my policy perspective by considering all the data — from market stability to job growth to inflation — and make decisions based on what the numbers are telling us. I think it's important to take a longterm view rather than to react to short-term volatility and to consider an array of data and longer term trends in forming a policy stance.

# You have discussed good and bad monetary policy. Can you expand on this?

Good monetary policy is almost invisible when it's done well. It allows businesses and employers to invest in the people, capital, and technology needed to grow their businesses. Good monetary policy can smooth out business cycles, but it will not affect long-term economic growth. You'll recognize bad monetary policy because it limits businesses from doing what they would naturally do. It goes without saying that bad monetary policy can derail the economy and reduce economic growth.

There is plenty of scope for economic policies — broadly interpreted — to improve the performance of the U.S. economy. Lawmakers can also do a great deal through fiscal policy and tax policy to support long-term economic growth.

## Focusing on the Local Community



One of the highlights of my first year at the Fed has been touring the Third District to get a better understanding of the forces behind the region's growth. I have heard firsthand about innovative community programs, new housing models, small business challenges, and much more. People's pride, commitment, and resilience are empowering.

"Good monetary policy ... allows businesses and employers to invest in the people, capital, and technology needed to grow their businesses."

I visited Allentown in the Lehigh Valley of Pennsylvania to see the area's expansion of businesses and its plans for future growth. I also went to northern Pennsylvania and visited Williamsport, where business leaders told me they remain optimistic that, as energy prices bounce back, they will continue to be a major producer of natural gas. Our challenge is to make sure we have the resources, the vision, and the leadership to make full use of our District's potential. You have said that you are optimistic about our economy and that the underlying shift shows that our economy is growing. What indicators are you seeing?

Economic fundamentals are sound, and our financial system is in good shape. The main indicator is the labor market. We are seeing robust hiring, which includes replacing baby boomers who are retiring.

We will continue to monitor the global economy and its impact on the United States. The strength of the dollar and shifts in China's economy are two variables that we are following closely. Data will be key in all of my future policy recommendations. If financial headwinds dissipate quickly and inflation picks up a bit, we will need a slightly more aggressive approach to policy.

What impact will the current move toward consolidation in the banking industry have on the economy and the Federal Reserve?

We have fewer member banks, as the total number of banks in the District continues to shrink. It puts the onus on us to understand why that consolidation is happening. Some of it is purely economics. Community bankers tell me about the heavy financial burden they are experiencing from expenses such as cybersecurity and investment in technology. That's an issue of economies of scale. It can be easier for larger banks to take on those investments. Community bankers have also told me about issues such as compliance cost. It's important for the Federal Reserve to hear about these challenges and bring them to policymakers in Washington, D.C. We need to discuss how we can ease that regulatory burden for the banks while continuing to ensure that they are safe and sound and that consumers are protected. That is our challenge.

What are your thoughts on community banks' role in the economy in the U.S. and more specifically in Pennsylvania?

Community banks across the country, particularly in Pennsylvania and the broader Third District, are critical because they serve small businesses, growing firms, and consumers where they are. They can take the pulse of the local economy because they are so deeply immersed in their communities. These banks have an invaluable perspective on their local economies because their customers are their neighbors.

The Philadelphia Fed wants to make sure we continue to create an environment in which community banks can thrive. We regularly meet with community bankers to talk about current banking conditions. These conversations are essential to my understanding of local economic climates. We also get feedback from community bankers at our annual field meetings across the District each fall. Field meetings are opportunities for us to talk with community bankers about topics such as banking regulation and business trends. Since 2015 is my final year at the Fed, I can now look back at the full scope of my service. I worked at the Federal Reserve Bank of Boston for more than 20 years before I came to the Philadelphia Fed. When I was recruited here, I worked with many dedicated people to deliver sophisticated and efficient services to Third District financial institutions and their customers during a time of rapid innovation in the financial services sector. I witnessed the creation of the automated clearinghouse system as a new payment process and watched it become a workhorse payment service that supports much of the economy. I also participated in the digital check image research project that eventually eliminated traditional check clearing. The new process replaced nearly 100 percent of check collection, which had consisted of physically sorting and shipping paper checks aboard planes, trucks, and vans on a daily basis across the nation.

I was honored to be the chief operating officer of the Philadelphia Fed during the Federal Reserve System's centennial celebration. Since the Federal Reserve System was founded in 1913, the Fed has continued to evolve with the nation as our economy matured, as our financial systems became increasingly complex and interconnected, and as the prominence of America as a financial superpower became undeniable.

If there are any lessons learned from my many years of experience at the Fed, I would say we need to consider the Fed's roles as a resource and as a service provider. We are a resource for economic data and analysis as well as an objective assessor gauging the health of the banking ecosystems. Since the days of the Great Recession, our role in providing a deeper analysis of conditions and trends has grown increasingly sophisticated and more predictive. The Philadelphia Fed has assembled

teams of experts in data analytics, retail risk, payment cards, and other specialties. As a financial services provider, we understand that service is something more than what we do or what we



intend to do. Our customer focus means that we think and act in ways that make the Philadelphia Fed indispensable to the Third District and essential to all our business partners.

I offer my sincere thanks to the dedicated officers and staff at the Philadelphia Fed. I wish you all every success in supporting such a well-defined mission in service to America in the years ahead.

D. Blake Prichard First Vice President and Chief Operating Officer

In April 2016, the Federal Reserve Bank of Philadelphia welcomed James D. Narron, a long-time veteran of the Federal Reserve System, as first vice president and chief operating officer. He has spent nearly three decades working for the System in various capacities, most recently as senior vice president and product manager at the Federal Reserve Bank of San Francisco. In addition, he has also worked at the Federal Reserve Banks of New York and Kansas City, at the Board of Governors of the Federal Reserve System, and in the private sector.

## Sharing National, Regional Economic Insights

At the start of the new year, **Charles I. Plosser**, outgoing president and CEO of the Federal Reserve Bank of Philadelphia, and **Elif Sen**, a senior economic analyst in the Research Department, provided insights into the current and future state of the U.S. economy to members of the Greater Philadelphia Chamber of Commerce. More than 400 local business executives and members of the media gathered for the chamber's annual Economic Outlook event to listen to the forecast for 2015.

In late summer, as incoming President and CEO **Patrick T. Harker** settled into his new role at the Philadelphia Fed, he joined members of the Community Development Studies & Education Department on several tours to get acquainted with Third District neighborhoods and organizations.

These tours gave Harker a chance to meet key stakeholders, discuss critical issues that have an impact on low- and moderate-income communities, and consider ways in which the Philadelphia Fed can strengthen its support of community development initiatives. Harker's outreach tours in 2015 included a briefing at the Pennsylvania College of Technology (PCT), an institution in Williamsport, PA, that is affiliated with the Pennsylvania State University, and a site visit to a lab at PCT's School of Industrial, Computing & Engineering Technologies. He also met with representatives from the Central Pennsylvania Workforce Development Corporation, SEDA-Council of Governments, and Lycoming County Planning & Community Development Department and visited affordable housing and economic development projects in the Williamsport area.

In November, Harker visited three organizations in Philadelphia geared to providing career paths for workers without high school diplomas: YouthBuild Philadelphia Charter School, Philadelphia Works, and District 1199C Training & Upgrading Fund. Bridging the gap between education and employment is a regional concern since the unemployment rate for youths aged 16 to 24 is more than twice that of the nation. The leaders from these organizations discussed ways in which their initiatives have been able to connect workers to job training and classroom instruction.







Charles I. Plosser (top), outgoing president and CEO, and Elif Sen (middle), senior economic analyst in the Research Department, discussed the U.S. economic outlook at a Greater Philadelphia Chamber of Commerce event in January 2015; Patrick T. Harker (bottom), current president and CEO, toured local workforce development sites in Philadelphia in late November to get acquainted with the needs of constituents in the Third District.

## **Distinguished Awards for Bank Initiatives**

## Community Development Champion

Theresa Y. Singleton, vice president of the Community Development Studies & Education Department, was appointed the 2015



Theresa Y. Singleton, vice president of Community Development Studies & Education, focuses on the ways research drives programs for underserved communities.

Community Development Champion by the Philadelphia Association of Community Development Corporations. The award recognizes her significant impact on Philadelphia. As the Bank's community affairs officer, Singleton directs research and outreach initiatives to low- and moderate-income communities as well as initiatives to improve access to credit for underserved markets. In addition, she oversees the Bank's economic education initiatives.

Singleton, who joined the Bank in March 2012, has continued to advance relationships with key community development stakeholders in the Third

District and nationwide. Under her direction, the CDS&E team has focused on research to advance effective and sustainable programs to encourage economic growth in local underserved communities.

## Bank Wins Award for Building of the Year

For the second time in three years, the Bank won the esteemed TOBY (The Outstanding Building of the Year) award for 2015, a tribute to excellence in building operations and management. The award, presented by the Business Owners and Managers Association, showcased the Bank in



Brian Houghton (left), Bank manager of plant operations and maintenance, and Chris Ivanoski, assistant vice president of Facilities Management, won another award for excellence in building operations and management.

the Government Building category. The Bank competed against other government buildings for the regional award and underwent thorough inspections of building operations and management, including green initiatives, tenant relations, and community service.

## Diversity and Inclusion Initiatives

In addition to recognition for its community development programs, the Bank received two marks of distinction for its diversity initiatives. The Human Resources Department accepted the HR Award for Excellence in Diversity from the Delaware Valley HR Department of the Year Award organization. The award is presented to an HR department that best integrates diversity practices and training into its institutional culture. In addition, the Bank accepted the 2015 Regional Corporation of the Year award from the Eastern Minority Supplier Development Council, recognizing its commitment to supplier diversity.

## Sharing the Keys to Financial Success

Economic educators at the Bank held a variety of teacher-training outreach programs for educators in the Third District. In one offering, 33 teachers participated in the annual five-day



Keys to Financial Success teacher-training course, which prepared them to offer personal finance classes in their own schools. During the annual five-day Making Sense of Money and Banking program, the Bank's economic educators trained 31 teachers, providing guidelines to share money and banking concepts in classrooms. In addition to the training, all course participants received 30 hours of professional development credit in their respective states. Each year, the number of teachers who take the financial literacy courses grows, and that knowledge extends into the community. These courses continue to provide nearly 100 teachers with financial literacy lessons to share with more than 6,500 students annually.

## A New Leader for Supervision, Regulation, and Credit

William G. Spaniel joined the Philadelphia Fed in November as senior vice president and lending officer. He leads the Bank's Supervision, Regulation, and Credit Department, which oversees financial institutions in the Third District and

plays a crucial role in the Fed's mission to promote the safety and soundness of the banking industry. Spaniel joined the senior management team in Philadelphia after 25 years at the Board of Governors, where he most recently was senior associate director of the Division of Banking Supervision and Regulation.



William G. Spaniel, senior vice president and lending officer

## Updates to the Treasury's Payment Systems

The Bank recently released a new Collateral Management System update for the U.S. Department of the Treasury's payment systems to enhance both functionality and business processes. The Collateral Management System team developed the 3.3 release, a special analytical tool, to boost data usability

for credit risk analysis and management reporting. The team also finished the Data Profiling Prototype on lending data and developed and implemented the latest Post Payment System release. The new release was designed to modernize and integrate former Treasury systems and features updates to its infrastructures, including a portal front end, a business workflow system, an enterprise content management system, and special customized features for the Treasury and government agencies. A work in progress, the Post Payment System is expected to be completed in 2018 to replace the legacy systems, improve the effectiveness of Treasury payment processing, and offer better analytical services.



## Bank Raises Bar on Risk Assessment with New 'BREW' Model

The Philadelphia Fed succeeded in enhancing the way the Federal Reserve System assesses bank risk. The innovative team created and released a new tool called the Bank Risk Early Warning (BREW) model, which measures a bank's risk factors and is more user friendly and comprehensive than existing tools. This model draws on financial and economic data to identify and quantify a bank's risk level over the next year or two. More specifically, the model predicts the likelihood that an institution currently rated satisfactory or better will become less than satisfactory in the next two years. The factors that drive bank risk are aggregated and calculated on a scale from 400 to 800, similar to how credit scores are determined for consumers: High-risk banks will have lower BREW scores; low-risk banks will have higher ratings.

The BREW model lets the Supervision, Regulation, and Credit Department determine which banks need the most attention rather than giving examiners volumes of data to analyze. The model is in its initial implementation phase. Examiners are still being trained on how to interpret the scores and assess bank risk. Experts across the System are also providing feedback so that further refinements can be made in the months to come.

## Vice President, Chief of Staff, and Corporate Secretary Appointed

Patricia A. Wilson came on board in July as vice president, chief of staff, and corporate secretary. She manages the Office of the President and its relationships and activities and oversees the Office of the Secretary, which supports the Bank's board of directors and corporate correspondence. In addition, Wilson assists with Bank- and Federal Reserve Systemwide initiatives. She has served as a senior advisor to President Patrick T. Harker and his leadership teams for over 17 years. Before joining the Bank, Wilson was vice president and chief of staff at the University of Delaware.

## **Professional Work for Young Partners**

In September, the Bank welcomed eight Cristo Rey Philadelphia High School students who gained professional experience in the Information Technology Services and the Supervision, Regulation, and Credit departments. As part of the Bank's ongoing partnership with Cristo Rey, students work a set number of hours at the Bank during the school year to acquire professional work experience. Cristo Rey, a private high school established in 2012, creates partnerships with local educators, businesses, and universities to give its students in the Philadelphia area a chance to combine academics with professional work experience as part of its curriculum.



Cristo Rey Philadelphia High School students (front row) share the spotlight with their mentors (back row) during their graduation presentation at the Bank.

## Keeping Up to Date with Conferences, Symposiums, and Seminars

Throughout the year, the Bank sponsors an array of conferences, some of which are open to the industry at large and some of which are specifically designed for government agencies and Reserve Banks throughout the System. Here are just some of the highlights.

Student Loan Repayment: Research, Data, and Policy Conference



The Payment Cards Center hosted the invitation-only conference Student Loan Repayment: Research, Data, and Policy. Its three key goals were to explore the existing research on student loan repayment, outline unanswered policy-relevant research questions, and examine capa-

bilities to respond to these questions with current analytical tools and data. Studying the factors that affect student loan repayment and the research based on innovative data can provide a better understanding of student and lender decision-making.

#### Emerging Risks in Auto Lending Workshop

The Supervision, Regulation, and Credit Department hosted the Emerging Risks in Auto Lending Workshop, an interagency conference that was the first of its kind in the auto lending field. With outstanding auto loans nationwide totaling more than \$900 million, the workshop zeroed in on potential risks and the uptick in the number of risk metrics. The supervisory roundtable at the end of the conference focused on issues related to policy and supervision. Among the 100 subject matter experts, there were System leaders and experts from the Office of the Comptroller of the Currency, the Consumer Financial Protection Bureau, and the Federal Deposit Insurance Corporation.



Paul Calem, vice president, Supervision, Regulation, and Credit, Philadelphia Fed



Chellappan Ramasamy, assistant vice president, Supervision, Regulation, and Credit, Philadelphia Fed



Patrick T. Harker discussed the value of social impact bonds on local communities at a conference in Philadelphia.

### Capital for Communities: Pay for Success Financing

The Community Development Studies & Education Department hosted a conference on Capital for Communities: Pay for Success Financing. Subject matter experts and local community leaders took a closer look at the implications of pay for success financing, or social impact bonds, a financial tool gaining national popularity in which the funds that investors contribute to social services are reimbursable by the government only if the program can demonstrate quantifiable success.

#### Audit and Research Symposium

The Audit and Research departments cohosted colleagues from the Bank and the Federal Reserve System for the Audit and Research Symposium. The goals were to promote Reserve Bank research activities, discuss how research is used for the Federal Open Market Committee meetings, review the relationships in academic research, formulate best practices, and provide networking opportunities for System attendees and speakers.



From left: Brie Coellner, manager of research analytics at the Philadelphia Fed; Paul Nunnally, enterprise information security consultant, Office of the Chief Information Security Officer, Federal Reserve Information Technology at the Richmond Fed; and Stan Sienkiewicz, vice president in Research at the Philadelphia Fed, shared their insights into best practices for promoting research activities.

#### New Perspectives on Consumer Behavior in Credit and Payments Markets Conference

The interaction between credit markets and the real economy was the basis for the eighth biennial New Perspectives on Consumer Behavior in Credit and Payments Markets Conference, cohosted by the Research Department and the Payment Cards Center. Armed with greater access to data about consumer credit and payments, the Philadelphia Fed's economists and other researchers have turned their attention to the design of financial contracts and consumer use, interactions of consumer credit markets and business cycles, and the efficacy of consumer disclosures by reviewing how college students respond to timely messages about borrowing and the cost of education.



## Regulating Consumer Credit Conference

The Bank hosted the Regulating Consumer Credit Conference, jointly sponsored by the Supervision, Regulation, and Credit Department; Fox School of Business at Temple University; and the *Journal of Economics and Business*. The conference drew more than 100 experts from academia and regulatory agencies, who presented their work and considered policies related to mortgages and consumer credit issues, especially regulatory and supervisory implications.

## Diversity and Inclusion Forum

The fourth annual Diversity and Inclusion (D&I) Industry Forum focused on D&I initiatives that have an impact on business. More than 80 D&I and Talent Management practitioners from Third District companies and organizations and the Federal Reserve System gathered for a conference on Unconscious Bias in the Workplace: What It Is, Why It Matters, and What You Can Do About It. Keynote speaker Howard J. Ross, founder and chief learning officer at Cook Ross Inc., explored unconscious bias in business and how to confront and modify behaviors.



Front row, from left (FRB Philadelphia, Human Resources), Karen J. Vaughn, associate director of Diversity and Inclusion; Misty Dill, senior analyst; Marjorie Hillock, talent management and organizational development consultant; and Stephen Hart, vice president; back row, from left: C. Neill Epperson, professor of psychiatry and obstetrics and gynecology, University of Pennsylvania Perelman School of Medicine; Howard J. Ross, founder and chief learning officer, Cook Ross Inc.; Michele C. Meyer-Shipp, vice president and chief diversity officer, corporate HR, Prudential; Alan M. Barstow, director and senior scholar of organizational dynamics, University of Pennsylvania; and Mary Ann Hood, senior vice president, FRB Philadelphia, HR; not pictured: Vernon L. Francis, partner, Dechert LLP

#### 2015 HIGHLIGHTS

#### **Policy Forum**

The 11th Annual Policy Forum gathered subject matter experts in December for a look at The New Normal for the U.S. Economy. For the more than 160 academics, policymakers, and market economists, the forum provided a platform to establish a longer term perspective about macroeconomic research and its implications for monetary policy. Among the notable experts were James Bullard, president and CEO of the St. Louis Fed, and Narayana Kocherlakota, president and CEO of the Minneapolis Fed.



From left: James Bullard, St. Louis Fed president and CEO; Patrick T. Harker, Philadelphia Fed president and CEO; and Narayana Kocherlakota, Minneapolis Fed president and CEO, were among the experts at the Bank's 11th Annual Policy Forum.



Bullard and Kocherlakota participated on a panel moderated by Michael Dotsey (right), senior vice president and director of research at the Philadelphia Fed.



## **Giving Back to the Community**

Bank employees volunteered their time and talents in several Bank-sponsored events throughout the year, many of which were coordinated by the Bank's PhillyFedCARES program. On Martin Luther King Jr. Day in January, more than 30 volunteers spent a day of service painting hallways, tackling minor repair work, sorting library books, and decorating classroom bulletin boards at the Andrew Jackson Elementary School in South Philadelphia. In July, more than 30 Bank employees volunteered at the Philabundance Hunger Relief Center in South Philadelphia, helping to sort food items for distribution through Philabundance programs that help the disadvantaged in the local community. Employees and their families turned out 60 strong for the 9/11 Heroes Run/Walk in September. And during the holidays, Bank employees volunteered at the Salvation Army Citadel Corps Community Center in Philadelphia, sorting toys that were handed out to children in need. Employees who couldn't volunteer their time showed their support by donating clothing and toys during a number of Bank-sponsored events during the year.











# INNOVATION

Strategies for Changing Times

Innovation. The word once evoked visions of scientists in white lab coats on the brink of discovery. But that was yesterday's vision. Today, entrepreneurs with novel ideas, some funding, and room in their garages can forever change how we work and how we live.

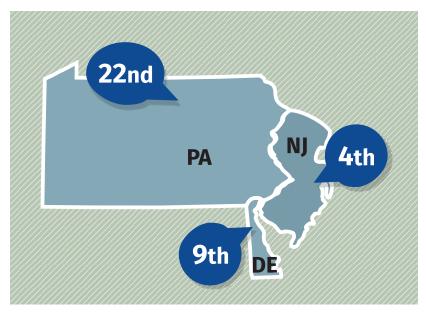
Innovation has redefined entire industries. Consider how Amazon has altered retail or how iPads transformed supercomputer capability into sleek devices that fit in your hand. Ultimately, innovation can raise productivity across the economy.

The impact of innovation is apparent in the Third District, which encompasses Delaware, eastern and central Pennsylvania, and southern New Jersey, home to 13 Fortune 500 corporations and two Ivy League universities.<sup>1</sup> Two of our states ranked in the top 10 in the 2015 Bloomberg State Innovation Index: New Jersey was No. 4, Delaware No. 9, and Pennsylvania No. 22 (Figure 1).<sup>2</sup> New Jersey was ranked highly because of its high-tech density, highly educated population, and top firms. It was also a leader in patents in 2015, ranking seventh, with 5,026 patents; Pennsylvania was 17th, with 4,225 patents, and Delaware was 25th, with 376.<sup>3</sup>

At the heart of this vibrant District, the Federal Reserve Bank of Philadelphia, as part of the Federal Reserve System, is charged with fostering the stability, integrity, and efficiency of the nation's monetary, financial, and payment systems. As such, the Philadelphia Fed also studies the economy and its impact on communities. Understanding the sources and effects of innovation is of special interest to economists and a topic of study at the Philadelphia Fed. **Gerald A. Carlino**, a senior economic advisor and economist in the Research Department, and **Robert M. Hunt**, a vice president and

#### FIGURE 1 Innovation Ranking for the Tristate Region

The Bloomberg State Innovation Index scores each state on a scale from 0 to 100, according to six equally weighted metrics. Here are the rankings for the three states in the Third District.



Source: 2015 Bloomberg State Innovation Index

the director of the Payment Cards Center, contributed to a 2015 working paper providing evidence that, even in the Internet age, the spillover of knowledge is highly localized.<sup>4</sup> Using a novel methodology, they identified four main research clusters in the Third District: Conshohocken/King of Prussia and Philadelphia in Pennsylvania, Wilmington/New Castle in Delaware, and Trenton/Princeton in New Jersey. The two researchers first examined the location and concentration of U.S. research and development labs along the Northeast Corridor and in California using innovative spatial techniques. By studying citation patterns in patents, they showed that inventors living within these clusters were far more likely to cite each other's patents than were inventors living outside them, suggesting that very close proximity to other groups of innovators plays a measurable role in developing ideas.

In a separate study, **Jeffrey Lin**, a Research Department economic advisor and economist, collaborated on a paper that provides evidence



Jeffrey Lin, economic advisor and economist, Philadelphia Fed

of the importance of geographic proximity by demonstrating that so-called simultaneous inventions — in which patent applications for the same invention are submitted by separate inventors at the same time — tend to occur near one another. He noted that cities exist in part because of the knowledge spillovers that nearness facilitates.<sup>5</sup>

As a mature economic region, the District tends to lag behind the nation in employment growth. While the tristate region lost relatively few jobs during the Great Recession, the nation recovered faster, surpassing its prior peak in May 2014, while the region regained its peak in October 2015. Each state in the tristate region faced the economic upheavals in different ways: Delaware and Pennsylvania recovered within nine months of the nation; New Jersey's job totals still remained a bit below its prior peak at the end of 2015 (Figure 2).<sup>6</sup> However, the year-over-year employment growth shows Delaware and New Jersey slightly ahead of Pennsylvania in jobs recovery.

The Philadelphia Fed uses much of its data to keep District stakeholders informed in their decision-making, policy outlook, and planning so that challenges can be addressed head on.

## **Research and Innovation**

Research Department analysts and others design, collect, and release several unique data sets to the public that are continually updated and studied for their ability to measure or predict economic variables. Through the maintenance and dissemination of these data sets and the analysis of their behavior over time, Research Department analysts contribute to ongoing efforts in the economics field to fine tune the design of monetary policy. These data sets also provide researchers, forecasters, bankers, market participants, and the public with potentially useful information on the current state of the economy.

The Research Department's Real-Time Data Research Center, for example, maintains a repository of official economic data as they were initially released by government statistical bureaus — before

any subsequent revisions — so that researchers at the Philadelphia Fed and elsewhere can study the effect of the initial announcements of the data on other economic variables and on policy decisions.<sup>7</sup>

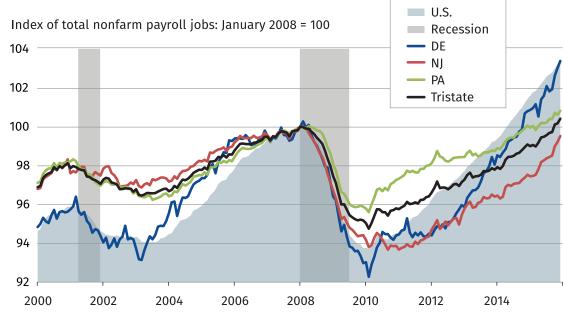
The Real-Time Data Research Center also maintains the *Survey of Professional Forecasters*, the nation's oldest quarterly survey of macroeconomic forecasts — first released in 1968 and housed at the Bank since 1990 — and the *Livingston Survey*, the oldest continuous survey of economists' expectations.<sup>8, 9</sup> A more recent innovation was *GDPplus*, launched in 2013, designed to improve upon official measurements of economic output through a unique methodology that combines gross domestic product and gross domestic income to arrive at more comprehensive estimates of economic activity.<sup>10</sup>

Another innovative indicator maintained by the Real-Time Data Research Center and under study for its potential usefulness in signaling economic effects is the monthly **Partisan**  **Conflict Index**, which traces discord among politicians at the federal level by measuring the frequency of newspaper articles that report political disagreement. The higher the index value, the greater the conflict among the political parties, Congress, and the President.<sup>11</sup>

In 2015, the Research Department also produced four Monetary

#### FIGURE 2 Employment Growth: The Third District versus the Nation

As a mature economic region, the Third District tends to lag behind the nation in employment growth. Although the tristate region lost relatively few jobs during the Great Recession, the nation recovered faster, surpassing its prior peak in May 2014; the region regained its peak nearly 17 months later.



Source: Bureau of Labor Statistics via Haver Last month plotted: December 2015

**Policy Reports: Using Rules for Benchmarking**, in which the actual policy settings adopted by the Federal Reserve's monetary policymaking arm, the Federal Open Market Committee, are compared with hypothetical settings that would be indicated by various well-established monetary policy rules.<sup>12</sup> These reports, which are similar to exercises performed at many central banks worldwide, are designed to make monetary policy more understandable to the public. They show to what extent actual Federal Reserve monetary policy deviates from the policy interest rates called for by key models and offer insight into possible reasons for the deviation.

Another unit in the Research Department is the Regional Economics team, which designs, collects, and publishes the results of indexes that investors, firms, and others follow. Its closely watched *Manufacturing Business Outlook Survey (MBOS)*, which is considered by many to be an early indicator of monthly national manufacturing conditions, follows current and future tristate business activity. To provide insight into policy issues, survey respondents are also asked special questions, which in 2015 included the effect of the strong dollar and declining energy prices on manufacturing. Regional analysts also continued to conduct and monitor the *Nonmanufacturing Business Outlook Survey*, a recent complement to the MBOS that surveys nonmanufacturing firms about current and future overall business activity.<sup>13</sup>

The Regional Economics team also contributes in a special way to the Federal Reserve System's **Beige Book**, or Summary of Commentary on Current Economic Conditions by Federal Reserve District, which collects anecdotal information on local economic conditions from businesspeople, market participants, economists, and other sources eight times a year.<sup>14</sup> **Paul R. Flora**, a senior regional research analyst and policy support manager, initiated and leads the compilation of the Beige Book checklist, which quantifies the contents of the District-by-District information. The checklist, which was implemented for the entire Federal Reserve System, ensures reporting consistency across the individual Reserve Bank reports. It is also used for uniformity in the national summary, which is compiled to present a more comprehensive look at conditions nationwide. Overall, the data offer ways to monitor and evaluate the health of the economy, locally and nationally. The data are also a channel for businesses and others to suggest improvements in policies and infrastructure.



Paul Flora, senior regional research analyst and policy support manager, Philadelphia Fed

The **State Coincident Indexes**, managed by the Regional Economics team, measure economic activity in each state based on its labor market performance.<sup>15</sup> Firms and state governments use the indexes to help

formulate budgets, and analysts use them to evaluate economic conditions. In 2015, the National Association for Business Economics included the indexes in its 12th Annual Economic Measurement Seminar presentations to enhance members' knowledge of economic statistics.

## Firms and state governments use the indexes to help formulate budgets, and analysts use them to evaluate economic conditions.

For the public, the Research Department introduced three new publications in 2015: *Regional Spotlight*, a semiannual exploration of trends and issues affecting the tristate economy; *Banking Trends*, a semiannual look at issues affecting banks in the tristate area and nation; and the *Banking Policy Review*, which annually analyzes legislative and regulatory activity affecting the banking industry.<sup>16</sup>

The *Business Review*, which was retired at the end of 2015 and replaced by *Economic Insights* as the Research Department's flagship publication, featured a dozen articles on vital economic topics written for noneconomists by Research Department economists and analysts.<sup>17</sup> The First Quarter 2015 issue, for example, examined lingering effects of the financial crisis. In **"The Government-Sponsored Enterprises: Past and Future,"** author **Ronel Elul**, a senior economic advisor and economist, traced the role of Fannie Mae and Freddie Mac in the housing bubble and subsequent financial crisis and described various reform proposals. In **"Smart Money or Dumb Money: Investors' Role in the Housing Bubble," Wenli Li**, a senior economic advisor and economist, examined evidence suggesting that, in addition to easy credit, real estate speculation was a major factor in the housing boom and bust. The Third Quarter 2015 issue published the debut of *Banking Trends* with "How Our Region Differs," an explanation by banking structure analyst James DiSalvo and banking structure associate **Ryan Johnston** of how tristate banks differ from other regional banks around the country.<sup>18</sup>

In 2015, economists in the Research Department published more than 60 working papers and updates to existing studies on innovations.<sup>19</sup> In one paper, **Roc Armenter**, vice president and economist in the Research Department, and **Benjamin Lester**, senior economic advisor and economist, demonstrated how interest rate instructions from the Federal Open Market Committee are implemented.<sup>20</sup> The researchers developed a structural model of the federal funds market — the first designed specifically for the current environment in which banks hold



Wenli Li, senior economic advisor and economist, Philadelphia Fed



Benjamin Lester, senior economic advisor and economist, Philadelphia Fed

large excess capital reserves with the Fed. In the model, the Committee's plan could be analyzed and additional designs could be proposed. Their model has led to a Federal Reserve System initiative to share and analyze other proposed frameworks for monetary policy implementation.

Research topics in 2015 also delved into the implications of disclosing bank stress test results to the public<sup>21</sup> and the role of occupancy fraud in residential mortgages.<sup>22</sup> Other studies explained how risky alternative mortgage products boosted housing prices by increasing demand,<sup>23</sup> how cities with a greater variety of natural amenities such as coastlines and hills tend to have more persistent geographic distributions of income over time,<sup>24</sup> and how congested cities may benefit from improving public transportation.<sup>25</sup>

As with all economists, the Philadelphia Fed's researchers and analysts rely on government data, such as the Bureau of Labor Statistics' monthly employment reports. To ensure that monthly fluctuations in the data reflect the true underlying state of the labor market rather than expected ups and downs that recur in certain months and seasons, the BLS applies seasonal adjustment factors to its payroll employment figures.<sup>26</sup> In his paper **"Weather-Adjusting Employment Data,"** coauthor **Michael Boldin**, a Bank senior economic analyst, took a different view of these fluctuations. He explained that unusual weather patterns can have sizable effects on employment reports that are not controlled in the Bureau's current seasonal adjustment procedures.<sup>27</sup> His findings demonstrated that unseasonably high or low temperatures can shift monthly U.S. employment totals by more than 20,000 in either direction and that major snowstorms in the nation's most populated areas can raise or lower the official job numbers by more than 100,000.

## **Community Development**

Other Bank departments use data to inform and educate stakeholders and the public at large. For the Community Development Studies & Education Department, mortgage financing, housing rehabilitation, and gentrification were three big issues in 2015. The Community Development's research team produced two reports on rental housing affordability that resonated with the public sector and local government: The Bank published a quantitative study on the **"Affordability and Availability of Rental Housing in the Third Federal District: 2015,"** along with a qualitative companion study that explored the challenges of rental housing through interviews with local housing professionals.<sup>28</sup>

In 2015, the Pennsylvania General Assembly used data from Community Development's two studies in a proposal to increase the Pennsylvania Housing Affordability and Rehabilitation Enhancement Fund. Local nonprofit and government stakeholders noted that these analyses provided critical information in planning for ongoing community needs and in developing funding proposals. The department has also been examining gentrification in Philadelphia and produced a comprehensive report that reached local and national news outlets, including Bloomberg, CNN Money, and *The Atlantic's* CityLab.<sup>29</sup>

Other Community Development initiatives centered on workforce development for young people (aged 16 to 24). As part of its **At the Intersection of Employment and Education** series, the department hosted several webinars for stakeholders nationwide.<sup>30</sup> Partnerships with community groups, including the Philadelphia Youth Network, supported the department's initiatives to advance summer job opportunities for Philadelphia youth. The result was a Philadelphia Summer Youth Employer Roundtable for several key employers in the region to discuss current youth summer job programs. In addition to offering teacher-training programs on financial literacy in the tristate area, the department's economic education team produced a personal financial education brochure that was distributed to more than 8,000 Philadelphia youths on what to do with a first paycheck.<sup>31</sup>

For workers without a college education, department analysts explored employment options. More than 25 local and national news outlets shared the findings of two reports about "opportunity occupations," or decent-paying employment opportunities for workers without a fouryear college degree.<sup>32</sup> The national report **"Identifying Opportunity Occupations in the Nation's Largest Metropolitan Economies,"** by **Keith Wardrip,** Community Development research manager, and his colleagues, was produced in conjunction with the Federal Reserve Banks of Atlanta and Cleveland and discussed the accessibility of such jobs for workers in 100 metro areas across the country. The regional report **"Identifying Opportunity Occupations in Pennsylvania, New Jersey, and Delaware,"** also by Wardrip, focused on the state of the opportunity occupations in the Third District. To broaden the report's reach, the department staff hosted a webinar that shared the details and reviewed policy implications. Wardrip, lead researcher for the studies, made a series of presentations to internal and external audiences as well as within the Federal Reserve System.

Another study by the Community Development Department captured the attention of the U.S. Department of Housing and Urban Development as it considered allocating more than \$36 million in grants to hundreds of organizations specializing in pre-purchase homeownership and financial management skills counseling. "The Effectiveness of Pre-Purchase Homeownership Counseling and



Keith Wardrip, Community Development research manager, Philadelphia Fed



Marvin M. Smith, senior Community Development economic advisor, Philadelphia Fed

**Financial Management Skills,"** a report by **Marvin M. Smith**, senior Community Development economic advisor, detailing the results of his five-year study, was released in 2014 and continues to generate media and industry attention.<sup>33</sup>

According to the report, the process of counseling individuals before they purchased a home could decrease mortgage defaults overall. Even if the individuals who underwent counseling didn't actually buy a home, the counseling still had a measureable impact that was

Another study by the Community Development Department captured the attention of the U.S. Department of Housing and Urban Development as it considered allocating more than \$36 million in grants ... likely to improve their creditworthiness going forward. HUD credited the study with having a significant effect on grant-giving decisions to counseling organizations.

## **Payment Cards Center**

The Payment Cards Center has a long history of providing insights into developments in consumer credit and payments markets that are of interest and accessible to the Federal Reserve System as well as the consumer finance industry, other businesses, academia, policymakers, and the public.

One important function of the Payment Cards Center is to act as a forum in which industry and public policy practitioners can discuss critical issues affecting the nation's financial services sector. In 2015, the department drove discussions forward by organizing 10 conferences, workshops, and research seminars that melded the viewpoints of academia, consumers, industry, and the public.

Meetings such as the **Eighth Biennial Research Conference**, cosponsored by the Payment Cards Center and the Research Department, featured some of the most cutting-edge academic research to date on consumer credit and payments.<sup>34</sup> The Payment Cards Center also organized **Student Loan Repayment: Research, Data, and Policy**, a conference that examined student loan repayment, outlined unanswered policy questions, and explored how these questions might be answered with available analytical tools and data resources. Since student loans have nearly doubled over the past decade nationally and default rates on the federal student loan program have increased substantially in recent years, the Payment Cards Center will continue this discussion in 2016.<sup>35</sup>

The Payment Cards Center also published 11 original papers and event summaries, which included fact-based papers and empirical analyses of unique data sets on a range of topics. Two studies focused on trends in consumers' use of payments, exploring the ways in which millennials use financial services and payments.<sup>36</sup> Two other papers described the recent introduction of new financial management tools for credit card customers and how those tools may affect consumer behavior.<sup>37</sup> Another explored the benefits of incorporating anonymized consumer credit data in forecasts of current or future economic activity.<sup>38</sup>

Since student loans have nearly doubled over the past decade nationally and default rates on the federal student loan program have increased substantially in recent years, the Payment Cards Center will continue this discussion in 2016.

In addition to its roster of publications, the Payment Cards Center continues to make significant contributions to a number of Federal Reserve System projects and activities. It has enhanced the System's ongoing initiatives to improve the speed, ubiquity, and security of the payments system as well as contributing analyses and data for System initiatives related to stress testing and financial stability.

## Supervision, Regulation, and Credit

The Supervision, Regulation, and Credit Department channeled its research into innovative technology and data strategies to support supervision and regulation initiatives, both internally and externally.<sup>39</sup> The department's Retail Risk Analysis and Financial Monitoring groups advance research with academic studies in addition to work in quantitative supervision of banks' consumer portfolio, risk modeling, and stress testing. The Supervision Team Site Support Office provided innovations that not only increased the automated supervisory tools for community banks and consumer compliance processes and monitoring tools for regional banks but also reduced administrative overhead and gave examiners more time to focus on core supervisory work.

Another unit in the Supervision, Regulation, and Credit Department provides innovations used System-wide. The Risk Assessment, Data Analysis, and Research (RADAR) group manages data for the Federal Reserve System's supervisory function and research related to consumer credit.<sup>40</sup> RADAR supports the Comprehensive Capital Analysis and Review assessments for the Board of Governors of the Federal Reserve System. RADAR's two teams — Data Warehouse and the Securities Evaluation Service — provide robust data and assist on exam requests. The Data Warehouse, the Federal Reserve System's premiere source for mortgage and consumer credit data, added public records data on more than 100 million residential and multiple listing services properties.

The Securities Evaluation Service provides valuation analysis to the System on Bank securities investment portfolios. In 2015, this unit conducted a record 109 investment securities valuations for the Federal Reserve System, including 20 in the Third District. While team members are involved in a number of stress test work initiatives, **Jeremy Brizzi**, a RADAR team specialist, was named to an international Basel policy committee to help develop future capital rules for banks' investment securities. To strengthen minority banks and their communities, the department's Philadelphia Partnership for Progress unit bridged the work between Supervision, Regulation, and Credit and Community Development.<sup>41</sup> Leveraging resources in both departments, the Partnership for Progress team is providing more effective delivery and participation in activities to help minority banks and the communities they serve. In addition, the team helped small businesses and entrepreneurs through its Small Business and Entrepreneur program locally and the Fed's Small Business Committee nationally.

## **Information Technology**

Some Bank innovations start with the infrastructure. One of the leading programs in the Information Technology Services Department is its Cyber Security Outreach, designed to improve cybersecurity in the financial services sector. Information Technology Services created a senior management forum to exchange cybersecurity best practices and lessons learned, initiatives that will continue in 2016. The Philadelphia Fed's long-term relationships with federal law enforcement and the intelligence community have also helped the Bank gain practical knowledge about threat actors and appropriate defenses.

Information Technology's ongoing partnership with the U.S. Department of the Treasury resulted in the design and implementation of new tools to improve process efficiencies.<sup>42</sup> The latest version of the Post Payment System is expected to provide significant cost savings to the U.S. Treasury's more than 1.2 billion payments that are processed annually. Likewise, the department worked with the Collateral Management System, which manages collateral pledged to support loans to financial institutions across the Federal Reserve System, and designed a release that improves analytics and security. Another innovation was the development of a customized service for RADAR's Securities Evaluation Services Request System. The new service creates automatic requests for an independent analysis of the examination process for Bank examiners and analysts within the Supervision and Regulation Department and the System.

## **Driving Innovation**

Economist John Maynard Keynes once said, "The difficulty lies not so much in developing new ideas as in escaping from old ones." The Philadelphia Fed is not just looking for the next big idea but seeks to encourage paradigm shifts that have a larger impact in the region and the economy at large.

In his book *Learning by Doing*, James Bressen, an economist, cites the often overlooked role that average workers play in developing new technologies through on-the-job learning and how these skills drive wage growth.<sup>43</sup> His view is that policies should encourage not just the entrepreneur but also the average worker so that wealth can be shared widely.

President and CEO Patrick T. Harker is a firm believer in the concept that driving innovation at all levels is the key to helping strengthen and grow the economy of the Third District.

"Innovation isn't just about big ideas. The people who adapt and change are the true innovators of today's economy," said Harker. "We need people who, through practical skills and training, bring ideas to reality. At the Philadelphia Fed, we are committed to promoting policies and educational opportunities that help make the leap from innovation to economic empowerment."

## **Endnotes**

<sup>1</sup> A list of Fortune 500 companies by state is available at www.geolounge.com/fortune-500-list-by-state-for-2015.

<sup>2</sup> See the 2015 Bloomberg State Innovation Index; the index rates the overall total score of each state according to research and development intensity (defined as R&D spending as a percentage of the state's gross domestic product), productivity, high-tech density (percent of public high-tech firms), the number of STEM (science, technology, engineering, and mathematics) jobs, the total of science and engineering degree holders, and patent activity; www.bloomberg.com/news/articles/2016-01-07/ here-are-the-most-innovative-states-in-america.

<sup>3</sup> In 2015, there were 325,979 patents granted, according to the U.S. Patent and Trademark Office; note that these figures represent the entire states, whereas the Third District includes only eastern Pennsylvania and southern New Jersey; see www. patenteducationseries.com/patent-bar/2015-patent-statistics-depth-look-chartsgraphs.html for details on patents issued in 2015 or the U.S. Patent and Trademark Office, www.uspto.gov.

<sup>4</sup> Gerald A. Carlino and Robert M. Hunt, "Localized Knowledge Spillovers: Evidence from the Agglomeration of American R&D Labs and Patent Data" (with Kristy Buzard, Jake K. Carr, and Tony E. Smith), Federal Reserve Bank of Philadelphia Working Paper 15-03, 2015; www.philadelphiafed.org/research-and-data/publications/working-papers.

<sup>5</sup> Jeffrey Lin, "History and the Sizes of Cities" (with Hoyt Bleakley), Federal Reserve Bank of Philadelphia Working Paper 15-06, 2015; www.philadelphiafed.org/research-and-data/publications/working-papers.

<sup>6</sup> Research compiled by Paul Flora, regional economic advisor in the Research Department, on employment growth of the Third District compared with the nation, 2015.

<sup>7</sup> See the Research & Data section at www.philadelphiafed.org/research-and-data.

<sup>8</sup> See more information about the *Survey of Professional Forecasters* at www. philadelphiafed.org/research-and-data/real-time-center/survey-of-professionalforecasters.

<sup>9</sup> See the *Livingston Survey* at www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey.

<sup>10</sup> See more information about the GDPplus at www.philadelphiafed.org/research-and-data/real-time-center/gdpplus.

<sup>11</sup> See the Partisan Conflict Index at www.philadelphiafed.org/research-and-data/realtime-center/partisan-conflict-index.

<sup>12</sup> The quarterly "Monetary Policy Reports: Using Rules for Benchmarking" are available at www.philadelphiafed.org/research-and-data/publications/special-reports.

<sup>13</sup> For more about the *Manufacturing Business Outlook Survey and the Nonmanufacturing Business Outlook Survey*, see www.philadelphiafed.org/researchand-data/regional-economy/business-outlook-survey and www.philadelphiafed.org/ research-and-data/regional-economy/nonmanufacturing-business-outlook-survey.

<sup>14</sup> For more about the Beige Book, see www.federalreserve.gov/monetarypolicy/ beigebook/beigebook2015.htm.

<sup>15</sup> See the State Coincident Indexes at www.philadelphiafed.org/research-and-data/ regional-economy/indexes/coincident.

<sup>16</sup> See *Regional Spotlight* at www.philadelphiafed.org/research-and-data/regionaleconomy/regional-research; *Banking Trends* and *Banking Policy Review* at www. philadelphiafed.org/research-and-data/banking.

<sup>17</sup> Business Review (renamed Economic Insights in 2016) is available at www. philadelphiafed.org/research-and-data/publications/business-review.

<sup>18</sup> The four 2015 issues of *Business Review* are available at www.philadelphiafed.org/ research-and-data/publications/business-review.

<sup>19</sup> See the current and past Federal Reserve Bank of Philadelphia's working papers at www.philadelphiafed.org/research-and-data/publications/working-papers.

<sup>20</sup> Roc Armenter and Benjamin Lester, "Excess Reserves and Monetary Policy Normalization," Federal Reserve Bank of Philadelphia Working Paper 15-35, 2015; www. philadelphiafed.org/research-and-data/publications/working-papers.

<sup>21</sup> Mitchell Berlin, "Disclosure of Stress Test Results," Federal Reserve Bank of Philadelphia Working Paper 15-31, 2015; www.philadelphiafed.org/research-and-data/ publications/working-papers.

<sup>22</sup> Ronel Elul, "Owner Occupancy Fraud and Mortgage Performance" (with Sebastian Tilson), Federal Reserve Bank of Philadelphia Working Paper 15-45, 2015; www. philadelphiafed.org/research-and-data/publications/working-papers.

<sup>23</sup> Paul S. Calem and Leonard Nakamura, "House-Price Expectations, Alternative Mortgage Products, and Default" (with Jan K. Brueckner), Federal Reserve Bank of Philadelphia Working Paper 15-01, 2015; www.philadelphiafed.org/research-and-data/ publications/working-papers. <sup>24</sup> Jeffrey Lin, "Natural Amenities, Neighborhood Dynamics, and Persistence in the Spatial Distribution of Income" (with Sanghoon Lee), Federal Reserve Bank of Philadelphia Working Paper 15-46, 2015; www.philadelphiafed.org/research-and-data/ publications/working-papers.

<sup>25</sup> Satyajit Chatterjee and Burcu Eyigungor, "A Tractable City Model for Aggressive Analysis," Federal Reserve Bank of Philadelphia Working Paper 15-37, 2015; www. philadelphiafed.org/research-and-data/publications/working-papers.

<sup>26</sup> For more information on regional economic data from the Bureau of Labor Statistics, see www.philadelphiafed.org/research-and-data/regional-economy and www.philadelphiafed.org/research-and-data/regional-economy/historical-data.

<sup>27</sup> Michael Boldin, "Weather-Adjusting Employment Data" (with Jonathan H. Wright), Federal Reserve Bank of Philadelphia Working Paper 15-05, 2015; www.philadelphiafed. org/research-and-data/publications/working-papers.

<sup>28</sup> Eileen Divringi, "Affordability and Availability of Rental Housing in the Third Federal Reserve District: 2015," *Cascade Focus*, February 2015, and Noelle Baldini, "Beyond the Numbers: A Qualitative Exploration of Affordability and Availability of Rental Housing in the Third Federal Reserve District: 2015," *Cascade Focus*, June 2015 at www. philadelphiafed.org/community-development/publications/cascade-focus.

<sup>29</sup> Lei Ding and Eileen Divringi, "A Practitioner's Summary: Gentrification and Residential Mobility in Philadelphia" (with Jackelyn Hwang), Community Development Studies & Education Department Discussion Paper, October 2015; www. philadelphiafed.org/community-development/publications/discussion-papers/.

<sup>30</sup> See the webinars "At the Intersection of Education and Employment: Strengthening Youth Employment Programs," June 9, 2015, and "At the Intersection of Education and Employment: Creating Workforce Development Programs for High School Students," June 11, 2015, at www.philadelphiafed.org/community-development/events.

<sup>31</sup> See www.philadelphiafed.org/education/teachers/training-programs.

<sup>32</sup> Keith Wardrip, "Identifying Opportunity Occupations in the Nation's Largest Metropolitan Economies" (with Kyle Fee, Lisa Nelson, and Stuart Andreason), September 2015, and Keith Wardrip, "Identifying Opportunity Occupations in Pennsylvania, New Jersey, and Delaware," September 2015; www.philadelphiafed.org/ community-development/publications/special-reports.

<sup>33</sup> Marvin M. Smith, "The Effectiveness of Pre-Purchase Homeownership Counseling and Financial Management Skills" (with Daniel Hochberg and William H. Greene), April 2014; www.philadelphiafed.org/community-development/homeownership-counseling-study.

<sup>34</sup> See more information about the Eighth Biennial Research Conference, "New Perspectives on Consumer Behavior in Credit and Payments Markets" at www. philadelphiafed.org/research-and-data/events/2015/consumer-credit-and-payments.

<sup>35</sup> Find out more about the "Student Loan Repayment: Research, Data and Policy" conference at www.philadelphiafed.org/consumer-credit-and-payments/payment-cards-center/events.

<sup>36</sup> Susan Herbst-Murphy, "Trends and Preferences in Consumer Payments: Updates from the Visa Payment Panel Study," Federal Reserve Bank of Philadelphia Payment Cards Center Discussion Paper 15-02, 2015; and Susan Herbst-Murphy and Greg Weed, "Millennials with Money Revisited: Updates from the 2014 *Consumer Payments Monitor,*" Federal Reserve Bank of Philadelphia Payment Cards Center Discussion Paper 15-06, 2015; www.philadelphiafed.org/consumer-credit-and-payments/paymentcards-center/publications.

<sup>37</sup> Vyacheslav Mikhed, "Can Credit Cards with Access to Complimentary Credit Score Information Benefit Consumers and Lenders?" Federal Reserve Bank of Philadelphia Payment Cards Center Discussion Paper 15-03, 2015; and Larry Santucci, "Financial Management Tools and Consumer Confidence: Chase Blueprint," Federal Reserve Bank of Philadelphia Payment Cards Center Discussion Paper 15-04, 2015; www. philadelphiafed.org/consumer-credit-and-payments/payment-cards-center/ publications.

<sup>38</sup> Chet Wiermanski and Stephanie Wilshusen, "Exploring the Use of Anonymized Consumer Credit Information to Estimate Economic Conditions: An Application of Big Data," Federal Reserve Bank of Philadelphia Payment Cards Center Discussion Paper 15-05, 2015; www.philadelphiafed.org/consumer-credit-and-payments/payment-cardscenter/publications.

<sup>39</sup> For more information on the Supervision, Regulation, and Credit Department, see www.philadelphiafed.org/bank-resources/supervision-and-regulation.

 $^{\rm 40}$  Learn more about the Risk Assessment, Data Analysis, and Research group at radar. frb.org.

<sup>41</sup> More information about the collaboration on outreach initiatives between the Supervision, Regulation, and Credit and the Community Development Studies & Education departments is available at www.philadelphiafed.org/bank-resources/outreach.

<sup>42</sup> To learn about how the Federal Reserve Banks perform fiduciary services for the U.S. Department of the Treasury and the Philadelphia Fed's role in the process, see www. philadelphiafed.org/about-the-fed/who-we-are/services.

<sup>43</sup> James Bessen, *Learning by Doing: The Real Connection Between Innovation, Wages, and Wealth.* New Haven: Yale University Press, 2015.

Federal Reserve Bank of Philadelphia

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Federal Reserve Bank of Philadelphia



From left: Michael J. Angelakis, James E. Nevels, David R. Hunsicker, Carol J. Johnson, William S. Aichele, Jon Evans, Edward J. Graham, and Brian M. McNeill

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The Community Depository Institutions Advisory Council, created in 2011, includes representatives from commercial banks, thrift institutions, and credit unions. The council provides information, advice, and recommendations to the Federal Reserve Bank of Philadelphia from the perspective of community depository institutions.

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Sitting, from left: William Wood, Angela M. Snyder, Anthony Biondi, Thomas M. Petro, and Marcie Barber; standing, from left: Christopher D. Maher, Gregory A. Smith, Richard Stipa, Ed Dietzler, Rory Ritrievi, and David E. Gillan; not pictured: Mark A. Turner

**Rory Ritrievi** President and CEO Mid Penn Bancorp, Inc. and Mid Penn Bank Millersburg, PA

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Federal Reserve Bank of Philadelphia

The Economic Advisory Council, created in 2008, was expanded and renamed the Economic and Community Advisory Council in 2016. It is now composed of up to 15 leaders from myriad firms and industry sectors as well as nonprofits, academic institutions, the public sector, organized labor, and philanthropic organizations. The council advises Federal Reserve officials on emerging trends, market conditions, and economic growth opportunities in the Third District and the nation.

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**Patrick J. Eiding** President Philadelphia Council AFL-CIO Philadelphia, PA

#### Varsovia Fernandez

President and CEO Greater Philadelphia Hispanic Chamber of Commerce Philadelphia, PA



Sitting, from left: Madeline Bell, Michael Pearson, and Michael Araten; standing, from left: Ernest Dianastasis, Thomas J. Doll, Maria Rodale, Patrick J. Eiding, and Varsovia Fernandez; not pictured: John Fry, Chris Gheysens, Patrick Magri, and Lynn Utter

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**Donna L. Franco** Senior Vice President and Chief Financial Officer

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Senior Vice President and General Counsel, Legal, Law Enforcement, and Facilities

**William G. Spaniel** Senior Vice President and Lending Officer, Supervision, Regulation, and Credit

**Patricia Wilson** Vice President, Chief of Staff, and Corporate Secretary



Sitting, from left: Deborah L. Hayes, Arun K. Jain, and Patrick T. Harker; standing, from left: Patricia Wilson, William G. Spaniel, Jeanne R. Rentezelas, Mary Ann Hood, Michael Dotsey, Donna L. Franco, Terry E. Harris, and D. Blake Prichard

# ADDITIONAL OFFICERS

Federal Reserve Bank of Philadelphia

#### VICE PRESIDENTS

**John D. Ackley** Vice President Cash Services

**Roc Armenter** Vice President and Economist Research

**Mitchell Berlin** Vice President and Economist Research

**Donna L. Brenner** Vice President Enterprise Risk Management

**Jennifer E. Cardy** Vice President Financial Management Services

**Larry Cordell** Vice President Supervision, Regulation, and Credit

**Michael T. Doyle** Vice President Treasury Payments

**Gregory Fanelli** Vice President Information Technology Services

**Stephen G. Hart** Vice President Human Resources

**Robert Hunt** Vice President and Director Payment Cards Center

**Charles Kirkland** Vice President Financial Statistics

#### Keith Morales

Vice President and Information Security Officer Information Technology Services

**Robert F. Mucerino** Vice President Treasury Services

**Leonard Nakamura** Vice President and Economist Research

**A. Reed Raymond III** Vice President and Chief Administrative Officer Supervision, Regulation, and Credit

**Patrick M. Regan** Vice President Information Technology Services

Michelle M. Scipione Vice President and General Auditor Audit

**Stanley Sienkiewicz** Vice President Research Support Research

Keith Sill Vice President and Director Real-Time Data Research Center Research

**Theresa Y. Singleton** Vice President and Community Affairs Officer Community Development Studies & Education

**Patrick F. Turner** Vice President and Managing Officer Groupware Leadership Center Vish P. Viswanathan Vice President and Discount Officer Supervision, Regulation, and Credit

**Constance H. Wallgren** Vice President and Chief Examinations Officer Supervision, Regulation, and Credit

James K. Welch Vice President Law Enforcement and Facilities Management

#### ASSISTANT VICE PRESIDENTS

**Joanne M. Branigan** Assistant Vice President Supervision, Regulation, and Credit

**Brian Calderwood** Assistant Vice President Groupware Leadership Center

**Paul Calem** Assistant Vice President Supervision, Regulation, and Credit

**Julia Cheney** Assistant Vice President and Assistant Director Payment Cards Center

Kori Ann Connelly Assistant Vice President and Counsel Legal

Maryann T. Connelly Assistant Vice President and Counsel Legal **Michael Costello** Assistant Vice President Supervision, Regulation, and Credit

**Suzanne W. Furr** Assistant Vice President and Assistant General Auditor Audit

**Christopher Henderson** Assistant Vice President Supervision, Regulation, and Credit

**Christopher Ivanoski** Assistant Vice President Facilities — Plant Operations

**John P. Kelly** Assistant Vice President Enterprise Risk Management

**Andrew Kish** Assistant Vice President Supervision, Regulation, and Credit

John J. Munera III Assistant Vice President Supervision, Regulation, and Credit

**Robin P. Myers** Assistant Vice President Supervision, Regulation, and Credit

Wanda Preston Assistant Vice President Supervision, Regulation, and Credit

**Chellappan Ramasamy** Assistant Vice President Supervision, Regulation, and Credit **Gregory A. Ramick** Assistant Vice President Cash Services

**Anthony T. Scafide Jr.** Assistant Vice President Financial Institutions Relations

**Stephen J. Smith** Assistant Vice President and Counsel Legal

**Kim Taylor** Assistant Vice President Human Resources

**H. Robert Tillman** Assistant Vice President Supervision, Regulation, and Credit

**Gail L. Todd** Assistant Vice President and Credit Officer Supervision, Regulation, and Credit

William T. Wisser Assistant Vice President Supervision, Regulation, and Credit

#### OFFICERS

**Heather Derbyshire** Officer Financial Statistics

**Jill Hettinger** Officer Enterprise Risk Management

**James Lofton** Officer Cash Services

**Linda Van Valkenburg** Officer Information Technology Services

Includes promotions through January 2016

The Federal Reserve Board engaged KPMG to audit the 2015 combined and individual financial statements of the Reserve Banks and Maiden Lane LLC.<sup>1</sup>

In 2015, KPMG also conducted audits of internal controls over financial reporting for each of the Reserve Banks. Fees for KPMG services totaled \$6.7 million, of which \$0.4 million was for the audit of Maiden Lane LLC. To ensure auditor independence, the Board requires that KPMG be independent in all matters relating to the audits. Specifically, KPMG may not perform services for the Reserve Banks or others that would place it in a position of auditing its own work, making management decisions on behalf of the Reserve Banks, or in any other way impairing its audit independence. In 2015, the Bank did not engage KPMG for any non-audit services.

<sup>&</sup>lt;sup>1</sup> In addition, KPMG audited the Office of Employee Benefits of the Federal Reserve System (OEB), the Retirement Plan for Employees of the Federal Reserve System (System Plan), and the Thrift Plan for Employees of the Federal Reserve System (Thrift Plan). The System Plan and the Thrift Plan provide retirement benefits to employees of the Board, the Federal Reserve Banks, the OEB, and the Consumer Financial Protection Bureau.

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### Management's Report on Internal Control over Financial Reporting



March 8, 2016

To the Board of Directors

The management of the Federal Reserve Bank of Philadelphia (Bank) is responsible for the preparation and fair presentation of the Statements of Condition as of December 31, 2015 and 2014, and the Statements of Income and Comprehensive Income, and Statements of Changes in Capital for the years then ended (the financial statements). The financial statements have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System as set forth in the Financial Accounting Manual for Federal Reserve Banks (FAM), and, as such, include some amounts that are based on management judgments and estimates. To our knowledge, the financial statements are, in all material respects, fairly presented in conformity with the accounting principles, policies, and practices documented in the FAM and include all disclosures necessary for such fair presentation.

The management of the Bank is responsible for establishing and maintaining effective internal control over financial reporting as it relates to the financial statements. The Bank's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with the FAM. The Bank's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Bank's assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with FAM and that the Bank's receipts and expenditures are being made only in accordance with authorizations of its management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank's assets that could have a material effect on its financial statements.

Even effective internal control, no matter how well designed, has inherent limitations, including the possibility of human error, and therefore can provide only reasonable assurance with respect to the preparation of reliable financial statements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The management of the Bank assessed its internal control over financial reporting based upon the criteria established in the Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, we believe that the Bank maintained effective internal control over financial reporting.

Patrick T. Harker, President and Chief Executive Officer

Donna L. Franco, Senior Vice President and Chief Financial Officer

#### **Independent Auditors' Report**



KPMG LLP 1601 Market Street Philadelphia, PA 19103-2499

#### Independent Auditors' Report

To the Board of Governors of the Federal Reserve System and the Board of Directors of the Federal Reserve Bank of Philadelphia:

We have audited the accompanying statement of condition of the Federal Reserve Bank of Philadelphia ("FRB Philadelphia") as of December 31, 2015, and the related statements of income and comprehensive income and changes in capital for the year then ended. We also have audited the FRB Philadelphia's internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The FRB Philadelphia's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial statements and an opinion on the FRB Philadelphia's internal control over financial reporting based on our audit. The accompanying financial statements of the FRB Philadelphia as of December 31, 2014 and for the year then ended were audited by other auditors whose report thereon dated March 11, 2015, expressed an unmodified opinion on those financial statements and contained an emphasis of matter paragraph that described the FRB Philadelphia's basis of accounting discussed in Note 3 to the 2014 financial statements.

We conducted our audit of the financial statements in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) ("PCAOB") and in accordance with auditing standards generally accepted in the United States of America. We conducted our audit of internal control over financial reporting in accordance with the auditing standards of the PCAOB and in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audit of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity.

#### **Independent Auditors' Report**

# KPMG

The FRB Philadelphia's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the accounting principles established by the Board of Governors of the Federal Reserve System (the "Board") as described in Note 3 of the financial statements and as set forth in the *Financial Accounting Manual for Federal Reserve Banks* ("FAM"). The FRB Philadelphia's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the FRB Philadelphia; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with the FAM, and that receipts and expenditures of the FRB Philadelphia are being made only in accordance with authorizations of management and directors of the FRB Philadelphia; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the FRB Philadelphia's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As described in Note 3 to the financial statements, the FRB Philadelphia has prepared these financial statements in conformity with the accounting principles established by the Board, as set forth in the FAM, which is a basis of accounting other than U.S. generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the FRB Philadelphia as of December 31, 2015, and the results of its operations for the year then ended, on the basis of accounting described in Note 3. Also, in our opinion, the FRB Philadelphia maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

KPMG LLP

Philadelphia, PA March 8, 2016

## Abbreviations

ACH	Automated clearinghouse
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
BEP	Benefit Equalization Retirement Plan
Bureau	Bureau of Consumer Financial Protection
FAM	Financial Accounting Manual for Federal Reserve Banks
FAST Act	Fixing America's Surface Transportation Act
FASB	Financial Accounting Standards Board
FOMC	Federal Open Market Committee
FRBNY	Federal Reserve Bank of New York

GAAP	Accounting principles generally accepted in the United States of America
GSE	Government-sponsored enterprise
IMF	International Monetary Fund
MBS	Mortgage-backed securities
SDR	Special drawing rights
SERP	Supplemental Retirement Plan for Select Officers of the Federal Reserve Banks
SOMA	System Open Market Account
TBA	To be announced
TDF	Term Deposit Facility

# Statements of Condition–As of December 31, 2015 and December 31, 2014 (in millions)

		2015	2014
ASSETS Gold certificates		¢240	¢ 2 2 0
Sold certificates Special drawing rights certificates		\$340 210	\$338 210
Coin		129	122
Loans	Note 4	129	7
System Open Market Account:	Note 4 Note 5	-	1
Treasury securities, net (of which \$472 and \$267 is lent as of December 31, 2015 and 2014, respectively) Government-sponsored enterprise debt securities, net (of which \$4 and \$15 is lent as of December 31, 2015	Note 5	64,186	62,198
and 2014, respectively)		839	958
Federal agency and government-sponsored enterprise mortgage-backed securities, net		44,780	42,861
Foreign currency denominated investments, net		1,093	1,571
Central bank liquidity swaps		56	115
Accrued interest receivable		634	619
Other assets		051	1
Bank premises and equipment, net	Note 6	89	90
Interdistrict settlement account	Note o	17,050	90
Other assets		27	29
		21	
Total assets		\$129,433	\$109,119
LIABILITIES AND CAPITAL			
Federal Reserve notes outstanding, net		\$43,954	\$41,512
System Open Market Account:	Note 5	÷ 10,5 0 1	+ 1 - 1
Securities sold under agreements to repurchase	11000 5	17,719	12,214
Other liabilities		13	20
Deposits:		15	20
Depository institutions		65,374	47,897
Other deposits		2	28
Interest payable to depository institutions		7	20
	Notes 8 and 9	119	121
Accrued remittances to the Treasury		56	7
Interdistrict settlement account		50	4,108
Other liabilities		15	16
		15	10
Total liabilities		127,259	105,925
Capital paid-in		1,624	1,597
Surplus (including accumulated other comprehensive loss of \$16 and \$25 at December 31, 2015 and 2014, respe	ctively)	550	1,597
Total capital		2,174	3,194

The accompanying notes are an integral part of these financial statements.

### Statements of Income and Comprehensive Income-For the years ended December 31, 2015 and December 31, 2014 (in millions)

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Treasury securities, net\$1,500\$1,500Government-sponsored enterprise debt securities, net340Federal agency and government-sponsored enterprise mortgage-backed securities, net26Total interest income2,7982,991System Open Market Account:Note 563Depository institutions160146Term Deposit Facility1411Total interest expense2,6182,771Note Structurest income2,6182,771NON-INTEREST LOSS160146Term Deposit Facility1411Total interest expense2,6182,771NON-INTEREST LOSS160160System Open Market Account:2,6182,771Note Interest income2,6182,771Note Interest income2,6182,771Note Interest income2,6183,34System Open Market Account:33Total non-interest loss050160OPERATING EXPENSES130133Total non-interest loss130133Total on-interest loss7278Depring currency transfer francial Protection2,7278Presenters2,2692,228Note Interest indepring entitiances to the Treasury2,2692,228Note Interest indepring entitiances to the Treasury2,2692,228Note Interest indepring remittances to the Treasury1,34-Dial optic remittances to the Treasury1,24- <tr< th=""><th>INTEREST INCOME</th><th>Nata 5</th><th></th><th></th></tr<>	INTEREST INCOME	Nata 5		
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Foreign currency denominated investments, net 2 6   Total interest income 2,798 2,931   NTRENEST EXPENSE 3   Securities sold under agreements to repurchase 6 3   Depositis 160 146   Term Deposit facility 14 11   Total interest income 2.618 2,771   NONTTERST LOSS 150 160   Note 10 160 146   Total interest income 2.618 2,771   NONTTERST LOSS 1 2   System Open Market Account: Note 5 1   Foreign currency translation losses, net 1 2   Foreign currency translation losses, net 130 133   Total non-interest loss 100 16 15   Currency translation losses, net 6 7   Solaries and benefits 130 133   Octal non-interest loss 12 78   Barrent of Construct Financial Protection 27 78   Burenu of Construct Financial Protection 27	Government-sponsored enterprise debt securities, net		33	40
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	Change in actuarial gains (losses) related to benefit plans		9	(12)
Comprehensive loss \$(950) \$(353)	Total other comprehensive income (loss)		9	(11)
	Comprehensive loss		\$(950)	\$(353)

The accompanying notes are an integral part of these financial statements.

# Statements of Changes in Capital–As of December 31, 2015 and December 31, 2014 (in millions, except share data)

			Surplus		
			Accumulated		
		Net income	other		
	Capital paid-in	retained	comprehensive loss	Total surplus	Total capital
Balance at December 31, 2013 (41,365,761 shares)	\$ 2,068	\$2,082	\$ (14)	\$ 2,068	\$4,136
Net change in capital stock redeemed (9,433,205 shares) Comprehensive income:	(471)	-			(471)
Net loss	-	(342)	-	(342)	(342)
Other comprehensive loss	-	-	(11)	(11)	(11)
Dividends on capital stock	-	(118)	-	(118)	(118)
Net change in capital	(471)	(460)	(11)	(471)	(942)
Balance at December 31, 2014 (31,932,556 shares)	\$ 1,597	\$1,622	\$ (25)	\$ 1,597	\$3,194
Net change in capital stock issued (539,655 shares)	27	-			27
Comprehensive loss:					
Net loss	-	(959)	-	(959)	(959)
Other comprehensive income	-	-	9	9	9
Dividends on capital stock	-	(97)	-	(97)	(97)
Net change in capital	27	(1,056)	9	(1,047)	(1,020)
Balance at December 31, 2015 (32,472,211 shares)	\$ 1,624	\$ 566	\$ (16)	\$ 550	\$2,174

The accompanying notes are an integral part of these financial statements.

#### **1. STRUCTURE**

The Federal Reserve Bank of Philadelphia (Bank) is part of the Federal Reserve System (System) and is one of the 12 Federal Reserve Banks (Reserve Banks) created by Congress under the Federal Reserve Act of 1913 (Federal Reserve Act), which established the central bank of the United States. The Reserve Banks are chartered by the federal government and possess a unique set of governmental, corporate, and central bank characteristics. The Bank serves the Third Federal Reserve District, which includes Delaware and portions of New Jersey and Pennsylvania.

In accordance with the Federal Reserve Act, supervision and control of the Bank is exercised by a board of directors. The Federal Reserve Act specifies the composition of the board of directors for each of the Reserve Banks. Each board is composed of nine members serving three-year terms: three directors, including those designated as chairman and deputy chairman, are appointed by the Board of Governors of the Federal Reserve System (Board of Governors) to represent the public, and six directors are elected by member banks. Banks that are members of the System include all nationally-chartered banks and any state-chartered banks that apply and are approved for membership. Member banks are divided into three classes according to size. Member banks in each class elect one director representing member banks and one representing the public. In any election of directors, each member bank receives one vote, regardless of the number of shares of Reserve Bank stock it holds.

In addition to the 12 Reserve Banks, the System also consists, in part, of the Board of Governors and the Federal Open Market Committee (FOMC). The Board of Governors, an independent federal agency, is

charged by the Federal Reserve Act with a number of specific duties, including general supervision over the Reserve Banks. The FOMC is composed of members of the Board of Governors, the president of the Federal Reserve Bank of New York (FRBNY), and, on a rotating basis, four other Reserve Bank presidents.

#### 2. OPERATIONS AND SERVICES

The Reserve Banks perform a variety of services and operations. These functions include participating in formulating and conducting monetary policy; participating in the payment system, including transfers of funds, automated clearinghouse (ACH) operations, and check collection; distributing coin and currency; performing fiscal agency functions for the U.S. Department of the Treasury (Treasury), certain federal agencies, and other entities; serving as the federal government's bank; providing short-term loans to depository institutions; providing loans to participants in programs or facilities with broad-based eligibility in unusual and exigent circumstances; serving consumers and communities by providing educational materials and information regarding 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. Certain services are provided to foreign and international monetary authorities, primarily by the FRBNY.

The FOMC, in conducting monetary policy, establishes policy regarding domestic open market operations, oversees these operations, and issues authorizations and directives to the FRBNY to execute transactions. The FOMC authorizes and directs the FRBNY to conduct operations in domestic markets, including the direct purchase and sale of Treasury securities, government-sponsored enterprise (GSE) debt securities, and federal agency and GSE mortgage-backed securities (MBS); the purchase of these securities under agreements to resell; and the sale of these securities under agreements to repurchase. The FRBNY holds the resulting securities and agreements in a portfolio known as the System Open Market Account (SOMA). The FRBNY is authorized and directed to lend the Treasury securities and GSE debt securities that are held in the SOMA.

To be prepared to counter disorderly conditions in foreign exchange markets or to meet other needs specified by the FOMC to carry out the System's central bank responsibilities, the FOMC has authorized and directed the FRBNY to execute spot and forward foreign exchange transactions in 14 foreign currencies, to hold balances in those currencies, and to invest such foreign currency holdings, while maintaining adequate liquidity. The FRBNY holds these securities and obligations in the SOMA. The FOMC has also authorized the FRBNY to maintain reciprocal currency arrangements with the Bank of Canada and the Bank of Mexico in the maximum amounts of \$2 billion and \$3 billion, respectively, and to warehouse foreign currencies for the Treasury and the Exchange Stabilization Fund in the maximum amount of \$5 billion.

Because of the global character of bank funding markets, the System has at times coordinated with other central banks to provide liquidity. The FOMC authorized and directed the FRBNY to establish U.S. dollar liquidity and reciprocal foreign currency liquidity swap lines with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank. The FRBNY holds amounts outstanding under these swap lines in the SOMA. These swap lines, which were originally established as temporary arrangements, were converted to standing arrangements on October 31, 2013, and will remain in place until further notice.

Although the Reserve Banks are separate legal entities, they collaborate on the delivery of certain services to achieve greater efficiency and effectiveness. This collaboration takes the form of centralized operations and product or function offices that have responsibility for the delivery of certain services on behalf of the Reserve Banks. Various operational and management models are used and are supported by service agreements between the Reserve Banks. In some cases, costs incurred by a Reserve Bank for services provided to other Reserve Banks are not shared; in other cases, the Reserve Banks are reimbursed for costs incurred in providing services to other Reserve Banks. Major services provided by the Bank on behalf of the System for which the costs were not reimbursed by the other Reserve Banks include Collateral Management System, Groupware Leadership Center, and Video Conferencing Network.

#### **3. SIGNIFICANT ACCOUNTING POLICIES**

Accounting principles for entities with the unique powers and responsibilities of the nation's central bank have not been formulated by accounting standard-setting bodies. The Board of Governors has developed specialized accounting principles and practices that it considers to be appropriate for the nature and function of a central bank. These accounting principles and practices are documented in the Financial Accounting Manual for Federal Reserve Banks (FAM), which is issued by the Board of Governors. The Reserve Banks are

required to adopt and apply accounting policies and practices that are consistent with the FAM. The financial statements and associated disclosures have been prepared in accordance with the FAM.

Limited differences exist between the accounting principles and practices in the FAM and accounting principles generally accepted in the United States of America (GAAP), due to the unique nature of the Bank's powers and responsibilities as part of the nation's central bank and given the System's unique responsibility to conduct monetary policy. The primary differences are the presentation of all SOMA securities holdings at amortized cost, adjusted for credit impairment, if any, the recording of all SOMA securities on a settlement-date basis, and the use of straight-line amortization for Treasury securities, GSE debt securities, and foreign currency denominated investments. Amortized cost, rather than the fair value presentation, more appropriately reflects the financial position associated with the Bank's securities holdings given the System's unique responsibility to conduct monetary policy. Although the application of fair value measurements to the securities holdings may result in values substantially greater or less than their carrying values, these unrealized changes in value have no direct effect on the quantity of reserves available to the banking system or on the ability of the Reserve Banks, as the central bank, to meet their financial obligations and responsibilities. Both the domestic and foreign components of the SOMA portfolio may involve transactions that result in gains or losses when holdings are sold before maturity. Decisions regarding securities and foreign currency transactions, including their purchase and sale, are motivated by monetary policy objectives rather than profit. Accordingly, fair values, earnings, and gains or losses resulting from the sale of such securities and currencies are incidental to open market operations and do not motivate

decisions related to policy or open market activities. Accounting for these securities on a settlement-date basis, rather than the trade-date basis required by GAAP, better reflects the timing of the transaction's effect on the quantity of reserves in the banking system. The cost bases of Treasury securities, GSE debt securities, and foreign government debt instruments are adjusted for amortization of premiums or accretion of discounts on a straight-line basis, rather than using the interest method required by GAAP.

In addition, the Bank does not present a Statement of Cash Flows as required by GAAP because the liquidity and cash position of the Bank are not a primary concern given the Reserve Bank's unique powers and responsibilities as a central bank. Other information regarding the Bank's activities is provided in, or may be derived from, the Statements of Condition, Income and Comprehensive Income, and Changes in Capital, and the accompanying notes to the financial statements. Other than those described above, there are no significant differences between the policies outlined in the FAM and GAAP.

Preparing the financial statements in conformity with the FAM requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates.

Significant accounts and accounting policies are explained below.

#### a. Consolidation

The Dodd-Frank Wall Street Reform and Consumer Protection Act

of 2010 (Dodd-Frank Act) established the Bureau of Consumer Financial Protection (Bureau) as an independent bureau within the System that has supervisory authority over some institutions previously supervised by the Reserve Banks in connection with those institutions' compliance with consumer protection statutes. Section 1017 of the Dodd-Frank Act provides that the financial statements of the Bureau are not to be consolidated with those of the Board of Governors or the System. The Board of Governors funds the Bureau through assessments on the Reserve Banks as required by the Dodd-Frank Act. The Reserve Banks reviewed the law and evaluated the design of and their relationship to the Bureau and determined that it should not be consolidated in the Bank's financial statements.

#### b. Gold and Special Drawing Rights Certificates

The Secretary of the Treasury is authorized to issue gold certificates to the Reserve Banks. Upon authorization, the Reserve Banks acquire gold certificates by crediting equivalent amounts in dollars to the account established for the Treasury. The gold certificates held by the Reserve Banks are required to be backed by the gold owned by the Treasury. The Treasury may reacquire the gold certificates at any time, and the Reserve Banks must deliver them to the Treasury. At such time, the Treasury's account is charged, and the Reserve Banks' gold certificate accounts are reduced. The value of gold for purposes of backing the gold certificates is set by law at \$42 2/9 per fine troy ounce. Gold certificates are recorded by the Banks at original cost. The Board of Governors allocates the gold certificates among the Reserve Banks once a year based on each Reserve Bank's average Federal Reserve notes outstanding during the preceding 12 months.

Special drawing rights (SDR) are issued by the International Mon-

etary Fund (IMF) to its members in proportion to each member's quota in the IMF at the time of issuance. SDRs serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for U.S. participation in the SDR system, the Secretary of the Treasury is authorized to issue SDR certificates to the Reserve Banks. When SDR certificates are issued to the Reserve Banks, equivalent amounts in U.S. dollars are credited to the account established for the Treasury and the Reserve Banks' SDR certificate accounts are increased. The Reserve Banks are required to purchase SDR certificates, at the direction of the Treasury, for the purpose of financing SDR acquisitions or for financing exchange-stabilization operations. At the time SDR certificate transactions occur, the Board of Governors allocates the SDR certificates among the Reserve Banks based upon each Reserve Bank's Federal Reserve notes outstanding at the end of the preceding calendar year. SDR certificates are recorded by the Banks at original cost.

#### c. Coin

The amount reported as coin in the Statements of Condition represents the face value of all United States coin held by the Bank. The Bank buys coin at face value from the U.S. Mint in order to fill depository institution orders.

#### d. Loans

Loans to depository institutions are reported at their outstanding principal balances and interest income is recognized on an accrual basis.

Loans are impaired when current information and events indicate that it is probable that the Bank will not receive the principal and interest that are due in accordance with the contractual terms of the loan agreement. Impaired loans are evaluated to determine whether an allowance for loan loss is required. The Bank has developed procedures for assessing the adequacy of any allowance for loan losses using all available information to identify incurred losses. This assessment includes monitoring information obtained from banking supervisors, borrowers, and other sources to assess the credit condition of the borrowers and, as appropriate, evaluating collateral values. Generally, the Bank would discontinue recognizing interest income on impaired loans until the borrower's repayment performance demonstrates principal and interest would be received in accordance with the terms of the loan agreement. If the Bank discontinues recording interest on an impaired loan, cash payments are first applied to principal until the loan balance is reduced to zero; subsequent payments are applied as recoveries of amounts previously deemed uncollectible, if any, and then as interest income.

### e. Securities Purchased Under Agreements to Resell, Securities Sold Under Agreements to Repurchase, and Securities Lending

The FRBNY may engage in purchases of securities with primary dealers under agreements to resell (repurchase transactions). These repurchase transactions are typically settled through a tri-party arrangement. In the United States, there are two commercial custodial banks that provide these services. In a tri-party arrangement, a commercial custodial bank manages the collateral clearing, settlement, pricing, and pledging, and provides cash and securities custodial services for and on behalf of the FRBNY and counterparty. The collateral pledged must exceed the principal amount of the transaction by a margin determined by the FRBNY for each class and maturity of acceptable collateral. Collateral designated by the FRBNY as acceptable under repurchase transactions primarily includes Treasury securities (including Treasury Inflation-Protected Securities, Separate Trading of Registered Interest and Principal of Securities Treasury securities, and Treasury Floating Rate Notes); direct obligations of several federal and GSE-related agencies, including Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, and Federal Home Loan Banks; and pass-through federal agency and GSE MBS. The repurchase transactions are accounted for as financing transactions with the associated interest income recognized over the life of the transaction. These transactions are reported at their contractual amounts as "System Open Market Account: Securities purchased under agreements to resell" and the related accrued interest receivable is reported as a component of "System Open Market Account: Accrued interest receivable" in the Statements of Condition.

The FRBNY may engage in sales of securities under agreements to repurchase with primary dealers and with a set of expanded counterparties that includes banks, savings associations, GSEs, and domestic money market funds (Primary dealer and expanded counterparties reverse repurchase agreements). These reverse repurchase transactions are designed to have a margin of zero and are settled through a tri-party arrangement, similar to repurchase transactions. Reverse repurchase transactions may also be executed with foreign official and international account holders as part of a service offering. Reverse repurchase agreements are collateralized by a pledge of an amount of Treasury securities, GSE debt securities, or federal agency and GSE MBS that are held in the SOMA. Reverse repurchase transactions are accounted for as financing transactions, and the associated interest expense is recognized over the life of the transaction. These transactions are reported at their contractual amounts as "System Open Market Account: Se-

curities sold under agreements to repurchase" and the related accrued interest payable is reported as a component of "System Open Market Account: Other liabilities" in the Statements of Condition.

Treasury securities and GSE debt securities held in the SOMA may be lent to primary dealers, typically overnight, to facilitate the effective functioning of the domestic securities markets. The amortized cost basis of securities lent continues to be reported as "System Open Market Account: Treasury securities, net" and "System Open Market Account: Government-sponsored enterprise debt securities, net," as appropriate, in the Statements of Condition. Securities lending transactions are fully collateralized by Treasury securities based on the fair values of the securities lent increased by a margin determined by the FRBNY. The FRBNY charges the primary dealer a fee for borrowing securities, and these fees are reported as a component of "Non-interest loss: System Open Market Account: Other" in the Statements of Income and Comprehensive Income.

Activity related to securities purchased under agreements to resell, securities sold under agreements to repurchase, and securities lending is allocated to each of the Reserve Banks on a percentage basis derived from an annual settlement of the interdistrict settlement account that occurs in the second quarter of each year.

### f. Treasury Securities, Government-Sponsored Enterprise Debt Securities, Federal Agency and Government-Sponsored Enterprise Mortgage-Backed Securities, and Foreign Currency Denominated Investments

Interest income on Treasury securities, GSE debt securities, and foreign currency denominated investments included in the SOMA

is accrued using the straight-line method. Interest income on federal agency and GSE MBS is accrued using the interest method and includes amortization of premiums, accretion of discounts, and gains or losses associated with principal paydowns. Premiums and discounts related to federal agency and GSE MBS are amortized or accreted over the term of the security to stated maturity, and the amortization of premiums and accretion of discounts are accelerated when principal payments are received. Gains and losses resulting from sales of securities are determined by specific issue based on average cost. Treasury securities, GSE debt securities, and federal agency and GSE MBS are reported net of premiums and discounts in the Statements of Condition and interest income on those securities is reported net of the amortization of premiums and accretion of discounts in the Statements of Income and Comprehensive Income.

In addition to outright purchases of federal agency and GSE MBS that are held in the SOMA, the FRBNY enters into dollar roll transactions (dollar rolls), which primarily involve an initial transaction to purchase or sell "to be announced" (TBA) MBS for delivery in the current month combined with a simultaneous agreement to sell or purchase TBA MBS on a specified future date. During the years ended December 31, 2015 and 2014, the FRBNY executed dollar rolls to facilitate settlement of outstanding purchases of federal agency and GSE MBS. The FRBNY accounts for dollar rolls as individual purchases and sales, on a settlement-date basis. Accounting for these transactions as purchases and sales, rather than as financing transactions, is appropriate because the purchase or sale component of the MBS TBA dollar roll is paired off or assigned prior to settlement and, as a result, there is no transfer and return of securities. The FRBNY also conducts small-value exercises from time to time for the purpose

of testing operational readiness. Small-value exercises may include sales of federal agency and GSE MBS. Net gains (losses) resulting from MBS transactions are reported as a component of "Non-interest loss: System Open Market Account: Federal agency and government-sponsored enterprise mortgage-backed securities gains, net" in the Statements of Income and Comprehensive Income.

Foreign currency denominated investments, which can include foreign currency deposits, securities purchased under agreements to resell, and government debt instruments, are revalued daily at current foreign currency market exchange rates in order to report these assets in U.S. dollars. Foreign currency translation gains and losses that result from the daily revaluation of foreign currency denominated investments are reported as "Non-interest loss: System Open Market Account: Foreign currency translation losses, net" in the Statements of Income and Comprehensive Income.

Because the FRBNY enters into commitments to buy Treasury securities, federal agency and GSE MBS, and foreign government debt instruments and records the related securities on a settlement-date basis in accordance with the FAM, the related outstanding commitments are not reflected in the Statements of Condition.

Activity related to Treasury securities, GSE debt securities, and federal agency and GSE MBS, including the premiums, discounts, and realized gains and losses, is allocated to each Reserve Bank on a percentage basis derived from an annual settlement of the interdistrict settlement account that occurs in the second quarter of each year. Activity related to foreign currency denominated investments, including the premiums, discounts, and realized and unrealized gains and losses, is allocated in the first quarter of each year to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to the Reserve Banks' aggregate capital and surplus at the preceding December 31.

#### g. Central Bank Liquidity Swaps

Central bank liquidity swaps, which are transacted between the FRB-NY and a foreign central bank, can be structured as either U.S. dollar or foreign currency liquidity swap arrangements.

Central bank liquidity swaps activity, including the related income and expense, is allocated in the first quarter of each year to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to the Reserve Banks' aggregate capital and surplus at the preceding December 31. The foreign currency amounts associated with these central bank liquidity swap arrangements are revalued daily at current foreign currency market exchange rates.

#### U.S. dollar liquidity swaps

At the initiation of each U.S. dollar liquidity swap transaction, the foreign central bank transfers a specified amount of its currency to a restricted account for the FRBNY in exchange for U.S. dollars at the prevailing market exchange rate. Concurrent with this transaction, the FRBNY and the foreign central bank agree to a second transaction that obligates the foreign central bank to return the U.S. dollars and the FRBNY to return the foreign currency on a specified future date at the same exchange rate as the initial transaction. The Bank's allocated portion of the foreign currency amounts that the FRBNY acquires are reported as "System Open Market Account: Central bank liquidity swaps" in the Statements of Condition. Because the

swap transaction will be unwound at the same U.S. dollar amount and exchange rate that were used in the initial transaction, the recorded value of the foreign currency amounts is not affected by changes in the market exchange rate.

The foreign central bank compensates the FRBNY based on the amount outstanding and the rate under the swap agreement. The Bank's allocated portion of the amount of compensation received during the term of the swap transaction is reported as "Interest income: System Open Market Account: Central bank liquidity swaps" in the Statements of Income and Comprehensive Income.

#### Foreign currency liquidity swaps

Foreign currency liquidity swap transactions involve the transfer by the FRBNY, at the prevailing market exchange rate, of a specified amount of U.S. dollars to an account for the foreign central bank in exchange for its currency. The foreign currency amounts that the FRBNY receives are recorded as a liability.

#### h. Bank Premises, Equipment, and Software

Bank premises and equipment are stated at cost less accumulated depreciation. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, which range from 2 to 50 years. Major alterations, renovations, and improvements are capitalized at cost as additions to the asset accounts and are depreciated over the remaining useful life of the asset or, if appropriate, over the unique useful life of the alteration, renovation, or improvement. Maintenance, repairs, and minor replacements are charged to operating expense in the year incurred. Reserve Banks may transfer assets to other Reserve Banks or may lease property of other Reserve Banks. Costs incurred to acquire software are capitalized based on the purchase price. Costs incurred during the application development stage to develop internal-use software are capitalized based on the cost of direct services and materials associated with designing, coding, installing, and testing the software. Capitalized software costs are amortized on a straight-line basis over the estimated useful lives of the software applications, which generally range from two to five years. Maintenance costs and minor replacements related to software are charged to operating expense in the year incurred.

Capitalized assets, including software, buildings, leasehold improvements, furniture, and equipment, are impaired and an adjustment is recorded when events or changes in circumstances indicate that the carrying amount of assets or asset groups is not recoverable and significantly exceeds the assets' fair value.

#### i. Interdistrict Settlement Account

Each Reserve Bank aggregates the payments due to or from other Reserve Banks. These payments result from transactions between the Reserve Banks and transactions that involve depository institution accounts held by other Reserve Banks, such as Fedwire funds and securities transfers and check and ACH transactions. The cumulative net amount due to or from the other Reserve Banks is reflected in the "Interdistrict settlement account" in the Statements of Condition.

An annual settlement of the interdistrict settlement account occurs in the second quarter of each year. As a result of the annual settlement, the balance in each Bank's interdistrict settlement account is adjusted by an amount equal to the average balance in the account during the previous twelve-month period ended March 31. An equal and offsetting adjustment is made to each Bank's allocated portion of SOMA assets and liabilities.

#### j. Federal Reserve Notes

Federal Reserve notes are the circulating currency of the United States. These notes, which are identified as issued to a specific Reserve Bank, must be fully collateralized. All of the Bank's assets are eligible to be pledged as collateral. The collateral value is equal to the book value of the collateral tendered with the exception of securities, for which the collateral value is equal to the par value of the securities tendered. The par value of securities sold under agreements to repurchase is deducted from the eligible collateral value.

The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize outstanding Federal Reserve notes. To satisfy the obligation to provide sufficient collateral for outstanding Federal Reserve notes, the Reserve Banks have entered into an agreement that provides for certain assets of the Reserve Banks to be jointly pledged as collateral for the Federal Reserve notes issued to all Reserve Banks. In the event that this collateral is insufficient, the Federal Reserve Act provides that Federal Reserve notes become a first and paramount lien on all the assets of the Reserve Banks. Finally, Federal Reserve notes are obligations of the United States government.

"Federal Reserve notes outstanding, net" in the Statements of Condition represents the Bank's Federal Reserve notes outstanding, reduced by the Bank's currency holdings of \$5,357 million and \$4,940 million at December 31, 2015 and 2014, respectively. At December 31, 2015 and 2014, all Federal Reserve notes outstanding, reduced by the Reserve Bank's currency holdings, were fully collateralized. At December 31, 2015, all gold certificates, all special drawing rights certificates, and \$1,363 billion of domestic securities held in the SOMA were pledged as collateral. At December 31, 2015, no investments denominated in foreign currencies were pledged as collateral.

# k. Deposits

### **Depository Institutions**

Depository institutions' deposits represent the reserve and service-related balances in the accounts that depository institutions hold at the Bank. Required reserve balances are those that a depository institution must hold to satisfy its reserve requirement. Reserve requirements are the amount of funds that a depository institution must hold in reserve against specified deposit liabilities. Excess reserves are those held by the depository institutions in excess of their required reserve balances. The interest rates paid on required reserve balances and excess balances are determined by the Board of Governors, based on an FOMC-established target range for the federal funds rate. Interest expense on depository institutions' deposits is accrued daily at the appropriate rate. Interest payable is reported as a component of "Interest payable to depository institutions" in the Statements of Condition.

The Term Deposit Facility (TDF) consists of deposits with specific maturities held by eligible institutions at the Reserve Banks. The Reserve Banks pay interest on these deposits at interest rates determined by auction. Interest expense on depository institutions' deposits is accrued daily at the appropriate rate. Interest payable is reported as a component of "Interest payable to depository institutions" in the Statements of Condition. There were no deposits held by the Bank

under the TDF at December 31, 2015 and 2014.

#### Other

Other deposits include the Bank's allocated portion of foreign central bank and foreign government deposits held at the FRBNY.

#### l. Capital Paid-in

The Federal Reserve Act requires that each member bank subscribe to the capital stock of the Reserve Bank in an amount equal to 6 percent of the capital and surplus of the member bank. These shares are nonvoting, with a par value of \$100, and may not be transferred or hypothecated. As a member bank's capital and surplus changes, its holdings of Reserve Bank stock must be adjusted. Currently, only one-half of the subscription is paid in, and the remainder is subject to call. A member bank is liable for Reserve Bank liabilities up to twice the par value of stock subscribed by it.

By law, each Reserve Bank was required to pay each member bank an annual dividend of 6 percent on the paid-in capital stock. This cumulative dividend is paid semiannually.

The Fixing America's Surface Transportation Act (FAST Act), which was enacted on December 4, 2015, amended section 7 of the Federal Reserve Act related to Reserve Bank surplus and the payment of dividends to member banks. The FAST Act changed the dividend rate for member banks with more than \$10 billion of consolidated assets, effective January 1, 2016, to the smaller of 6 percent or the rate equal to the high yield of the 10-year Treasury note auctioned at the last auction held prior to the payment of the dividend. The FAST Act did not change the 6 percent dividend rate for member banks with \$10 billion or less of total consolidated assets. The provisions of the FAST Act related to dividend payments did not affect the amounts reported by the Bank for the year ended December 31, 2015, but are expected to reduce the amount of dividend payments made to member banks in future years.

#### m. Surplus

Before the enactment of the FAST Act, the Board of Governors required the Reserve Banks to maintain a surplus equal to the amount of capital paid-in. On a daily basis, surplus was adjusted to equate the balance to capital paid-in. Effective December 4, 2015, the FAST Act limits aggregate Reserve Bank surplus to \$10 billion. Reserve Bank surplus is allocated among the Reserve Banks based on the ratio of each Bank's capital paid-in to total Reserve Bank capital paid-in as of December 31 of each year.

Accumulated other comprehensive income is reported as a component of "Surplus" in the Statements of Condition and the Statements of Changes in Capital. Additional information regarding the classifications of accumulated other comprehensive income is provided in Notes 9 and 10.

#### n. Earnings Remittances to the Treasury

Before the enactment of the FAST Act, the Board of Governors required the Reserve Banks to transfer excess earnings to the Treasury as interest on Federal Reserve notes after providing for the costs of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid-in. The Federal Reserve Act, as amended by the FAST Act effective December 4, 2015, now requires that any amounts of the surplus funds of the Reserve Banks that exceed, or would exceed, the aggregate limitation of \$10 billion shall be transferred to the Board of Governors for transfer to the Treasury. The Bank remits excess earnings to the Treasury after providing for the cost of operations, payment of dividends, and reservation of an amount necessary to maintain surplus at the Bank's allocated portion of the \$10 billion aggregate surplus limitation. Remittances to the Treasury are made on a weekly basis. The amount of the remittances to the Treasury that were required under the Board of Governor's policy is reported as "Earnings remittances to the Treasury: Interest on Federal Reserve notes" in the Statements of Income and Comprehensive Income. The amount of the remittances to the Treasury that are required by the FAST Act is reported as "Earnings remittances to the Treasury: Required by the Federal Reserve Act, as amended by the FAST Act" in the Statements of Income and Comprehensive Income. The amount due to the Treasury is reported as "Accrued remittances to the Treasury" in the Statements of Condition. See Note 12 for additional information on earnings remittances to the Treasury.

Under the previous Board of Governor's policy, if earnings during the year were not sufficient to provide for the costs of operations, payment of dividends, and equating surplus and capital paid-in, remittances to the Treasury were suspended, and under the FAST Act, if earnings during the year are not sufficient to provide for the costs of operations, payment of dividends, and maintaining surplus at an amount equal to the Bank's allocated portion of the \$10 billion aggregate surplus limitation, remittances to the Treasury are suspended. A deferred asset is recorded that represents the amount of net earnings a Reserve Bank will need to realize before remittances to the Treasury resume. This deferred asset is periodically reviewed for impairment.

#### o. Income and Costs Related to Treasury Services

When directed by the Secretary of the Treasury, the Bank is required by the Federal Reserve Act to serve as fiscal agent and depositary of the United States Government. By statute, the Treasury has appropriations to pay for these services. During the years ended December 31, 2015 and 2014, the Bank was reimbursed for substantially all services provided to the Treasury as its fiscal agent.

During the year 2014, the Bank sought reimbursement from the Treasury and other government agencies on behalf of all Reserve Banks for costs of performing fiscal agency functions. Each Reserve Bank transferred its Treasury reimbursement receivable to the Bank. The reimbursement receivable is reported in "Other assets" and totaled \$2 million at December 31, 2014.

In 2015, responsibility for collecting Treasury reimbursements receivable transferred from the Bank to the Federal Reserve Bank of St. Louis.

#### p. Compensation Received for Service Costs Provided

The Federal Reserve Bank of Atlanta has overall responsibility for managing the Reserve Banks' provision of check and ACH services to depository institutions, the FRBNY has overall responsibility for managing the Reserve Banks' provision of Fedwire funds and securities services, and the Federal Reserve Bank of Chicago has overall responsibility for managing the Reserve Banks' provision of electronic access services to depository institutions. The Reserve Bank that has overall responsibility for managing these services recognizes the related total System revenue in its Statements of Income and Comprehensive Income. The Bank is compensated for costs incurred to provide these services by the Reserve Banks responsible for managing these services and reports this compensation as "Non-interest loss: Compensation received for service costs provided" in its Consolidated Statements of Income and Comprehensive Income.

#### q. Assessments

The Board of Governors assesses the Reserve Banks to fund its operations and the operations of the Bureau. These assessments are allocated to each Reserve Bank based on each Reserve Bank's capital and surplus balances. The Board of Governors also assesses each Reserve Bank for expenses related to producing, issuing, and retiring Federal Reserve notes based on each Reserve Bank's share of the number of notes comprising the System's net liability for Federal Reserve notes on December 31 of the prior year.

The Dodd-Frank Act requires that, after the transfer of its responsibilities to the Bureau on July 21, 2011, the Board of Governors fund the Bureau in an amount not to exceed a fixed percentage of the total operating expenses of the System as reported in the Board of Governor's 2009 annual report, which totaled \$4.98 billion. After 2013, the amount will be adjusted annually in accordance with the provisions of the Dodd-Frank Act. The percentage of total operating expenses of the System for the years ended December 31, 2015 and 2014 was 12.42 percent (\$618.7 million) and 12.22 percent (\$608.4 million), respectively. The Bank's assessment for Bureau funding is reported as "Assessments: Bureau of Consumer Financial Protection" in the Statements of Income and Comprehensive Income.

#### r. Taxes

The Reserve Banks are exempt from federal, state, and local taxes, ex-

cept for taxes on real property. The Bank's real property taxes were \$1 million for each of the years ended December 31, 2015 and 2014, and are reported as a component of "Operating expenses: Occupancy" in the Statements of Income and Comprehensive Income.

#### s. Restructuring Charges

The Reserve Banks recognize restructuring charges for exit or disposal costs incurred as part of the closure of business activities in a particular location, the relocation of business activities from one location to another, or a fundamental reorganization that affects the nature of operations. Restructuring charges may include costs associated with employ-ee separations, contract terminations, and asset impairments. Expenses are recognized in the period in which the Bank commits to a formalized restructuring plan or executes the specific actions contemplated in the plan and all criteria for financial statement recognition have been met.

In 2014, the Treasury announced plans to consolidate the provision of substantially all fiscal agent services for the U.S. Treasury at the Federal Reserve Bank of Cleveland, the Federal Reserve Bank of Kansas City, the FRBNY, and the Federal Reserve Bank of St. Louis. The implementation plan associated with this consolidation is expected to be completed in 2018.

Note 11 describes the Bank's restructuring initiatives and provides information about the costs and liabilities associated with employee separations and contract terminations. The costs associated with the impairment of certain Bank assets are discussed in Note 6. Costs and liabilities associated with enhanced pension benefits in connection with the restructuring activities for all of the Reserve Banks are recorded on the books of the FRBNY. Costs and liabilities associated with enhanced postretirement benefits are discussed in Note 9. The Bank had no significant restructuring activities in 2015.

#### t. Recently Issued Accounting Standards

In April 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-08, *Presentation of Financial Statements (Topic 205) and Property, Plant, and Equipment (Topic 360): Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity.* This update changes the requirements for reporting discontinued operations, which may include a component of an entity or a group of components of an entity, or a business or nonprofit activity. This update is effective for the Bank for the year ended December 31, 2015, and did not have a material effect on the Bank's financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic* 606). This update was issued to create common revenue recognition guidance for U.S. GAAP and International Financial Reporting Standards. The guidance is applicable to all contracts for the transfer of goods or services regardless of industry or type of transaction. This update requires recognition of revenue in a manner that reflects the consideration that the entity expects to receive in return for the transfer of goods or services to customers. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic* 606): *Deferral of the Effective Date*, which delayed the required effective date of this accounting by one year. This revenue recognition accounting guidance is effective for the Bank for the year ending December 31, 2019, although the Bank may elect to adopt guidance on the Bank's financial statements.

In June 2014, the FASB issued ASU 2014-11, Transfer and Servicing (Topic 860): Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures. This update requires certain changes in the accounting for repurchase-to-maturity transactions and repurchase financing transactions. Additionally, this update provides guidance for the disclosures for certain transfers of financial assets accounted for as sales, where the transferor retains substantially all of the exposure to economic return on the transferred financial asset; and repurchase agreements, securities lending transactions, and repurchase-to-maturity transactions that are accounted for as secured borrowings. This update is effective for the Bank for the year ended December 31, 2015. The update did not have any effect on the Bank's accounting for these transactions. The relevant required disclosures have been included in the Note 3e and Note 5 to the Bank's financial statements.

In April 2015, the FASB issued ASU 2015-05, *Intangibles - Goodwill* and Other - Internal Use Software (Subtopic 350-40). The amendments in this update provide guidance to customers about whether a cloud computing arrangement includes a software license. If a cloud computing arrangement includes a software license, then the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If a cloud computing arrangement does not include a software license, the customer should account for the arrangement as a service contract. Consequently, all software licenses within the scope of subtopic 350-40 will be accounted for consistent with other licenses of intangible assets. This update is effective for the Bank for the year ending December 31, 2016, and is not expected to have a material effect on the Bank's financial statements. In July 2015, the FASB issued ASU 2015-12, Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): (Part I) Fully Benefit-Responsive Investment Contracts, (Part II) Plan Investment Disclosures, (Part III) Measurement Date Practical Expedient (consensuses of the FASB Emerging Issues Task Force). Previously, plans were required to disclose (1) individual investments representing 5 percent or more of net assets available for benefits and (2) net appreciation or depreciation for investments by general type. The amendments in Part II of this update (1) eliminate the required disclosure related to individual investments and (2) removes the requirement to disaggregate net appreciation or depreciation for investments by general type. This update is effective for the Bank for the year ending December 31, 2016, and is not expected to have a material effect on the Bank's financial statements.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments* – Overall (Subtopic 825-10): Recognition and Measurement of *Financial Assets and Financial Liabilities*. The amendments in this update eliminate the requirement to disclose methods and significant assumptions used to estimate the fair value for financial instruments measured at amortized cost on the balance sheet. This update is effective for the Bank for the year ending December 31, 2019. The Bank is continuing to evaluate the effect of this new guidance on the Bank's financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. This update revises the model to assess how a lease should be classified and provides guidance for lessees, requiring lessees to present right-of-use assets and lease liabilities on the balance sheet. The up-

date is effective for the Bank for the year ended December 31, 2020, although earlier adoption is permitted. The Bank is continuing to evaluate the effect of this new guidance on its financial statements.

#### 4. LOANS

#### Loans to Depository Institutions

The Bank offers primary, secondary, and seasonal loans to eligible borrowers (depository institutions that maintain reservable transaction accounts or nonpersonal time deposits and have established discount window borrowing privileges). Each program has its own interest rate and interest is accrued using the applicable interest rate established at least every 14 days by the Bank's board of directors, subject to review and determination by the Board of Governors. Primary and secondary loans are extended on a short-term basis, typically overnight, whereas seasonal loans may be extended for a period of up to nine months.

Primary, secondary, and seasonal loans are collateralized to the satisfaction of the Bank to reduce credit risk. Assets eligible to collateralize these loans include consumer, business, and real estate loans; Treasury securities; GSE debt securities; foreign sovereign debt; municipal, corporate, and state and local government obligations; asset-backed securities; corporate bonds; commercial paper; and bank-issued assets, such as certificates of deposit, bank notes, and deposit notes. Collateral is assigned a lending value that is deemed appropriate by the Bank, which is typically fair value reduced by a margin. Loans to depository institutions are monitored daily to ensure that borrowers continue to meet eligibility requirements for these programs. If a borrower no longer qualifies for these programs, the Bank will generally request full repayment of the outstanding loan or, for primary or seasonal loans, may convert the loan to a secondary credit loan. Collateral levels are

reviewed daily against outstanding obligations, and borrowers that no longer have sufficient collateral to support outstanding loans are required to provide additional collateral or to make partial or full repayment.

The Bank had no loans to depository institutions outstanding as of December 31, 2015. The loans to depository institutions outstanding as of December 31, 2014 was \$7 million with remaining maturity within 15 days.

At December 31, 2015 and 2014, the Bank did not have any loans that were impaired, restructured, past due, or on non-accrual status, and no allowance for loan losses was required. There were no impaired loans during the years ended December 31, 2015 and 2014. Interest income attributable to loans to depository institutions was immaterial during the years ended December 31, 2015 and 2014.

#### **5. SYSTEM OPEN MARKET ACCOUNT**

#### a. Domestic Securities Holdings

The FRBNY conducts domestic open market operations and, on behalf of the Reserve Banks, holds the resulting securities in the SOMA.

During the year ended December 31, 2014, the FRBNY continued the purchase of Treasury securities and federal agency and GSE MBS under the large-scale asset purchase programs as directed by the FOMC, although at a reduced pace than previous years. In October 2014, the FOMC concluded its asset purchase program while maintaining its existing policy of reinvesting principal payments from its holdings of GSE debt securities and federal agency and GSE MBS and of rolling over maturing Treasury securities at auction. During the year ended December 31, 2015, the FRBNY continued the reinvestments.

The Bank's allocated share of activity related to domestic open market operations was 2.487 percent and 2.396 percent at December 31, 2015 and 2014, respectively.

The Bank's allocated share of Treasury securities, GSE debt securities, and federal agency and GSE MBS, net, excluding accrued interest, held in the SOMA at December 31 was as follows (in millions):

			2015	
	Par	Unamortized premiums	Unaccreted discounts	Total amortized cost
Treasury securities				
Notes	\$40,659	\$ 521	\$ (161)	\$ 41,019
Bonds	20,563	2,836	(232)	23,167
Total Treasury securities	\$61,222	\$ 3,357	\$ (393)	\$ 64,186
GSE debt securities	\$ 819	\$ 20	\$-	\$ 839
Federal agency and GSE MBS	\$43,462	\$ 1,336	\$ (18)	\$ 44,780
			2014	
	Par	Unamortized premiums	Unaccreted discounts	Total amortized cost
Treasury securities				
Notes	\$39,168	\$ 663	\$ (185)	\$ 39,646
Bonds	19,799	2,985	(232)	22,552
Total Treasury securities	\$ 58,967	\$ 3,648	\$ (417)	\$ 62,198
GSE debt securities	\$ 927	\$ 31	\$-	\$ 958
Federal agency and GSE MBS	\$41,609	\$ 1,275	\$ (23)	\$ 42,861

The FRBNY enters into transactions for the purchase of securities under agreements to resell and transactions to sell securities under agreements to repurchase as part of its monetary policy activities. Prior to December 17, 2015, these operations were for the purpose of further assessing the appropriate structure of such operations in supporting the implementation of monetary policy during normalization. From December 17, 2015 these

operations have been undertaken as necessary to maintain the federal funds rate in a target range. In addition, transactions to sell securities under agreements to repurchase are entered into as part of a service offering to foreign official and international account holders.

There were no material transactions related to securities purchased under agreements to resell during the years ended December 31, 2015 and 2014. Financial information related to securities sold under agreements to repurchase for the years ended December 31 was as follows (in millions):

	Allocated to the Bank				Total SOMA				
		2015		2014		2015		2014	
Primary dealers and expanded counterparties:									
Contract amount outstanding, end of year	\$	11,804	\$	9,504	\$	474,592	\$	396,705	
Average daily amount outstanding, during the year		3,086		3,238		125,656		130,281	
Maximum balance outstanding, during the year		11,804		9,504		474,592		396,705	
Securities pledged (par value), end of year		10,893		8,750		437,961		365,235	
Securities pledged (fair value), end of year		11,825		9,548		475,422		398,540	
Foreign official and international accounts:									
Contract amount outstanding, end of year	\$	5,915	\$	2,710	\$	237,809	\$	113,132	
Average daily amount outstanding, during the year		3,894		2,602		157,929		102,968	
Maximum balance outstanding, during the year		5,915		3,424		237,809		122,232	
Securities pledged (par value), end of year		5,729		2,596		230,333		108,355	
Securities pledged (fair value), end of year		5,915		2,710		237,825		113,132	
Total contract amount outstanding, end of year	\$	17,719	\$	12,214	\$	712,401	\$	509,837	
Supplemental information - interest expense:									
Primary dealers and expanded counterparties	\$	2	\$	2	\$	84	\$	68	
Foreign official and international accounts		4		1		164		44	
Total interest expense - securities sold under agreements to repurchase	\$	6	\$	3	\$	248	\$	112	

Securities pledged as collateral, at December 31, 2015 and 2014, consisted solely of Treasury securities. The contract amount outstanding as of December 31, 2015 of securities sold under agreements to repurchase that were transacted with primary dealers and expanded counterparties predominately had a term of one business day and matured on January 4, 2016. The contract amount outstanding as of December 31, 2015 of securities sold under agreements to repurchase that were transacted with foreign official and international accounts had a term of one business day and matured on January 4, 2016.

The remaining maturity distribution of Treasury securities, GSE debt securities, federal agency and GSE MBS bought outright, and securities sold under agreements to repurchase that were allocated to the Bank at December 31, 2015 and 2014 was as follows (in millions):

		ithin 15 days	lays to days	91 day 1 ye		Over 1 year to 5 years	Over 5 years to 10 years	Over 10 years	Total
December 31, 2015: Treasury securities									
(par value)	\$	-	\$ 961	\$	4,415	\$ 27,815	\$ 12,168	\$ 15,863	\$ 61,222
GSE debt securities (par value)		-	92		325	344		58	819
Federal agency and GSE MBS (par value) <sup>1</sup> Securities sold under		-	-		-	12	224	43,226	43,462
agreements to repurchase (contract amount)	17	,719			-	-		-	17,719
December 31, 2014: Treasury securities									
(par value)	\$	-	\$ -	\$	84	\$ 26,662	\$ 16,449	\$ 15,772	\$ 58,967
GSE debt securities (par value) Federal agency and GSE MBS		26	17		94	733	-	57	927
(par value) <sup>1</sup> Securities sold under			-		-	-	155	41,454	41,609
agreements to repurchase (contract amount)	12	,214	-		-	-	-	-	12,214

1The par amount shown for federal agency and GSE MBS is the remaining principal balance of the securities.

Federal agency and GSE MBS are reported at stated maturity in the table above. The estimated weighted average life of these securities, which differs from the stated maturity primarily because it factors in scheduled payments and prepayment assumptions, was approximately 6.5 and 5.7 years as of December 31, 2015 and 2014, respectively.

The amortized cost and par value of Treasury securities and GSE debt securities that were loaned from the SOMA under securities lending agreements, at December 31 were as follows (in millions):

	Allo	ocated	to the	Total S	SOMA	
	2015 2014		2015	2014		
Treasury securities						
(amortized cost)	\$	472	\$	267	\$18,960	\$11,144
Treasury securities						
(par value)		449		242	18,055	10,105
GSE debt securities						
(amortized cost)		4		15	146	633
GSE debt securities						
(par value)		3		15	137	616

Securities pledged as collateral by the counterparties in the securities lending arrangements at December 31, 2015 and 2014, consisted solely of Treasury securities. The securities lending agreements outstanding as of December 31, 2015 had a term of one business day and matured on January 4, 2016.

The FRBNY enters into commitments to buy and sell Treasury securities and records the related securities on a settlement-date basis. As of December 31, 2015, there were no outstanding commitments.

The FRBNY enters into commitments to buy and sell federal agency and GSE MBS and records the related securities on a settlement-date basis. As of December 31, 2015, the total purchase price of the federal agency and GSE MBS under outstanding purchase commitments was \$22,187 million, none of which was related to dollar rolls. The total purchase price of outstanding purchase commitments allocated to the Bank was \$552 million, none of which was related to dollar rolls. MBS commitments, which had contractual settlement dates extending through January 2016, are principally for the purchase of TBA MBS for which the number and identity of the pools that will be delivered to fulfill the commitment are unknown at the time of the trade. As of December 31, 2015, there were no outstanding sales commitments for federal agency and GSE MBS. These commitments are subject to varying degrees of off-balance-sheet market risk and counterparty credit risk that result from their future settlement. The FRBNY requires the posting of cash collateral for MBS commitments as part of its risk management practices used to mitigate the counterparty credit risk.

Other assets consists primarily of cash and short-term investments related to the federal agency and GSE MBS portfolio. Other liabilities, which are primarily related to federal agency and GSE MBS purchases and sales, includes the FRBNY's obligation to return cash margin posted by counterparties as collateral under commitments to purchase and sell federal agency and GSE MBS. In addition, other liabilities includes obligations that arise from the failure of a seller to deliver MBS to the FRBNY on the settlement date. Although the FRBNY has ownership of and records its investments in the MBS as of the contractual settlement date, it is not obligated to make payment until the securities are delivered, and the amount included in other liabilities represents the FRBNY's obligation to pay for the securities when delivered. The amount of other assets and other liabilities allocated to the Bank and held in the SOMA at December 31 was as follows (in millions):

	A	Allocated	l to the	Bank		Total SOMA					
	2	015	20	014	2	2015	2	2014			
Other assets:						1.0	•				
MBS portfolio related cash and short term investments	\$	-	\$	1	\$	13	\$	28			
Other		-		-		1		1			
Total other assets	\$	-	\$	1	\$	14	\$	29			
Other liabilities:											
Cash margin	\$	12	\$	19	\$	486	\$	793			
Obligations from MBS transaction fails		-		1		16		30			
Other		1		-		6		7			
Total other liabilities	\$	13	\$	20	\$	508	\$	830			

Accrued interest receivable on domestic securities holdings was \$25,354 million and \$25,561 million as of December 31, 2015 and 2014, respectively, of which \$630 million and \$613 million, respectively, was allocated to the Bank. These amounts are reported as a component of "System Open Market Account: Accrued interest receivable" in the Statements of Condition.

Information about transactions related to Treasury securities, GSE debt securities, and federal agency and GSE MBS during the years ended December 31, 2015 and 2014, is summarized as follows (in millions):

	Allocated to the Bank									
		Notes	]	Bonds	Total Treasury securities		GSE debt securities			al agency SE MBS
Balance at December 31, 2013	\$	43,320	\$	25,043	\$	68,363	\$	1,713	\$	44,442
Purchases <sup>1</sup> Sales <sup>1</sup> Realized gains, net <sup>2</sup>		4,337		2,242		6,579		-		11,948 (1)
Principal payments and maturities Amortization of premiums and accretion of discounts, net Inflation adjustment on inflation-indexed securities		(13) (140) 12		(256) 33		(13) (396) 45		(494) (15)		(5,070) (179)
Annual reallocation adjustment <sup>3</sup>		(7,870)		(4,510)		(12,380)		(246)		(8,279)
Balance at December 31, 2014	\$	39,646	\$	22,552	\$	62,198	\$	958	\$	42,861
Purchases <sup>1</sup> Sales <sup>1</sup> Realized gains, net <sup>2</sup> Principal payments and maturities		68 (74)		19 (14)		87 (88)		(140)		8,793 (11) (8,209)
Amortization of premiums and accretion of discounts, net Inflation adjustment on inflation-indexed securities Annual reallocation adjustment <sup>3</sup>		(135) 2 1,512		(252) 5 857		(387) 7 2,369		(140) (13) 34		(289)
Balance at December 31, 2015	\$	41,019		\$23,167		\$64,186		\$839		\$44,780
Year-ended December 31, 2014 Supplemental information - par value of transactions: Purchases <sup>4</sup> Sales		\$4,400		\$2,198		\$6,598		\$-		\$11,548 (1)
Year-ended December 31, 2015 Supplemental information - par value of transactions: Purchases <sup>4</sup> Sales		\$68		\$19		\$87		\$-		\$8,486 (10)

1 Purchases and sales may include payments and receipts related to principal, premiums, discounts, and inflation compensation adjustments to the basis of inflation-indexed securities. The amount reported as sales includes the realized gains and losses on such transactions. Purchases and sales exclude MBS TBA transactions that are settled on a net basis.

2 Realized gains, net offset the amount of realized gains and losses included in the reported sales amount.

3 Reflects the annual adjustment to the Bank's allocated portion of the related SOMA securities that results from the annual settlement of the interdistrict settlement account, as discussed in Note 3i. 4 Includes inflation compensation.

	_	Notes	Bonds	То	otal SOMA tal Treasury securities		GSE debt ecurities	leral agency d GSE MBS
Balance at December 31, 2013	\$	1,495,115	\$ 864,319	864,319 \$		\$ 59,122		\$ 1,533,860
Purchases <sup>1</sup> Sales <sup>1</sup>		165,306	85,826		251,132		-	466,384 (29)
Realized gains, net <sup>2</sup>		-			-		-	(
Principal payments and maturities		(475)	-		(475)		(18,544)	(203,933)
Amortization of premiums and accretion of discounts, net		(5,545)	(10,132)		(15,677)		(588)	(7,199)
Inflation adjustment on inflation-indexed securities		500	1,327		1,827		-	-
Balance at December 31, 2014	\$	1,654,901	\$ 941,340	\$	2,596,241	\$	39,990	\$ 1,789,083
Purchases <sup>1</sup>		2,736	761		3,497		-	356,976
Sales <sup>1</sup>		-	-		-		-	(464)
Realized gains, net <sup>2</sup>		-	-		-		-	16
Principal payments and maturities		(2,977)	(543)		(3,520)		(5,733)	(333,441)
Amortization of premiums and accretion of discounts, net		(5,485)	(10,253)		(15,738)		(509)	(11,721)
Inflation adjustment on inflation-indexed securities		53	143		196		-	-
Balance at December 31, 2015	\$	1,649,228	\$ 931,448	\$	2,580,676	\$	33,748	\$ 1,800,449
Year-ended December 31, 2014 Supplemental information - par value of transactions: Purchases <sup>3</sup> Sales	\$	167,497	\$ 83,739	\$	251,236	\$	-	\$ 450,633 (29)
Year-ended December 31, 2015 Supplemental information - par value of transactions: Purchases <sup>3</sup> Sales	\$	2,747	\$ 766	\$	3,513	\$	-	\$ 344,505 (435)

<sup>1</sup> Purchases and sales may include payments and receipts related to principal, premiums, discounts, and inflation compensation adjustments to the basis of inflation-indexed securities. The amount reported as sales includes the realized gains and losses on such transactions. Purchases and sales exclude MBS TBA transactions that are settled on a net basis.

<sup>2</sup> Realized gains, net offset the amount of realized gains and losses included in the reported sales amount.

<sup>3</sup> Includes inflation compensation.

#### b. Foreign Currency Denominated Investments

The FRBNY conducts foreign currency operations and, on behalf of the Reserve Banks, holds the resulting foreign currency denominated investments in the SOMA.

The FRBNY holds foreign currency deposits with foreign central banks and the Bank for International Settlements and invests in foreign government debt instruments of Germany, France, and Japan. These foreign government debt instruments are backed by the full faith and credit of the issuing foreign governments. In addition, the FRBNY may enter into transactions to purchase Euro-denominated government debt securities under agreements to resell for which the accepted collateral is the debt instruments issued by the governments of Belgium, France, Germany, Italy, the Netherlands, and Spain, which are backed by the full faith and credit of those issuing governments.

At December 31, 2015 and 2014, there were no securities purchased under agreements to resell outstanding and, consequently, no related foreign securities held as collateral.

The Bank's allocated share of activity related to foreign currency operations was 5.588 percent and 7.519 percent at December 31, 2015 and 2014, respectively.

Information about foreign currency denominated investments valued at amortized cost and at foreign currency market exchange rates at December 31 was as follows (in millions):

	Allocated to Bank			Bank	Total S	SOMA
	20	2015		014	2015	2014
Euro: Foreign currency deposits German government debt instruments French government debt	\$	347 126	\$	521 187	\$ 6,218 2,261	\$ 6,936 2,494
instruments		186		277	3,325	3,687
Japanese yen: Foreign currency deposits Japanese government debt		144		194	2,568	2,576
instruments		290		392	5,195	5,207
Total	\$1	,093	\$ 1	,571	\$19,567	\$20,900

Accrued interest receivable on foreign currency denominated investments was \$64 million and \$83 million as of December 31, 2015 and 2014, respectively, of which \$4 million and \$6 million, respectively, was allocated to the Bank. These amounts are reported as a component of "System Open Market Account: Accrued interest receivable" in the Statements of Condition.

The remaining maturity distribution of foreign currency denominated investments that were allocated to the Bank at December 31, 2015 and 2014, was as follows (in millions):

	:hin 15 lays	5 16 days to 90 days		91 days to 1 year		Over 1 year to 5 years		Over 5 years to 10 years		,	Total
December 31, 2015: Euro	\$ 119	\$	248	\$	59	\$	214	\$	19	\$	659
Japanese yen	153		20		90		171		-		434
Total	\$ 272	\$	268	\$	149	\$	385	\$	19	\$	1,093
December 31, 2014:											
Euro	\$ 273	\$	211	\$	124	\$	377	\$	-	\$	985
Japanese yen	207		30		116		233		-		586
Total	\$ 480	\$	241	\$	240	\$	610	\$	-	\$	1,571

There were no foreign exchange contracts related to foreign currency operations outstanding as of December 31, 2015.

The FRBNY enters into commitments to buy foreign government debt instruments and records the related securities on a settlement-date basis. As of December 31, 2015, there were no outstanding commitments to purchase foreign government debt instruments. During 2015, there were purchases and maturities of foreign government debt instruments of \$3,288 million and \$3,155 million, respectively, of which \$191 million and \$186 million, respectively, were allocated to the Bank. There were no sales of foreign government debt instruments in 2015.

In connection with its foreign currency activities, the FRBNY may enter into transactions that are subject to varying degrees of off-balance-sheet market risk and counterparty credit risk that result from their future settlement. The FRBNY controls these risks by obtaining credit approvals, establishing transaction limits, receiving collateral in some cases, and performing monitoring procedures.

Foreign currency working balances held and foreign exchange contracts executed by the Bank to facilitate international payments and currency transactions made on behalf of foreign central banks and U.S. official institution customers were not material as of December 31, 2015 and 2014.

### c. Central Bank Liquidity Swaps U.S. Dollar Liquidity Swaps

The Bank's allocated share of U.S. dollar liquidity swaps was 5.588 percent and 7.519 percent at December 31, 2015 and 2014, respectively.

The total foreign currency held under U.S. dollar liquidity swaps in the SOMA at December 31, 2015 and 2014, was \$997 million and \$1,528 million, respectively, of which \$56 million and \$115 million, respectively, was allocated to the Bank.

The remaining maturity distribution of U.S. dollar liquidity swaps that were allocated to the Bank at December 31 was as follows (in millions):

	2015	2014
	Within 15 days	Within 15 days
Euro	\$ 52	\$ -
Japanese yen	4	115
Total	\$ 56	\$ 115

#### Foreign Currency Liquidity Swaps

At December 31, 2015 and 2014, there was no balance outstanding related to foreign currency liquidity swaps.

#### d. Fair Value of SOMA Assets and Liabilities

The fair value amounts below are presented solely for informational purposes and are not intended to comply with the fair value disclosures required by FASB Accounting Standards Codification (ASC) Topic 820 (ASC 820), Fair Value Measurement. Although the fair value of SOMA security holdings can be substantially greater than or less than the recorded value at any point in time, these unrealized gains or losses have no effect on the ability of the Reserve Banks, as the central bank, to meet their financial obligations and responsibilities. Because SOMA securities are recorded at amortized cost, cumulative unrealized gains (losses) are not recognized in the Statements of Condition and the changes in cumulative unrealized gains (losses) are not recognized in the Statements of Income and Comprehensive Income.

The fair value of the Treasury securities, GSE debt securities, federal agency and GSE MBS, and foreign government debt instruments held in the SOMA is subject to market risk, arising from movements in market variables such as interest rates and credit risk. The fair value of federal agency and GSE MBS is also affected by the expected rate of prepayments of mortgage loans underlying the securities. The fair value of foreign government debt instruments is also affected by currency risk. Based on evaluations performed as of December 31, 2015 and 2014, there are no credit impairments of SOMA securities holdings.

The following table presents the amortized cost, fair value, and cumulative unrealized gains on the Treasury securities, GSE debt securities, and federal agency and GSE MBS held in the SOMA at December 31 (in millions):

	Allocated to the Bank									
—		2015		2014						
	Amortized cos	t Fair value	Cumulative unrealized gains	Amortized cost	Fair value	Cumulative unrealized gains				
Treasury securities:										
Notes	\$ 41,019	\$ 41,521	\$ 502	\$ 39,646	\$ 40,328	\$ 682				
Bonds	23,167	25,034	1,867	22,552	25,225	2,673				
Total Treasury securities	64,186	66,555	2,369	62,198	65,553	3,355				
GSE debt securities	839	875	36	- 958	1,018	60				
Federal agency and GSE MBS	44,780	45,024	244	- 42,861	43,615	754				
Total domestic SOMA portfolio securities holdings	\$ 109,805	\$ 112,454	\$ 2,649	\$106,017	\$ 110,186	\$ 4,169				
Memorandum - Commitments for: Purchases of Treasury securities Purchases of Federal agency and GSE MBS Sales of Federal agency and GSE MBS	\$ 552	\$ 551	\$ (1)	\$ 687	\$ 690	\$.3				

	Total SOMA								
		2015		2014					
	Amortized cost	Fair value	Cumulative unrealized gains	Amortized cost	Fair value	Cumulative unrealized gains			
Treasury securities: Notes	\$1,649,228	\$ 1,669,395	\$ 20,167	\$ 1,654,901	\$ 1,683,377	\$ 28,476			
Bonds	931,448	1,006,514	75,066	941,340	1,052,916	111,576			
Total Treasury securities	2,580,676	2,675,909	95,233	2,596,241	2,736,293	140,052			
GSE debt securities	33,748	35,165	1,417	39,990	42,499	2,509			
Federal agency and GSE MBS 31,461		1,800,449	1,810,256	9,807	1,789,083	1,820,544			
Total domestic SOMA portfolio securities hol	dings \$4,414,873	\$ 4,521,330	\$ 106,457	\$ 4,425,314	\$ 4,599,336	\$ 174,022			
Memorandum - Commitments for: Purchases of Treasury securities Purchases of Federal agency and GSE MBS Sales of Federal agency and GSE MBS	\$ 22,187	\$ 22,170	\$ (17)	\$	\$ 28,803	\$			

The fair value of Treasury securities and GSE debt securities was determined using pricing services that provide market consensus prices based on indicative quotes from various market participants. The fair value of federal agency and GSE MBS was determined using a pricing service that utilizes a model-based approach that considers observable inputs for similar securities.

The cost bases of securities purchased under agreements to resell, securities sold under agreements to repurchase, central bank liquidity swaps and other investments held in the SOMA domestic portfolio approximate fair value. Due to the shortterm nature of these agreements and the defined amount that will be received upon settlement, the cost basis is estimated to approximate fair value.

At December 31, 2015 and 2014, the fair value of foreign currency denominated investments was \$19,630 million and \$20,996 million, respectively, of which \$1,097 million and \$1,579 million, respectively, was allocated to the Bank. The fair value of foreign government debt instruments was determined using pricing services that provide market consensus prices based on indicative quotes from various market participants. The fair value of foreign currency deposits and securities purchased under agreements to resell was determined by reference to market interest rates.

The following table provides additional information on the amortized cost and fair values of the federal agency and GSE MBS portfolio at December 31 (in millions):

			201	5		2014			
	1	Amortized cos	st	Fair value	A	Amortized cost		Fair value	
Distribution of	MBS	5							
holdings by cou	ipon								
rate									
Allocated to th	ie Bai	nk:							
2.0%	\$	279	\$	273	\$	306	\$	302	
2.5%		2,898		2,861		2,746		2,718	
3.0%		13,790		13,512		12,297		12,129	
3.5%		14,411		14,474		11,531		11,724	
4.0%		8,982		9,167		10,255		10,570	
4.5%		2,883		3,085		3,734		4,021	
5.0%		1,217		1,306		1,570		1,694	
5.5%		277		298		365		393	
6.0%		38		41		51		55	
6.5%		5		7		6		9	
Total	\$	44,780	\$	45,024	\$	42,861	\$	43,615	
Total SOMA:									
2.0%	\$	11,198	\$	10,993	\$	12,788	\$	12,618	
2.5%		116,527		115,018		114,609		113,468	
3.0%		554,430		543,270		513,289		506,280	
3.5%		579,403		581,940		481,305		489,390	
4.0%		361,149		368,576		428,047		441,204	
4.5%		115,914		124,043		155,867		167,844	
5.0%		48,931		52,523		65,544		70,719	
5.5%		11,138		11,989		15,232		16,414	
6.0%		1,542		1,666		2,110		2,287	
6.5%		217		238		292		320	
Total	\$	1,800,449	\$	1,810,256	\$	51,789,083		\$1,820,544	

The following tables present the realized gains (losses) and the change in the cumulative unrealized gains (losses) related to SOMA domestic securities holdings during the years ended December 31, 2015 and 2014 (in millions):

		Allocated to Bank						
			2015			4	2014	
	Realize	d gains <sup>1</sup>	cumulati	ange in ve unrealized <sup>ssses<sup>2,3</sup></sup>	Realize	d gains1	cumulativ	nge in e unrealized losses) <sup>2,3</sup>
		u guillo			1001120	a guillo	guino (	
Treasury securities	\$	-	\$	(1,159)	\$	-	\$	\$4,056
GSE debt securities		-		(27)		-		(15)
Federal agency and GSE MBS		1		(551)		2		1,796
Total	\$	1	\$	(1,737)	\$	2	\$	5,837

				Total	SOMA			
			2015			- -	2014	
				ange in ve unrealized				nge in ve unrealized
	Realize	ed gains <sup>1</sup>	10	osses <sup>2,3</sup>	Realize	d gains <sup>1</sup>	gains	(losses) <sup>2,3</sup>
Treasury securities	\$	-	\$	(44,819)	\$	-	\$	158,150
GSE debt securities		-		(1,092)		-		(605)
Federal agency and GSE MBS		43		(21,654)		81		69,749
Total	\$	43	\$	(67,565)	\$	81	\$	227,294

1 Realized gains are reported in "Non-interest loss: System Open Market Account: Federal agency and government-sponsored enterprise mortgage-backed securities gains, net" in the Statements of Income and Comprehensive Income.

2 Because SOMA securities are recorded at amortized cost, the change in the cumulative unrealized gains (losses) is not reported in the Statements of Income and Comprehensive Income.

3 The amount reported as change in cumulative unrealized gains (losses) allocated to the Bank is affected by the annual adjustment to the Bank's allocated portion of the related SOMA securities, as discussed in Note 3f.

The amount of change in cumulative unrealized gains (losses) position, net, related to foreign currency denominated investments was a loss of \$33 million and a gain of \$18 million for the years ended December 31, 2015 and 2014, respectively, of which \$2 million and \$1 million, respectively, were allocated to the Bank.

ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that distinguishes between assumptions developed using market data obtained from independent sources (observable inputs) and the Bank's assumptions developed using the best information available in the circumstances (unobservable inputs). The three levels established by ASC 820 are described as follows:

- Level 1 Valuation is based on quoted prices for identical instruments traded in active markets.
- Level 2 Valuation is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.
- Level 3 Valuation is based on model-based techniques that use significant inputs and assumptions not observable in the market. These unobservable inputs and assumptions reflect the Bank's estimates of inputs and assumptions that market participants would use in pricing the assets and liabilities. Valuation techniques include the use of option pricing models, discounted cash flow models, and similar techniques.

Treasury securities, GSE debt securities, federal agency and GSE MBS, and foreign government debt instruments are classified as Level 2 within the ASC 820 hierarchy because the fair values are based on indicative quotes and other observable inputs obtained from independent pricing services. The fair value hierarchy level of SOMA financial assets is not necessarily an indication of the risk associated with those assets.

## 6. BANK PREMISES, EQUIPMENT, AND SOFTWARE

Bank premises and equipment at December 31 were as follows (in millions):

	2	015	2	2014
Bank premises and equipment:				
Land and land improvements	\$	8	\$	8
Buildings		120		119
Building machinery and equipment		32		28
Construction in progress		1		1
Furniture and equipment		47		50
Subtotal		208		206
Accumulated depreciation	(	119)		(116)
Bank premises and equipment, net		89		90
Depreciation expense, for the years ended December 31	\$	9	\$	9

The Bank leases space to outside tenants with remaining lease terms ranging from 2 to 9 years. Rental income from such leases was \$2 million for each of the years ended December 31, 2015 and 2014, and is reported as a component of "Non-interest loss: Other" in the Statements of Income and Comprehensive Income. Future minimum lease payments that the Bank will receive under non-cancelable lease agreements in existence at December 31, 2015, are as follows (in millions):

2016	\$ 2	
2017	2	
2018	3	
2019	3	
2020	3	
Thereafter	2	
Total	\$ 15	_

The Bank had capitalized software assets, net of amortization, of \$9 million and \$7 million at December 31, 2015 and 2014, respectively. Amortization expense was \$3 million and \$2 million for the years ended December 31, 2015 and 2014, respectively. Capitalized software assets are reported as a component of "Other assets" in the Statements of Condition and the related amortization is reported as a component of "Operating expenses: Other" in the Statements of Income and Comprehensive Income.

#### 7. COMMITMENTS AND CONTINGENCIES

In conducting its operations, the Bank enters into contractual commitments, normally with fixed expiration dates or termination provisions, at specific rates and for specific purposes. At December 31, 2015, the Bank was obligated under non-cancelable leases for premises and equipment with remaining terms ranging from three to approximately four years. These leases provide for increased lease payments based upon increases in real estate taxes, operating costs, or selected price indexes.

Rental expense under operating leases for certain operating facilities, warehouses, and data processing and office equipment (including taxes, insurance, and maintenance when included in rent), net of sublease rentals, was \$1 million for the each of the years ended December 31, 2015 and 2014. Certain of the Bank's leases have options to renew.

Future minimum lease payments under non-cancelable operating leases, net of sublease rentals, with remaining terms of one year or more, at December 31, 2015, are as follows (in thousands):

	Opera	Operating leases	
2016	\$	481	
2017		492	
2018		498	
2019		41	
Future minimum lease payments	\$	1,512	

At December 31, 2015, there were no material unrecorded unconditional purchase commitments or obligations in excess of one year.

Under the Insurance Agreement of the Reserve Banks, each of the Reserve Banks has agreed to bear, on a per-incident basis, a share of certain losses in excess of 1 percent of the capital paid-in of the claiming Reserve Bank, up to 50 percent of the total capital paid-in of all Reserve Banks. Losses are borne in the ratio of a Reserve Bank's capital paid-in to the total capital paid-in of all Reserve Banks at the beginning of the calendar year in which the loss is shared. No claims were outstanding under the agreement at December 31, 2015 and 2014.

The Bank is involved in certain legal actions and claims arising in the ordinary course of business. Although it is difficult to predict the ultimate outcome of these actions, in management's opinion, based on discussions with counsel, the legal actions and claims will be resolved without material adverse effect on the financial position or results of operations of the Bank.

## 8. RETIREMENT AND THRIFT PLANS Retirement Plans

The Bank currently offers three defined benefit retirement plans to its employees, based on length of service and level of compensation. Substantially all of the employees of the Reserve Banks, Board of Governors, and Office of Employee Benefits of the Federal Reserve System participate in the Retirement Plan for Employees of the Federal Reserve System (System Plan). Under the Dodd-Frank Act, newly hired Bureau employees are eligible to participate in the System Plan and, during the years ended December 31, 2015 and 2014, certain costs associated with the System Plan were reimbursed by the Bureau. In addition, employees at certain compensation levels participate in the Benefit Equalization Retirement Plan (BEP) and certain Reserve Bank officers participate in the Supplemental Retirement Plan for Select Officers of the Federal Reserve Banks (SERP).

The FRBNY, on behalf of the System, recognizes the net asset or net liability and costs associated with the System Plan in its consolidated financial statements. The Bank reports the net cost related to the BEP and SERP as a component of "Operating expenses: Salaries and benefits" in its Statements of Income and Comprehensive Income and reports the net liability as a component of "Accrued benefit costs" in its Statements of Condition.

The Bank's projected benefit obligation, funded status, and net pension expenses for the BEP and the SERP at December 31, 2015 and 2014, and for the years then ended, were not material.

## Thrift Plan

Employees of the Bank participate in the defined contribution Thrift Plan for Employees of the Federal Reserve System (Thrift Plan). The Bank matches 100 percent of the first 6 percent of employee contributions from the date of hire and provides an automatic employer contribution of 1 percent of eligible pay. The Bank's Thrift Plan contributions totaled \$5 million for each of the years ended December 31, 2015 and 2014, respectively, and are reported as a component of "Operating expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income.

#### 9. POSTRETIREMENT BENEFITS OTHER THAN RETIREMENT PLANS AND POSTEMPLOYMENT BENEFITS

Postretirement Benefits Other Than Retirement Plans

In addition to the Bank's retirement plans, employees who have met certain age and length-of-service requirements are eligible for both medical and life insurance benefits during retirement.

2015

2014

The Bank and plan participants fund benefits payable under the medical and life insurance plans as due and the plans have no assets.

Following is a reconciliation of the beginning and ending balances of the benefit obligation (in millions):

	 2015	2014
Accumulated postretirement benefit obligation at January 1	\$ 106.6	\$ 91.3
Service cost benefits earned during the period	3.5	3.0
Interest cost on accumulated benefit obligation	4.3	4.5
Net actuarial (gain) loss	(7.2)	13.0
Curtailment loss	-	(0.9)
Special termination benefits loss	0.1	-
Contributions by plan participants	1.8	1.9
Benefits paid	(5.7)	(6.6)
Medicare Part D subsidies	0.4	0.4
Accumulated postretirement benefit obligation at December 31	\$ 103.8	\$ 106.6

At December 31, 2015 and 2014, the weighted-average discount rate assumptions used in developing the postretirement benefit obligation were 4.31 percent and 3.96 percent, respectively.

Discount rates reflect yields available on high-quality corporate bonds that would generate the cash flows necessary to pay the plan's benefits when due. The System Plan discount rate assumption setting convention uses an unrounded rate.

Following is a reconciliation of the beginning and ending balance of the plan assets, and the unfunded postretirement benefit obligation and accrued postretirement benefit costs (in millions):

	2015	2014
Fair value of plan assets at January 1	\$-	\$-
Contributions by the employer	3.5	4.3
Contributions by plan participants	1.8	1.9
Benefits paid	(5.7)	(6.6)
Medicare Part D subsidies	0.4	0.4
Fair value of plan assets at December 31	\$-	\$-
Unfunded obligation and accrued		
postretirement benefit cost	\$ 103.8	\$106.6
Amounts included in accumulated		
other comprehensive loss are shown below:		
Prior service cost	\$ (0.3)	\$(0.5)
Net actuarial loss	(15.5)	(24.7)
Total accumulated other		
comprehensive loss	\$(15.8)	\$(25.2)

Accrued postretirement benefit costs are reported as a component of "Accrued benefit costs" in the Statements of Condition.

For measurement purposes, the assumed health-care cost trend rates at December 31 are provided in the table below. The current healthcare cost trend rate for next year is expected to decline ratably each year until achieving the ultimate trend rate in 2022:

	2015	2014
Health-care cost trend rate assumed		
for next year	7.00%	6.60%
Rate to which the cost trend rate is		
assumed to decline (the ultimate trend rate)	4.75%	4.75%
Year that the rate reaches the ultimate trend rate	2022	2019

Assumed health-care cost trend rates have a significant effect on the amounts reported for health-care plans. A one percentage point change in assumed health-care cost trend rates would have the following effects for the year ended December 31, 2015 (in millions):

	C	Dne		One
	perc	entage	per	centage
	point	increase	point	decrease
Effect on aggregate of service and interest cost components of net				
periodic postretirement benefit cost	s \$	0.2	\$	(0.9)
Effect on accumulated postretirement				
benefit obligation		2.8		(9.3)

The following is a summary of the components of net periodic postretirement benefit expense for the years ended December 31 (in millions):

	2015	2014
Service cost-benefits earned during the period	\$ 3.5	\$ 3.0
Interest cost on accumulated benefit obligation	4.3	4.5
Amortization of prior service cost	0.2	0.6
Amortization of net actuarial loss	2.0	0.7
Total periodic expense	10.0	8.8
Curtailment	-	0.1
Special termination benefits loss	0.1	-
Net periodic postretirement benefit expense	\$10.1	\$8.9

Estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic postretirement benefit expense in 2016 are shown below:

Prior service cost Net actuarial loss	\$ 0.1 0.7	
Total	\$ 0.8	

Net postretirement benefit costs are actuarially determined using a January 1 measurement date. At January 1, 2015 and 2014, the weighted-average discount rate assumptions used to determine net periodic postretirement benefit costs were 3.96 percent and 4.79 percent, respectively.

Net periodic postretirement benefit expense is reported as a component of "Operating expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income. The recognition of special termination benefit losses is primarily the result of enhanced retirement benefits provided to employees during the restructuring described in Note 11. A curtailment loss associated with restructuring programs that are described in Note 11 was recognized in net income in the year ended December 31, 2014.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 established a prescription drug benefit under Medicare (Medicare Part D) and a federal subsidy to sponsors of retiree healthcare benefit plans that provide benefits that are at least actuarially equivalent to Medicare Part D. The benefits provided under the Bank's plan to certain participants are at least actuarially equivalent to the Medicare Part D prescription drug benefit. The estimated effects of the subsidy are reflected in actuarial loss in the accumulated postretirement benefit obligation and net periodic postretirement benefit expense.

Federal Medicare Part D subsidy receipts were \$313 thousand and \$408 thousand in the years ended December 31, 2015 and 2014, respectively. Expected receipts in 2016, related to benefits paid in the years ended December 31, 2015 and 2014, are \$128 thousand and \$86 thousand, respectively. Following is a summary of expected postretirement benefit payments (in millions):

	Without subsidy	With subsidy
2016	\$ 5.3	\$ 4.9
2017	5.5	5.0
2018	5.8	5.4
2019	6.0	5.5
2020	6.3	5.8
2021 - 2025	35.2	32.0
Total	\$ 64.1	\$ 58.6

## **Postemployment Benefits**

The Bank offers benefits to former qualifying or inactive employees. Postemployment benefit costs are actuarially determined using a December 31 measurement date and include the cost of providing disability; medical, dental, and vision insurance; and survivor income benefits. The accrued postemployment benefit costs recognized by the Bank at December 31, 2015 and 2014, were \$6.8 million and \$6.7 million, respectively. This cost is included as a component of "Accrued benefit costs" in the Statements of Condition. Net periodic postemployment benefit expense (credit) included in 2015 and 2014 operating expenses were \$0.9 million and \$0.3 million, respectively, and are recorded as a component of "Operating expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income.

# **10. ACCUMULATED OTHER COMPREHENSIVE INCOME AND OTHER COMPREHENSIVE INCOME**

Following is a reconciliation of beginning and ending balances of accumulated other comprehensive income (loss) as of December 31 (in millions):

	2015	2014		
	Amount	Amount related to postretirement		
	related to			
	postretirement			
	benefits other than	benefits other than		
	retirement	retirement		
	plans	plans		
Balance at January 1	\$ (25.2)	\$(14.4)		
Change in funded status of benefit plan		+ (- 1.1)		
Prior service costs arising during the year		0.1		
Amortization of prior service cost	0.2 <sup>1</sup>	0.6 <sup>1</sup>		
Change in prior service costs relate				
benefit plans	0.2	0.7		
Net actuarial gain (loss) arising durir	ng the			
year	7.2	(12.2)		
Amortization of net actuarial loss	2.0 <sup>1</sup>	0.7 <sup>1</sup>		
Change in actuarial gain (losses) relate	ed to			
benefit plans	9.2	(11.5)		
Change in funded status of benefit plan	ns -			
other comprehensive income (loss)	9.4	(10.8)		
Balance at December 31	\$ (15.8)	\$(25.2)		

<sup>1</sup> Reclassification is reported as a component of "Operating Expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income.

Additional detail regarding the classification of accumulated other comprehensive loss is included in Note 9.

## **11. BUSINESS RESTRUCTURING CHARGES**

In 2014, the Treasury announced a plan to consolidate the number of Reserve Banks providing fiscal agent services to the Treasury from ten to four. As a result of this initiative, the Government Entity Accounting and Reporting System and Treasury Collection Management and Monitoring operations performed by the Federal Reserve Bank of Philadelphia were transitioned to the Federal Reserve Bank of St. Louis in 2015. In addition, the phased transition of the Treasury Software Quality Assurance functions to Kansas City started in 2015. The Post Payment System and its associated quality assurance function will transition to Kansas City in the next several years. The Bank had no material business restructuring charges in 2015.

Following is a summary of financial information related to the restructuring plans (in millions):

		2014 structuring plans		
Information related to restructuring plans as of December 31, 2015: Total expected costs related to restructuring activity Expected completion date		2.7 2014		
Reconciliation of liability balances: Balance at December 31, 2013 Employee separation costs Adjustments	\$	2.1 0.8		
Balance at December 31, 2014	\$	2.9		
Adjustments Payments		(0.2) (0.3)		
Balance at December 31, 2015	\$	2.4		

Employee separation costs are primarily severance costs for identified staff reductions associated with the announced restructuring plans. Separation costs that are provided under terms of ongoing benefit arrangements are recorded based on the accumulated benefit earned by the employee. Separation costs that are provided under the terms of one-time benefit arrangements are generally measured based on the expected benefit as of the termination date and recorded ratably over the period to termination. Restructuring costs related to employee separations are reported as a component of "Operating expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income.

Adjustments to the accrued liability are primarily due to changes in the estimated restructuring costs and are shown as a component of the appropriate expense category in the Statements of Income and Comprehensive Income.

Costs associated with enhanced pension benefits for all Reserve Banks are recorded on the books of the FRBNY as discussed in Note 8. Costs associated with enhanced postretirement benefits are disclosed in Note 9.

#### **12. DISTRIBUTION OF COMPREHENSIVE INCOME**

The following table presents the distribution of the Bank's comprehensive income for the years ended December 31 (in millions):

_	2015		2014	
Dividends on capital stock	\$	97	\$ 118	
Transfer from surplus	(1,047)		(471)	
Earnings remittances to the Treasury:				
Interest on Federal Reserve notes	1,994		2,625	
Required by the Federal Reserve Act	,			
as amended by the FAST Act	1	,234	-	
Total distribution	\$ 2	2,278	\$ 2,272	

Before the enactment of the FAST Act, the amount reported as transfer to (from) surplus represented the amount necessary to equate surplus with capital paid-in, in accordance with the Board of Governor's policy. Subsequent to the enactment of the FAST Act, the amount reported as transfer to (from) surplus represents the amount necessary to maintain surplus at an amount equal to the Bank's allocated portion of the aggregate surplus limitation.

On December 28, 2015, the Reserve Banks reduced the aggregate surplus to the \$10 billion limit in the FAST Act by remitting \$19.3 billion to the Treasury. The Bank's share of this remittance was \$1,066 million, which is reported as a component of "Earnings remittances to the Treasury: Required by the Federal Reserve Act, as amended by

the FAST Act" in the Bank's Statements of Income and Comprehensive Income, and in the table above.

#### **13. SUBSEQUENT EVENTS**

The FAST Act includes provisions that, effective on January 1, 2016, will change the rate of dividends paid to member banks by the Bank. See Note 31 for additional information on these FAST Act provisions.

There were no other subsequent events that require adjustments to or disclosures in the financial statements as of December 31, 2015. Subsequent events were evaluated through March 8, 2016, which is the date that the financial statements were available to be issued.



Federal Reserve Bank of Philadelphia

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