

# The Art and Science of Risk Management

2009 Federal Reserve Bank of Chicago Annual Report

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LETTER FROM  
**The President**



At this time last year, we found ourselves in the midst of likely the worst recession since The Great Depression. Today we continue to make very positive steps toward recovery. In fact, in a technical sense, the recession has ended. Across the board, many broad indicators of activity are increasing, as can be expected

in the early stages of a recovery.

However, unemployment remains high, and many businesses are still producing and selling much less than they did two years ago. The recovery will probably be slower than many of us would like, and for some, particularly those looking for work, it might seem like there's no recovery under way at all.

Current economic conditions lend themselves to very accommodative monetary policy. The question challenging the Federal Reserve in the coming year and beyond will be judging the appropriate timing and pace for reducing the current accommodation. On one

hand, removing too much accommodation prematurely could choke off recovery. On the other hand, if the Fed leaves the current level of accommodation in place too long, inflationary pressures eventually will build. The Fed is preparing for these decisions by carefully monitoring business activity and remaining alert for signs of incipient inflation. As always, we'll make our decisions with confidence about the long-term potential of our economy.

On a personal note, I'd like to extend my appreciation to our staff for their hard work during a very challenging year. Their accomplishments are highlighted on pages 4 and 5. The Chicago Fed's achievements also speak well of the contributions of our directors in Chicago and Detroit. A special note of gratitude goes to Chicago Board Chairman John Canning as well as to Chicago and Detroit directors Roger Cregg, William Hartman, Michael Kubacki and Linda Likely, who completed their board service in 2009. Thanks also to Chicago director Mark Gaffney for his continuing commitment to the Federal Reserve, as he re-joined our Detroit board in 2010.

And finally, in the wake of the financial crisis, the essay in this year's annual report offers a thoughtful look at how "art" and "science" each have an important role to play in a healthy risk management process. I hope you find it informative.

Charles L. Evans  
President and Chief Executive Officer  
April 20, 2010

# Monetary Policy in 2009\*



The U.S. economy began 2009 in the midst of a serious recession. Real gross domestic product (GDP) fell sharply in the first half of the year, declining 3.7% on an annualized basis. However, by mid-year, the rapid decline in economic activity had moderated, and real GDP grew at an annual rate of 3.8% in the second half of 2009. As 2010 begins, the economy has entered the early stages of a recovery.

That said, there is still a long way to go to make up the more than 8.2 million jobs that were lost during this recession. Business and household caution, the need to repair balance sheets, and restrictive bank credit are likely to hold back consumer and business spending, leading to a more gradual recovery than what has been typical following previous recessions of this magnitude.

With elevated levels of resource slack holding down cost pressures, the Personal Consumption Expenditures price index ended the year 1.2% higher than in the fourth quarter of 2008. Core PCE inflation, which excludes volatile food and energy prices, was up 1.5% compared with the fourth quarter of 2008, down considerably from the 2% inflation rate at this time in 2008.

## THE ECONOMY

After falling for four consecutive quarters, real GDP increased at a 2.3% percent annual rate in the third quarter of 2009. Growth then accelerated to its strongest pace in more than six years, increasing at a 5.6% annual rate in the fourth quarter. Many firms that cut production and inventories very aggressively during the recession dialed back their inventory liquidation in the second half of the year, providing a boost to real GDP growth, and business spending on equipment and software began to increase.

Consumer spending also improved in the second half of 2009. In a positive sign, vehicle sales held up well even after the cash-for-clunkers program ended. In the housing market, conditions were more mixed. Housing starts stopped falling early in 2009 and leveled off as the year progressed. Sales of existing homes increased sharply through most of 2009—buoyed by homebuyer tax credits and sales of foreclosed homes—but fell markedly around the turn of the year. The overhang of unsold homes has been noticeably reduced, setting the stage for a gradual recovery in new residential construction.

Financial conditions improved considerably over the course of the year. Large firms were again able to borrow at reasonable spreads, both short-term in commercial paper markets and long-term

in corporate bond markets. However, the availability of bank credit remained a significant headwind for many small- and medium-sized companies. More generally, credit flows continue to be reduced because both borrowers and lenders are still dealing with losses from the recession, especially in real estate, and businesses and households are wary of taking on new debt burdens in an uncertain environment.

For many households and businesses it does not yet feel like much of a recovery. The unemployment rate increased to 10% by year's end, up from 4.7% prior to the recession. Many businesses slashed payrolls during the recession. Indeed, employment still fell substantially during the second half of 2009 even as output was increasing. However, toward the end of the year the pace of job loss moderated significantly. In early 2010, some positive job growth occurred and the unemployment rate edged lower. While hiring has remained slow apart from temporary workers, the transition to permanent hiring should ensue once clearer signs of sustained increases in demand are evident.

With such a depressed labor market, workers are seeing little growth in wages and salaries. Combined with tight credit and the substantial loss in household wealth during the recession, these factors mean that consumer spending will gain momentum only as people get back to work.

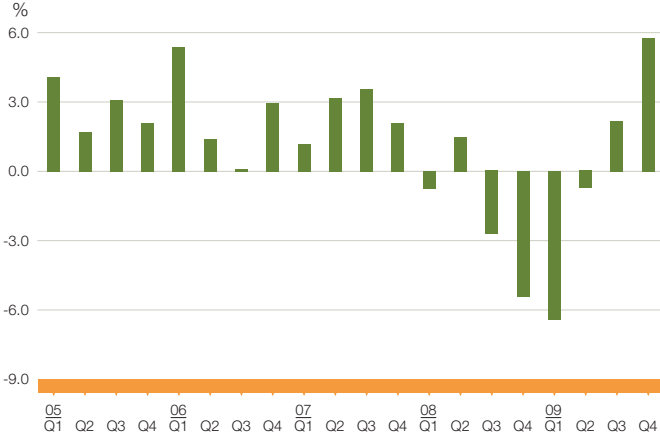
## MONETARY POLICY

The FOMC left unchanged its traditional policy instruments in 2009, leaving the target federal funds rate between zero and 0.25% and maintaining a spread of 25 basis points to the discount rate. With financial conditions continuing to improve in early 2010, the FOMC increased the spread to the discount rate to 50 basis points and returned the maximum maturity of discount loans to overnight.

As liquidity returned to the financial markets, usage of the Federal Reserve's nontraditional liquidity facilities declined sharply in 2009. In fact, many of these facilities were closed in February 2010. In contrast, the Fed embarked on a program of large-scale asset purchases designed to improve the functioning of long-term credit markets, consisting of about \$175 billion in Agency debt and \$1.25 trillion in Agency mortgage-backed securities (MBS), as well as \$300 billion in longer-term Treasury securities. Purchases of longer-term Treasury securities were concluded in October, while those for Agency debt and MBS ended in late March of 2010. The Federal Reserve's asset purchases in 2009 roughly balanced out the decline in the use of liquidity facilities so that the overall

### Economic Growth

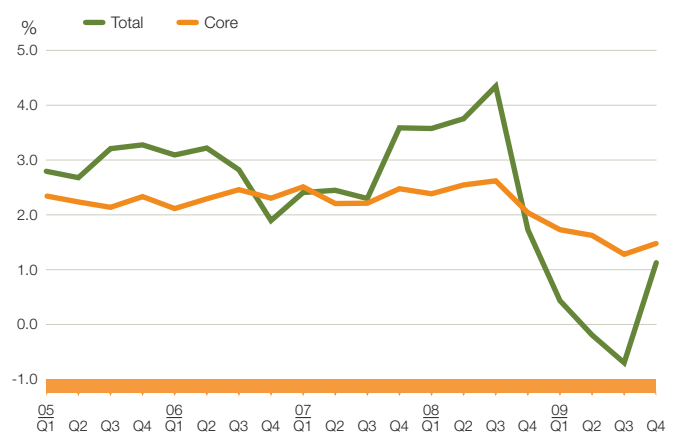
Annualized quarterly Real Gross Domestic Product growth



Real gross domestic product (GDP) fell sharply early in 2009, but in the second half recovered. On net, real GDP inched up 0.1% from the fourth quarter of 2008 to the fourth quarter of 2009.

### Inflation

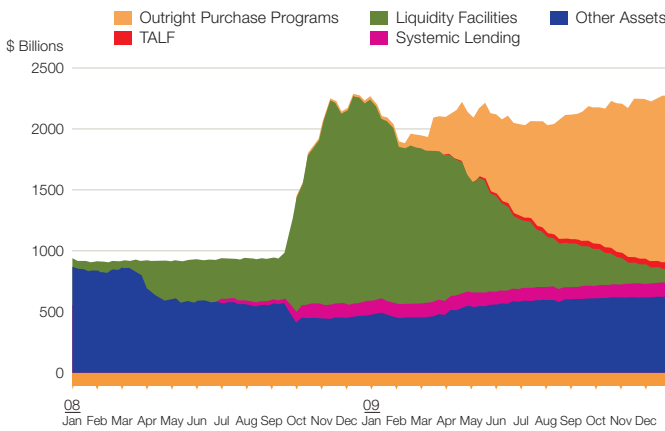
Year-Over-Year Personal Consumption Expenditures (PCE) Inflation



Inflation declined for much of 2009. The total and core Personal Consumption Expenditures (PCE) price indexes finished 2009 1.2% and 1.5% higher, respectively, than in the fourth quarter of 2008.

### Non-traditional Monetary Policy

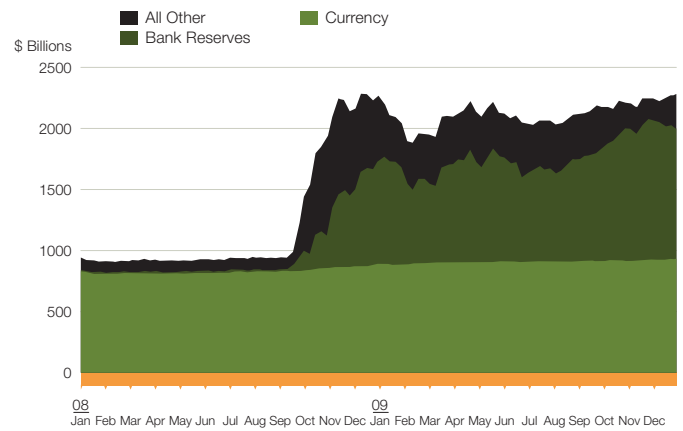
The Federal Reserve's assets



Large-scale asset purchases in 2009 roughly balanced out the decline in the use of liquidity facilities so that the overall size of the Federal Reserve's balance sheet, at \$2.3 trillion, was nearly unchanged from the end of the prior year.

### Non-traditional Monetary Policy

The Federal Reserve's liabilities



The monetary base (currency plus bank reserves) increased 22% in 2009, to roughly \$2.0 trillion. Most of the increase in the monetary base is currently sitting idly in bank reserves.

size of the balance sheet was nearly unchanged from the end of the prior year.

The rise in the monetary base that accompanied these policies has generated a risk of inflation in the future. This risk is not imminent. Substantial resource slack is exerting downward pressure on inflation, and most of the increase in the monetary base is currently sitting idly in bank reserves where it is not generating spending pressure. However, as the economy recovers, leaving the current policy in place for too long would eventually fuel inflationary pressures. Accordingly, looking ahead, the Fed will have to balance fostering the recovery that is underway with preventing a future build-up of inflationary pressures.

The size of the Fed's balance sheet could make it more difficult to begin to reduce accommodation when the time comes. The FOMC will address such concerns by using the new instrument of paying interest on excess reserves. When it is necessary to also drain reserves from the banking system, the Fed can turn to reverse repurchase agreements, a term deposit facility, and, if needed, sales of securities from its balance sheet.

*Source for all charts: Bureau of Economic Analysis, Federal Reserve Board of Governors H.4.1 Release.*

*\*This essay reflects information available as of April 20, 2010.*

# Highlights of 2009



*Chicago Fed staff members deepened their understanding of key economic and financial issues in 2009 to improve public policy and promote financial stability. They also anticipated and responded to rapidly changing developments in financial markets, payment systems, and the banking industry. In addition, staff members promoted the integrity, efficiency and accessibility of U.S. payment and settlement systems by developing advanced electronic payment methods.*



*Research and analysis conducted at the Chicago Fed in 2009 contributed to the deliberations of the members (above) of the Federal Open Market Committee, which formulates national monetary policy.*

## PROMOTING INFORMED PUBLIC POLICY AND FINANCIAL STABILITY

- Staff provided high-quality analysis of the financial crisis and regional economy to President Charles Evans and the Board of Directors in support of their policy-making role.

- Analysis included studies of the effect of large-scale asset purchases on long-term interest rates, the markets for credit card and dealer floor plan asset-backed securities, and differences in labor market dynamics during recessions and expansions.

- Specialized research relating to financial markets focused on financial market utilities and just-in-time liquidity.
- Longer-term research projects included analysis of markets for non-prime loans, community development financial institutions, and the relationship between output and inflation in modern empirical macroeconomic models.

## ENSURING SOUNDNESS OF THE BANKING SYSTEM

- Supervision of emerging problem banks and bank holding companies intensified in response to weakening conditions in the financial industry.
- This included more frequent examinations, expanded examinations scopes, and many more enforcement actions.
- Overall resources for the supervision function were enhanced and resources re-deployed to the most essential activities.
- Interim targeted exams were conducted at problem banks to assess and identify





A new Chicago Fed video is now available to be viewed online. The film features a variety of staff members describing the responsibilities of the Chicago Fed. It can be viewed online at the Chicago Fed's Web site at: [www.chicagofed.org/webpages/utilities/about\\_us/what\\_we\\_do.cfm](http://www.chicagofed.org/webpages/utilities/about_us/what_we_do.cfm)

deteriorating conditions sooner, and dedicated teams were created for problem institutions.

- The Seventh District successfully assumed responsibility for supervising two new large, complex holding companies—GMAC and Discover.
- Unprecedented levels of activity took place in discount window lending and collateral operations, with a 258% increase in collateral volume.

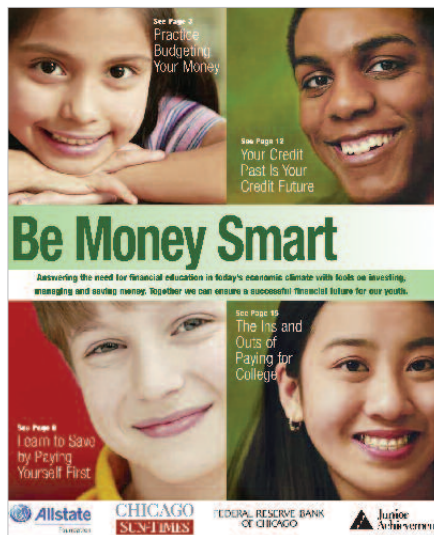
#### MAINTAINING A STRONG PAYMENTS SYSTEM

- The Federal Reserve System's Customer Relations and Support Office (CRSO), headquartered at the Chicago Fed, delivered on strategic and operational initiatives while achieving aggressive cost and revenue objectives. These included exceeding sales and electronic access revenue targets in a challenging business environment.
- The CRSO worked closely with national Product Offices to identify cross-business product opportunities and more effectively serve customers.

- Currency-processing staff maintained a strong control environment, improved efficiency levels, and met all performance measures.
- Check-processing staff sustained high levels of performance while transitioning Des Moines check operation in January to the Chicago Midway Office.
- Chicago paper check processing transitioned in September to the Federal Reserve Bank of Cleveland

#### FOSTERING PRODUCTIVE RELATIONSHIPS

- Bank staff collaborated with a broad range of organizations on neighborhood stabilization efforts, foreclosure prevention, and community development. This effort included hosting more than 30 events focused on foreclosure issues and carrying out a wide variety of other community outreach activities.
- The Bank continued building relationships that improve understanding of Chicago financial markets through participation in the activities of the Working Group on Financial Markets, the OTC Derivatives Regulators' Forum, and System workgroups.



The Chicago Fed in 2009 sponsored Money Smart Weeks in Indiana, Illinois, Iowa, Michigan and Wisconsin. All bring together a wide variety of partner groups to help consumers learn how to make informed decisions about their personal finances.

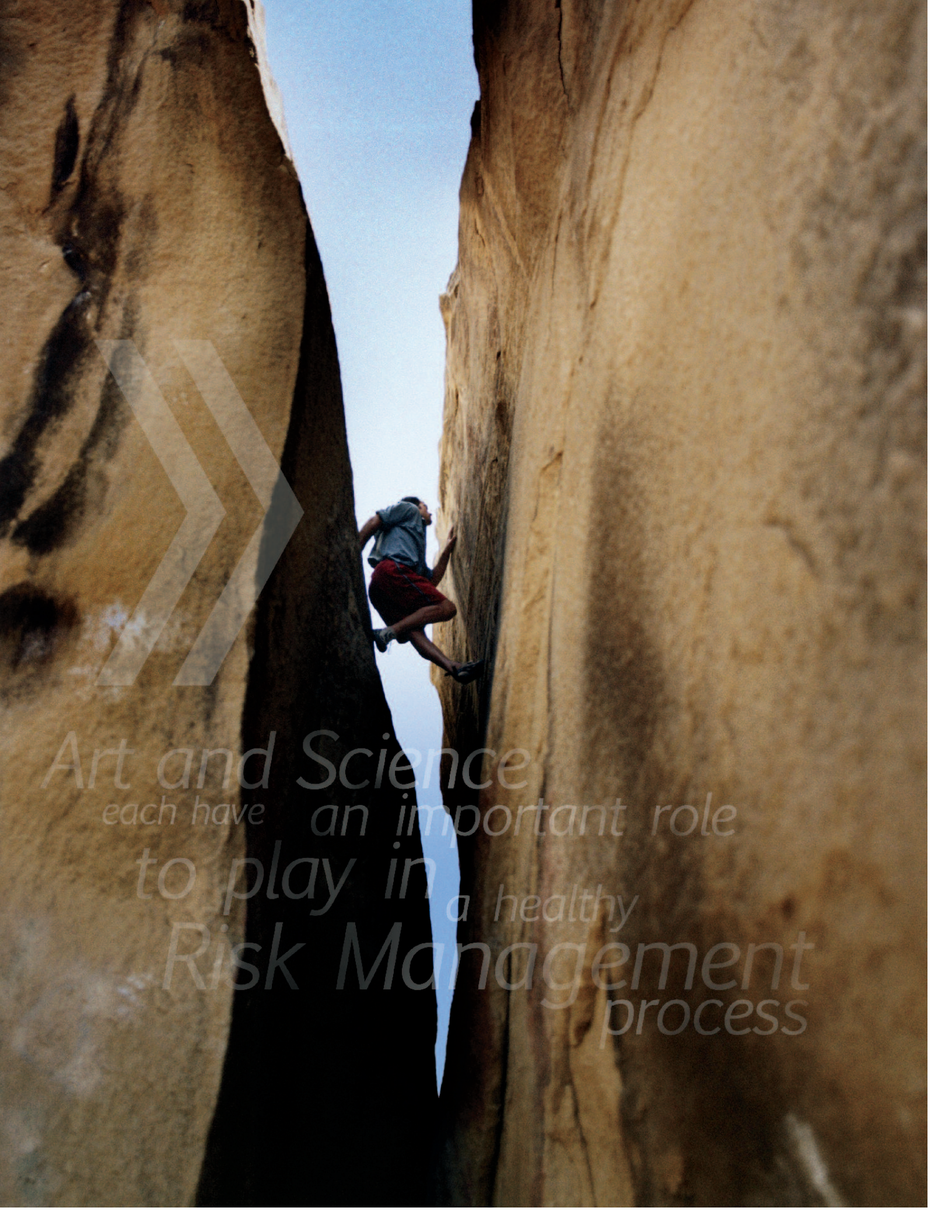
- The District was successful in partnering with others throughout the Federal Reserve and delivering on System-level responsibilities.



The Federal Reserve Bank of Chicago unveiled a redesigned Web site in 2009 that makes it easier to find information. The site is located at [www.chicagofed.org](http://www.chicagofed.org).

- Money Smart Week in all Seventh District states continued to bring together consumers with organizations and individuals who provide financial education. More than 1,800 partner organizations throughout the Midwest offered roughly 2,300 events and seminars to thousands of consumers.
- The Chicago Fed unveiled a redesigned Web site in 2009 to make it easier for visitors to find information. Check it out at [Chicagofed.org](http://Chicagofed.org)





*Art and Science*  
each have an important role  
to play in a healthy  
*Risk Management*  
process



# The Art and Science of Risk Management

By Carl Tannenbaum & Richard Rosen

*In what seemed like the blink of an eye, the Great Moderation gave way to the Great Recession. What some had considered the height of economic and financial performance descended into crisis. Practices and personages who were exalted just a few short years ago have retreated to discredit.*

*The financial crisis has prompted a re-evaluation of many views that had been widely held. To this end, scholars, investors, and policy makers have issued a series of “lessons learned” exposés that are intended as both mea culpas and roadmaps for reform.<sup>1</sup> Within them are updated views of how risk should be measured and managed by banks and their regulators.*



In this essay, we discuss the balance needed between statistical and intuitive perspectives of risk at financial firms, and why risk management at these firms was out of balance at the time of the recent crisis. The movement in risk management that began in the late 1980s, which stressed more technical methods, prompted a sea change in the skill sets of risk managers. The “artists,” who relied more on intuition to understand complicated risk landscapes, increasingly gave way to the “scientists,” who felt most at home with statistical models.

While the two camps are often seen to be in opposition, art and science each have an important role to play in a healthy risk management process. The models of the scientists can aggregate more data than individuals can. But, the limitations of technical

approaches place a premium on those who can see risks that aren’t apparent in the models (for example, the possibility of a housing correction that goes far beyond the bounds of recent experience). The science of these models should be balanced by good judgment.

## I. THE REVOLUTION IN RISK MANAGEMENT

**“It was the age of wisdom, it was the age of foolishness.”**

*Charles Dickens, A Tale of Two Cities*

People differ in their willingness to accept uncertainty. (Some people sky dive, while others are afraid to board an airplane.) Insurance and financial hedging strategies allow people to express their appetite for risk. Chicago has long been a leading center in both arenas; we are home to a number of the nation’s largest insurance concerns, and to a group of leading derivatives exchanges and clearinghouses.

<sup>1</sup>Leading “lessons learned” documents would include work from the Group of Thirty, the Senior Supervisors Group, and the IMF, among others.

## Securitization Reigns



During the last generation, the role of banks in many areas of finance has changed dramatically.

Traditionally, banks made loans and waited for borrowers to repay them. But beginning with home mortgages, and then other asset classes (including auto loans and credit card balances), banks began originating loans with the intent of selling them off. Intermediaries (often an investment bank) pooled these loans into bonds and sold them to investors. This activity, known as securitization (because of the securities which are the end product of the process), has become pervasive.

Often without knowing it, we are on both sides of securitizations. Loans provided to us are often pooled and sold, and our stakes in mutual funds, 401(k)s, and pension plans are often invested in asset-backed securities.

Securitization lowered costs to borrowers, improved liquidity, and offered opportunities for diversification that did not exist under the traditional lending model. It also produced market prices on an expanding series of assets, which increased the transparency surrounding value.

Yet securitizations became increasingly complex as underwriters created an expanding spectrum of risk-reward combinations. Issues became more opaque and harder to value. During the financial crisis, the models used to value securitized bonds were found to be seriously flawed. This led many to shy away from

owning these securities, causing the market for privately issued securitizations to virtually disappear.

### Growth of Securitization Markets

Outstanding asset-backed and mortgage-backed securities ('98-'09)

\$ Trillion



MBS data from *Inside Mortgage Finance*. CMBS data from Mortgage Bankers Association quarterly date book. ABS data from Securities Industry and Financial Markets Association.

Since the depth of the crisis at the end of 2008, securitization has been slow to re-emerge. Whatever its flaws, securitization has become an integral part of the American credit channel, and it is unlikely that banks could re-intermediate all of the lending that has migrated to the secondary markets through securitization. Reinvigorating secondary asset markets remains a major focus for policy makers.

Arguably, the willingness to take risk is an essential ingredient in the entrepreneurial and inventive spirits that expand our horizons and our standard of living. Markets and institutions that intermediate risk—transferring it from those with low tolerance for uncertainty to those willing to bear it—are important to a well-functioning economy.

Yet is also essential that those institutions manage the risk that they take on in a safe and sound manner. Their failure to do so causes damage to others and to the financial system.

To head off worst-case outcomes, financial companies typically establish a risk “appetite,” which dictates how much uncertainty they are willing to bear. Limits are set to enforce compliance, and regular analysis is undertaken to measure exposure against these tolerances.

Years ago, the management of credit risk (traditionally, the one form of risk most systematically addressed by banks) was largely confined to the evaluation of loan applications. The metric of choice

for expressing risk appetite was a ceiling on loan size. Relatively little work was done to analyze risk in the loan portfolio after the initial review of individual applications.

From these humble origins, the science of measuring risk has evolved dramatically during the past twenty years, especially at larger, more complex banks. In the early 1990s, large institutions started looking to traded securities markets to make inferences about asset dynamics. One important innovation that emerged from this investigation was the calculation of correlations among assets. This laid the foundation for the review of portfolios, as opposed to individual holdings.

The importance of looking at things in this context is illustrated by the following example. Consider a portfolio with loans to two entities: a golf course operator and an umbrella manufacturer. Individually, each company faces some weather-related risk: sunny



climes favor the golf, while rain promotes umbrella sales. But taken together, their results should be unaffected by the forecast, unless an extreme event like a hurricane arrives to damage both. The risk of the two together is far less than that of the two considered separately.

Risk managers also started using market prices to make inferences about the risk characteristics of assets. For example, the trading patterns for bonds issued by a specific firm were employed to estimate default probabilities for loans made to that firm. The next step in this process was to infer that firms in the same industry or risk class would have similar default probabilities. This step-wise progression allowed analysts to estimate prices for products that were not traded.

This trend coincided with the exponential growth of securitization and derivatives markets. These markets have increased transparency around a broad range of asset classes (See box on page 8). Advances in financial theory and computer speeds, combined with the expanding availability of price information from securitization markets, provided the power behind new approaches to risk management. Entire financial institutions could now be thought of as portfolios, and modern portfolio theory provided a framework to analyze them statistically.

Among the quantitative tools used by modern risk managers are Value at Risk (VaR) (see story on page 10) and Economic Capital (EC). One reason firms like these metrics is that they express the risk of portfolios with a single number, which can be used both as a measure of exposure and as the basis for limit-setting.

In their basic formulations, VaR and EC exercises often rest on two key assumptions which need to be understood (see box on page 10). First, the future is assumed to resemble the recent past. And second, some versions assume a normal distribution for past and future outcomes.

These assumptions lead the signals sent by VaR and EC models to be very procyclical. When times are good, the history used for risk analysis includes few bad days. The implied distribution of possible future outcomes consequently looks benign. As good times extend, the estimated risk presented by a portfolio declines, allowing firms to hold larger positions without requiring larger risk limits.

The movement in risk management toward more analytical methods altered the desired skill sets of risk managers. More and more, the “art” of using informed intuition to navigate complicated risk landscapes was giving way to the “science” of statistical models.

The inherent conflict between risk controls and profits may have accelerated this transition. Bankers were largely rewarded for the profits they produced and often pushed back against risk limits. The pressure to grow earnings and keep pace with competitors may have led the top management at some firms to embrace the view of risk that was most benign. And, in some cases, the more scientific approaches won support by producing the desired outcome.

The careful balance of risk and reward, which is so important to corporate governance, became skewed. Some of this distortion

may have been a natural consequence of behavioral and psychological factors known to affect financial decisions (see story on page 12). The behavioral economics and finance literature suggests that when making decisions, people tend to underestimate risk and ignore signals of danger during boom periods.

The steady increase in asset prices during the beginning of the last decade led many firms to become optimistic at the same time. Many organizations used similar models, which gave similar signals and led to similar positioning. Ratings agencies, using analysis akin to that used by financial firms, saw modest risk in the environment and provided high ratings to complicated securities. The lack of diversity among models meant that large groups of investors entered into and exited from markets at the same time, a factor that would become problematic during the financial crisis.

Reflecting the ethos of the day, Charles Prince, the Chairman of Citigroup, observed in late 2007 that “as long as the music is playing, you’ve got to get up and dance.” But then the music stopped.

## II. THE FAILURE

**“The past does not repeat itself, but it rhymes.”**

*Mark Twain*

It’s difficult to identify precisely when the tide turned. Progressively, markets reevaluated their opinion of house prices, the mortgages which financed them, and the institutions that had exposure to the housing markets.

House prices fell precipitously, catching many models and economists by surprise. Defaults on mortgage loans skyrocketed. Steep asset price declines started to invade previously benign distributions of results, increasing VaR estimates. Models were pushing firms to sell, and ratings agencies rushed to reevaluate. (During a particularly difficult day, \$60 billion in mortgage-backed securities was downgraded from AAA to junk status.)

Problems in the mortgage-backed securities markets spread to other markets, in part because some investors needed to raise liquidity and capital to support their now riskier portfolios. The negative cycle was reinforced, and prices became more difficult to ascertain amid the absence of two-way bidding. The expected diversification within portfolios dissolved as correlations between assets increased significantly. The hurricane in our earlier example had arrived.

Liquidity left markets and institutions. Technical and behavioral factors turned dark and fed off one another. The absence of adequate information flow and concerns about transparency fed a rising risk aversion that created severe market dislocations. Investors fled to Treasury securities and banks began to leave substantial excess reserves at the central bank. Many avoided risk at any price.

Capital flows within the economy became seriously impaired. While the Federal Reserve moved decisively to add liquidity to the financial markets, credit availability in many sectors remains a fraction

## Is Value at Risk Adding Value?



Risk is a complicated topic with many dimensions. The market risk of a holding (the possibility that its price might decline) can be broken down into myriad subcomponents.

In the late 1980s, the concept of value at risk (VaR) emerged, promising to simplify things. On the surface, VaR is deceptively straightforward. Taking the example of a common stock, the daily price changes in that stock for some past length of time are assembled into a distribution of outcomes. VaR is the draw from this distribution at a certain confidence interval.

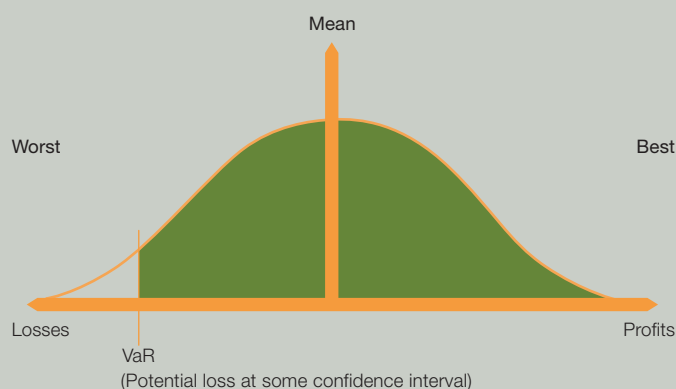
As an illustration, the value at risk for a 99% confidence interval would represent the loss the position would have endured on the 99th worst day out of the last 100 days. (Or if a 1,000 day history was used, the VaR would be taken from the 990th worst day.)

VaR promised to condense the risk of a position or portfolio into a single number. It had other attractions: it promised to put a wide range of holdings on a similar analytical footing, it showed higher levels of risk when markets became more volatile, and it was rooted in actual data as opposed to hypothetical scenarios.

Unfortunately, VaR was sometimes implemented using simplifying assumptions that proved problematic. Time periods for the analysis were too short to capture severe corrections. Adjustments for the non-normalcy of distributions proved incapable of capturing the magnitude of risk that firms might endure. And many of the products that proved to be most volatile were so new that the history needed to assemble a robust VaR simply did not exist.

When positions go on a losing streak, observations invade the left-hand side of the distribution, raising the VaR. If these are sufficiently significant, holdings can exceed their VaR limit, leading to liquidation. The selling mania adds to the losing streak, reinforcing the negativity.

Distribution of Possible Daily Outcomes  
(Ranked from Worst to Best)



In the aftermath of the recent crisis, VaR regimes are being augmented to make sure they factor in the possibility of extreme events (so-called “black swans”), and, in addition, old-fashioned notional limit regimes are making a comeback. Value at risk will likely remain an important tool for risk managers, but only as part of a larger tool kit.

of its former levels. Some think that this represents a potential damper on economic performance.

### III. TIME FOR REPAIR

**“We must as second best...take the least of the evils.”**

*Aristotle*

The Federal Reserve, along with other policymakers, took bold steps to limit the damage and initiate recovery. This has provided some space and time for reflection.

When conditions go beyond past norms, we can use the experience as an opportunity to learn, revisit accepted dogma, and contribute

to change. To this end, financial institutions and their supervisors are pressing on the following themes in the hope of putting risk management on sounder footing.

- Not enough attention was paid to worst-case scenarios of risk management models. Tail events occur much more frequently than normal distributions would suggest,<sup>2</sup> and attempts to make adjustments for these “fat tails” were poorly formulated and often ill-received by bankers anxious to take full advantage of rising markets. Evaluating positions under extreme events can provide additional perspective and a potentially more stable basis for assessing exposure.

<sup>2</sup>As an example, if stock returns were normally distributed, the market’s performance during the month of the October 1987 crash would be expected to occur only once in 5,800 years. In fact, it was only the third-worst month since 1929.





The challenge here is how to choose appropriate tail scenarios. How bad does the worst case need to be? Can this be done without igniting conflicts between risk managers and those whose risk they manage?

- The use of an immediate past history to project the future proved to be myopic. Risk analysis needs to be more forward looking; spring 2009's Supervisory Capital Adequacy Program (SCAP, or stress test) took a step in this direction by asking banks to review their positions against an adverse future scenario. Firms are now performing these exercises more regularly.
- Insufficient attention was paid to risks that are less easily measured. Liquidity and model risk (to name two) played key roles in the crisis, yet these were not covered terribly well by existing risk management systems. Financial companies drove to achieve statistical parity with competitors in measuring credit and market risk, but paid relatively little attention to the residual vulnerabilities that models left behind. And only a few brave firms risked short-run disadvantage by adopting a stricter regime than their competitors.

During the past ten years, international capital rules have incorporated VaR and EC approaches into new standards, adding to the momentum behind them. As the shortcomings of these



## Behavioral Explanations for Risk Management Weaknesses



A good deal of attention has been paid to the role of models during the recent crisis. Yet human nature may have played an equally important role in reinforcing the extremes that we have witnessed.

The behavioral economics and finance literature suggests that investors tend to be overly optimistic and overconfident.<sup>3</sup> In the risk management context, this can mean that risk managers believe that their models work better than they really do. In addition, something called confirmation bias leads individuals to put a bigger weight on news that confirms what they believe relative to news that challenges their beliefs. Confirmation bias may have made it less likely that risk managers would react to small problems with their models.

Another factor is that risk managers, like many of us, are typically very busy. They have to make decisions about how to allocate their time. If they believe (perhaps because of overconfidence) that they understand a particular class of securities, they may not carefully examine each new security in that class that is acquired. This “rational inattention” may have led to a problem

for banks as the bonds issued as part of securitizations gradually became more complicated. Risk managers, because they were busy, may have been focused on other issues.

Added to this, decision makers at banks are investing other people’s money. This agency problem can lead them to make decisions that increase the risk at a bank. For example, shareholders may want banks to yield a certain return on equity each quarter. One way to increase reported return is to increase risk, and many of the complicated securities offer a higher yield (in exchange for higher risk). If shareholders react more to return than to risk, banks may have an incentive to reach for yield by investing in risky securities.

When a crisis comes, behavioral factors can lead to a quick shift from an appetite for risk to an aversion to risk. With their comfort violated, rationally inattentive investors without time to examine their securities carefully opt to “just say no.” This can lead to a flight to safe havens such as Treasury securities and remove liquidity from markets just when it is most needed.

Finding prescriptions to correct behavioral problems is exceedingly difficult. But it is still important for market participants to be aware of these problems.

approaches have become apparent, the Bank for International Settlements (BIS) has advanced new ideas for the measurement of risk and capital that attempt to address perceived weaknesses in past practice. These will garner a good deal of discussion during the coming year.

- Unseen linkages between firms and markets must become more transparent, and models must reflect them. Prices tend to become more correlated during high stress periods. Models must also attempt to tackle the messy business of capturing behavioral accelerants that characterize market cycles.

There were gaps in oversight of key financial players, which made these links across firms and markets more difficult to discern. Hence, the call for macroprudential supervision that would allow a broad line of sight across financial companies.

- Corporate governance must be reinforced. From boards of directors that did not adequately comprehend the activities within their firms, to corporate officers with misaligned incentives, to shareholders who should have been asking tougher questions, many of

those who might have been in a position to serve as checks did not do so. As part of this, managers should consider that items that are off the balance sheet should remain within risk management’s field of vision.

Related to this, corporate governance and supervisory approaches must take into account the natural tendencies that lead people to overlook potential problems, especially during good times. This can affect both the decision to take on risk and the management of that risk.

Skeptics will certainly note that remedies implemented today cannot guarantee that we’ll never encounter such challenges again. The next crisis will most assuredly not resemble the one just past, and institutional memories will fade as the markets and the economy recover.

Nonetheless, the exercise of correcting revealed weaknesses is one worth undertaking. Risk managers may not have taken the positions that ultimately harmed financial firms, but their models and approaches failed to reveal excesses before it was too late.

<sup>3</sup>This is discussed more fully in Rosen, Richard J. (2009), “Too Much Right Can Make a Wrong: Setting the Stage for the Financial Crisis,” Federal Reserve Bank of Chicago working paper 2009-18.





#### IV. CONCLUSION

Risk management must combine art and science. While strongly informed by math and models, effective risk management ultimately relies on good judgment. Firms and their supervisors should seek to stress the importance of combining these perspectives. The past two years represent one of the most challenging intervals in our

nation's financial history. Policymakers, regulators, and market participants have been left with some difficult questions to answer. At the Federal Reserve Bank of Chicago, we are committed to keeping the public informed of developments through our research, presentations, and publications as we work to reach "the new normal."



#### **About the Authors\***

*Carl Tannenbaum (left) is a Vice President and Head of the Risk Specialist Division in Bank Supervision. His group is charged with following markets and industries to identify issues that may be problematic for banks and the financial system. Carl joined the Federal Reserve Bank of Chicago in 2008 after almost 25 years with LaSalle Bank/ABN AMRO, where he had various roles in risk management and served as the organization's chief economist.*

*Richard Rosen (right) is an Economic Advisor and Senior Economist in the Economic Research Department. His research focuses on several areas including the role of financial intermediaries. Richard joined the Federal Reserve Bank of Chicago in 2003. Before that he taught at Indiana University and the University of Pennsylvania and worked at the Board of Governors of the Federal Reserve System.*

*\*The authors would like to thank David Marshall and Dan Sullivan of the Federal Reserve Bank of Chicago for their ideas and their editorial comments.*







# Board of Directors

## FEDERAL RESERVE BANK OF CHICAGO

### CHAIRMAN

**JOHN A. CANNING, JR.**

Chairman  
Madison Dearborn  
Partners, LLC  
Chicago, Illinois

### DEPUTY CHAIRMAN

**WILLIAM C. FOOTE**

Chairman and  
Chief Executive Officer  
USG Corporation  
Chicago, Illinois

### ANTHONY K. ANDERSON

Vice Chair and  
Midwest Managing Partner  
Ernst & Young  
Chicago, Illinois

### MARK T. GAFFNEY

President  
Michigan AFL-CIO  
Lansing, Michigan

### MARK C. HEWITT

President and  
Chief Executive Officer  
Clear Lake Bank &  
Trust Company  
Clear Lake, Iowa

### MICHAEL L. KUBACKI

Chairman, President and  
Chief Executive Officer  
Lake City Bank and  
Lakeland Financial  
Corporation  
Warsaw, Indiana

### ANN D. MURTLow

President and  
Chief Executive Officer  
Indianapolis Power  
and Light Company  
Indianapolis, Indiana  
Vice President  
AES Corporation

### FREDERICK H. WADDELL

Chairman, President and  
Chief Executive Officer  
Northern Trust Corporation  
and The Northern Trust  
Company  
Chicago, Illinois

### THOMAS J. WILSON

Chairman, President and  
Chief Executive Officer  
The Allstate Corporation  
Northbrook, Illinois



### Three new directors joined the Chicago Board in 2010:

**Jeffrey Joerres** (left), Chairman and Chief Executive Officer of Manpower Inc. in Milwaukee, Wisconsin, replaced **John Canning**. **Terry Mazany** (middle), President and Chief Executive Officer of The Chicago Community Trust in Chicago, Illinois, replaced **Mark Gaffney**. **Stephen Goodenow** (right), President and Chief Executive Officer of Bank Midwest in Spirit Lake, Iowa, replaced **Michael Kubacki**.





# Board of Directors

## DETROIT BRANCH

### CHAIRMAN

#### TIMOTHY M. MANGANELLO

Chairman and  
Chief Executive Officer  
BorgWarner, Inc.  
Auburn Hills, Michigan

#### CARL T. CAMDEN

President and  
Chief Executive Officer  
Kelly Services, Inc.  
Troy, Michigan

#### ROGER A. CREGG

Executive Vice President  
and Chief Financial Officer  
Pulte Homes, Inc.  
Bloomfield Hills, Michigan

#### WILLIAM R. HARTMAN

Retired Chairman,  
President and  
Chief Executive Officer  
Citizens Republic Bancorp  
Flint, Michigan

#### LINDA S. LIKELY

Director of Housing and  
Community Development  
Kent County Community  
Development Department  
and Housing Commission  
Grand Rapids, Michigan

#### MICHAEL M. MAGEE, JR.

President and  
Chief Executive Officer  
Independent Bank  
Corporation  
Ionia, Michigan

#### BRIAN C. WALKER

President and  
Chief Executive Officer  
Herman Miller, Inc.  
Zeeland, Michigan



### Three new directors joined the Detroit Branch Board in 2010:

**Lou Anna Simon** (left), President of Michigan State University in East Lansing, Michigan, replaced **Linda Likely**. **Sheilah Clay** (middle), President and Chief Executive Officer of the Neighborhood Service Organization in Detroit, Michigan, replaced **William Hartman**. **Mark Gaffney** (right), President of the Michigan AFL-CIO in Lansing, Michigan, replaced **Roger Cregg**.

# Management Committee



*The Chicago Fed Management Committee with Federal Reserve Chairman Ben Bernanke. From left to right: Valerie Van Meter, Barbara Benson, Margaret Koenigs, Daniel Sullivan, Gordon Werkema, Ben Bernanke, Charles Evans, David Marshall, William Barouski, Robert Wiley, Elizabeth Knospe and Catharine Lemieux.*

**Charles L. Evans**  
President and  
Chief Executive Officer

**Gordon Werkema**  
First Vice President and  
Chief Operating Officer

**William A. Barouski**  
Executive Vice President  
Customer Relations and  
Support Office (CRSO) and  
Technology Group

**Barbara D. Benson**  
Senior Vice President  
People, Strategy, and Finance

**Elizabeth A. Knospe**  
Senior Vice President and  
General Counsel  
Legal, Board of Directors,  
Enterprise Risk Management,  
Business Continuity, and  
Law Enforcement

**Margaret K. Koenigs**  
Senior Vice President and  
General Auditor  
Internal Audit

**Catharine Lemieux**  
Senior Vice President  
Supervision and Regulation

**David A. Marshall**  
Senior Vice President  
Financial Markets Group

**Daniel G. Sullivan**  
Senior Vice President and  
Director of Research  
Economic Research  
and Programs

**Valerie J. Van Meter**  
Senior Vice President and  
EEO Officer  
Central Bank Services, Corporate  
Accounting, and Procurement

**Robert G. Wiley**  
Senior Vice President and  
Branch Manager  
District Operations, Administrative  
Services, and Detroit Branch



# Executive Officers

## **Charles L. Evans**

President and  
Chief Executive Officer

## **Gordon Werkema**

First Vice President and  
Chief Operating Officer

## **CENTRAL BANK SERVICES**

### **Valerie J. Van Meter**

Senior Vice President and  
EEO Officer

### **Jerome E. Julian**

Vice President

## **ECONOMIC RESEARCH AND PROGRAMS**

### **Daniel G. Sullivan**

Senior Vice President and  
Director of Research

### **Spencer D. Krane**

Senior Vice President

### Regional Economics

#### **William A. Testa**

Economic Advisor and  
Vice President

### Banking and Financial Studies

#### **Douglas D. Evanoff**

Economic Advisor and  
Vice President

### Macroeconomic Policy Research

#### **Jonas D. Fisher**

Economic Advisor and  
Vice President

### Microeconomic Policy Research

#### **Daniel R. Aaronson**

Economic Advisor and  
Vice President

### Consumer and Community Affairs

#### **Alicia Williams**

Vice President

### Public Affairs

#### **G. Douglas Tillett**

Vice President

## **FINANCIAL MARKETS GROUP**

### **David A. Marshall**

Senior Vice President

### **Ed Nosal**

Vice President

### **Anna Paulson**

Vice President

### **Richard D. Porter**

Vice President

## **SUPERVISION AND REGULATION**

### **Catharine Lemieux**

Senior Vice President

### Community Bank

#### **Mark H. Kawa**

Vice President

### Large Bank

#### **Steven M. Durfey**

Vice President

### Irwin

#### **A. Raymond Bacon**

Vice President

### GMAC

#### **James Nelson**

Vice President

### Risk Specialists

#### **Carl R. Tannenbaum**

Vice President

### Regional and Foreign Group/ Technology

#### **Douglas J. Kasl**

Vice President

### Workforce Practices/Operations

#### **Pamela S. Rieger**

Vice President

## **CUSTOMER RELATIONS AND SUPPORT OFFICE (CRSO)**

### **Gordon Werkema**

Product Director

### **William A. Barouski**

Executive Vice President and  
Product Manager

### Electronic Access

#### **Ellen J. Bromagen**

Senior Vice President

### **Todd Aadland**

Vice President

### National Sales and Marketing

#### **Sean Rodriguez**

Senior Vice President

### **Shonda Clay**

Vice President and  
Regional Sales Director

### **William J. Devine**

Vice President

### **Michael J. Hoppe**

Vice President and  
National Account Manager

### **Laura J. Hughes**

Vice President

### **Steven E. Jung**

Vice President

## **DISTRICT OPERATIONS AND DETROIT BRANCH**

### **Robert G. Wiley**

Senior Vice President and  
Branch Manager

### District Cash

#### **Donna M. Dziak**

Vice President

### **Mary H. Sherburne**

Vice President, Chicago Cash

### District Check

#### **Kimberly A. Clark**

Vice President

## **CORPORATE ACCOUNTING, PROCUREMENT, AND DISTRICT ADMINISTRATIVE SERVICES**

### **Valerie J. Van Meter**

Senior Vice President and  
EEO Officer

### **Jeffrey Marcus**

Vice President and  
Corporate Controller

## **PEOPLE, STRATEGY, AND FINANCE**

### **Barbara D. Benson**

Senior Vice President

### **Jeffrey S. Anderson**

Vice President

## **INFORMATION TECHNOLOGY**

### **William A. Barouski**

Executive Vice President

### **Daniel F. Reimann**

Vice President

## **LEGAL, BOARD OF DIRECTORS, ENTERPRISE RISK MANAGEMENT, BUSINESS CONTINUITY, AND LAW ENFORCEMENT**

### **Elizabeth A. Knospe**

Senior Vice President and  
General Counsel

### **Katherine Hilton Schrepfer**

Vice President, Associate General  
Counsel, Ethics Officer and District  
Board Secretary

### **Yurii Skorin**

Vice President and  
Associate General Counsel

### **Anna M. Voytovich**

Vice President and  
Associate General Counsel

## **INTERNAL AUDIT**

### **Margaret K. Koenigs**

Senior Vice President and  
General Auditor

FEDERAL RESERVE BANK OF CHICAGO  
**Advisory Council**



*From left to right: Donald Snider, G. Curtis Lansbery, John Howard, William Beckett, Siva Yam, John Hardin, Jr., Jeffrey Armstrong, Joseph Massa, Jack Evans, David Newby, Cathy McClelland, Gary Sipiorski and David Terrell. Not pictured are Michael Carrigan, Joe Crookham, Dennis Gannon, Clarence Nixon, Jr., and Ken Zeller.*

**SEVENTH DISTRICT  
 ADVISORY COUNCIL ON  
 AGRICULTURE, SMALL BUSINESS  
 AND LABOR**

**Illinois**

**Michael T. Carrigan**

President  
 AFL-CIO of Illinois  
 Springfield

**Dennis Gannon**

President  
 Chicago Federation of Labor, AFL-CIO  
 Chicago

**John L. Howard**

Senior VP & General Counsel  
 W.W. Grainger, Inc.  
 Lake Forest

**G. Curtis Lansbery**

President  
 North American Tool Corp.  
 South Beloit

**Siva Yam**

President  
 United States of America-China  
 Chamber of Commerce  
 Chicago

**Indiana**

**John D. Hardin, Jr.**

Owner  
 Hardin Farms  
 Danville

**David Terrell**

Executive Director  
 Indiana Office of Community and  
 Rural Affairs  
 Indianapolis

**Ken Zeller**

President  
 Indiana State AFL-CIO  
 Indianapolis

**Iowa**

**Joe Crookham**

President & Principal Owner  
 Musco Corporation and Mahaska  
 Communication Group  
 Oskaloosa

**Jack B. Evans**

President  
 The Hall-Perrine Foundation  
 Cedar Rapids

**Joseph R. Massa**

General Manager  
 Riverside Casino and Golf Resort  
 Riverside

**Michigan**

**Jeffrey D. Armstrong**

Dean and Professor of College of  
 Agriculture and Natural Resources  
 Michigan State University  
 East Lansing

**Cathy McClelland**

President & CEO  
 McClelland & Associates  
 Southfield

**Clarence Nixon, Jr.**

President & CEO  
 CNC Group, LLC  
 Farmington Hills

**Donald Snider**

President & CEO  
 Walden Foods  
 Detroit

**Wisconsin**

**William P. Beckett**

President & CEO  
 Chrysalis Packaging & Assembly  
 Corporation (CHRYSPAC)  
 Milwaukee

**David Newby**

President  
 Wisconsin State AFL-CIO  
 Milwaukee

**Gary Sipiorski**

Dairy Development Manager  
 Vita Plus Corporation  
 Madison



# Executive Changes

## DIRECTORS

Members of the Federal Reserve Bank of Chicago's boards of directors are selected to represent a cross section of the Seventh District economy, including consumers, industry, agriculture, the service sector, labor and banks of various sizes.

The Chicago board consists of nine members. Seventh District member banks elect three bankers and three non-bankers. The Board of Governors appoints three additional non-bankers and designates the Reserve Bank chair and deputy chair from among its three appointees.

The Detroit Branch has a seven-member board of directors. The Board of Governors appoints three non-bankers, and the Chicago Reserve Bank board appoints four additional directors. The Chicago board designates one of the Board of Governors appointees as chair of the Detroit Board. Reserve Bank and Branch directors may serve three-year terms, with a maximum of two full terms.

Director appointments and elections at the Chicago Reserve Bank and its Detroit Branch effective in 2009 were:

**John A. Canning, Jr.** was re-appointed to a one-year term as a Chicago director and as Chicago board chairman.

**William C. Foote** was re-appointed to a one-year term as Chicago board deputy chairman.

**Frederick H. Waddell** was elected to a three-year term as a Chicago director.

**Anthony K. Anderson** was re-elected to a three-year term as a Chicago director.

**Brian C. Walker** was appointed to a three-year term as a Detroit Branch director.

**Roger A. Cregg** was re-appointed to a one-year term as a Detroit Branch director.

**Timothy M. Manganello** was re-appointed to a three-year term as a Detroit Branch director and re-appointed to a one-year term as Detroit Branch board chairman.

At the end of 2009, the following appointments and elections for 2010 were announced:

**William C. Foote** was re-appointed to a three-year term as a Chicago director and was appointed to a one-year term as Chicago board chairman.

**Thomas J. Wilson** was appointed to a one-year term as Chicago board deputy chairman.

**Jeffrey A. Joerres** was appointed to a two-year term as a Chicago director.

**Terry Mazany** was elected to a three-year term as a Chicago director.

**Stephen J. Goodenow** was elected to a three-year term as a Chicago director.

**Lou Anna K. Simon** was appointed to a three-year term as a Detroit Branch director.

**Sheilah P. Clay** was appointed to a three-year term as a Detroit Branch director.

**Mark T. Gaffney** was appointed to a two-year term as a Detroit Branch director.

**Timothy M. Manganello** was re-appointed to a one-year term as Detroit Branch board chairman.

## FEDERAL ADVISORY COUNCIL

The Federal Advisory Council, which meets quarterly to discuss business and financial conditions with the Board of Governors in Washington, D.C., is composed of one person from each of the 12 Federal Reserve Districts. Each year the Chicago Reserve Bank's board of directors selects a representative to this group.

**William A. Downe**, President and Chief Executive Officer of BMO Financial Group, Chicago, Illinois, served as the representative in 2007, 2008 and 2009.

**David W. Nelms**, Chairman and Chief Executive Officer of Discover Financial Services, Riverwoods, Illinois, was selected to be the 2010 representative.

## EXECUTIVE CHANGES

The Bank's Board of Directors acted on the following promotions during 2009:

**Todd Aadland** to Vice President, Customer Relations and Support Office (CRSO).

**Anna Paulson** to Vice President, Financial Markets Group.

The Bank's Board of Directors acted on the following appointment during 2009:

**James Nelson** to Vice President, Supervision and Regulation.

# Operations Volumes

	DOLLAR AMOUNT		NUMBER OF ITEMS	
	2009	2008	2009	2008
<b>CHECK AND ELECTRONIC PAYMENTS</b>				
Checks, NOWs, & Share Drafts Processed	89.5 Billion	749.6 Billion	35.9 Million	490.5 Million
Legacy Images Captured	—	—	9.8 Million	38.4 Million
Check 21 Images Presented	—	—	713.7 Million	429.1 Million
Check 21 IRD* Printed	—	—	185.2 Million	412.9 Million
Check 21 Items Received	1.3 Trillion	1.7 Trillion	1.1 Billion	1.1 Billion
<b>CASH OPERATIONS</b>				
Currency Counted	41.5 Billion	45.7 Billion	3.0 Billion	3.1 Billion
Unfit Currency Destroyed	5.2 Billion	5.4 Billion	486.5 Million	512.6 Million
Coin Bags Paid and Received	1.8 Billion	1.9 Billion	3.6 Million	3.8 Million
Number of Notes Paid and Received	102.9 Billion	121.4 Billion	7.4 Billion	8.2 Billion
<b>LOANS TO DEPOSITORY INSTITUTIONS</b>				
Total Loans Made During Year	115.9 Billion	48.4 Billion	3.2 Thousand	1.4 Thousand

\*Image Replacement Documents



FINANCIAL REPORTS  
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## Auditor Independence

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In 2009, the Board of Governors engaged Deloitte & Touche LLP (D&T) for the audits of the individual and combined financial statements of the Reserve Banks and the consolidated financial statements of the limited liability companies (LLCs) that are associated with Federal Reserve actions to address the financial crisis and are consolidated in the financial statements of the Federal Reserve Bank of New York. Fees for D&T's services are estimated to be \$9.6 million, of which approximately \$2.0 million were for the audits of the LLCs<sup>1</sup>. To ensure auditor independence, the Board of Governors requires that D&T be independent in all matters relating to the audit. Specifically, D&T 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 Reserve Banks, or in any other way impairing its audit independence. In 2009, the Bank did not engage D&T for any non-audit services.

<sup>1</sup>Each LLC will reimburse the Board of Governors for the fees related to the audit of its financial statements from the entity's available net assets.



# Management's Report on Internal Control Over Financial Reporting

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April 21, 2010

To the Board of Directors

The management of the Federal Reserve Bank of Chicago ("FRBC") is responsible for the preparation and fair presentation of the Statement of Condition, Statements of Income and Comprehensive Income, and Statement of Changes in Capital as of December 31, 2009 (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 the Federal Reserve Banks ("Manual"), 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 Manual and include all disclosures necessary for such fair presentation.

The management of the FRBC is responsible for establishing and maintaining effective internal control over financial reporting as it relates to the Financial Statements. Such internal control is designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation of the Financial Statements in accordance with the Manual. Internal control contains self-monitoring mechanisms, including, but not limited to, divisions of responsibility and a code of conduct. Once identified, any material deficiencies in internal control are reported to management and appropriate corrective measures are implemented.

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 FRBC assessed its internal control over financial reporting reflected in the Financial Statements, based upon the criteria established in the "*Internal Control – Integrated Framework*" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, we believe that the FRBC maintained effective internal control over financial reporting as it relates to the Financial Statements.

Federal Reserve Bank of Chicago



by Charles L. Evans  
President



by Gordon Werkema  
First Vice President



by Jeffrey Marcus  
Vice President and Controller

# Independent Auditors' Report

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# Deloitte.

Deloitte & Touche LLP  
111 S. Wacker Drive  
Chicago, IL 60606-4301  
USA  
Tel: +1 312 486 1000  
Fax: +1 312 486 1486  
[www.deloitte.com](http://www.deloitte.com)

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

We have audited the accompanying statements of condition of the Federal Reserve Bank of Chicago (“FRB Chicago”) as of December 31, 2009 and 2008 and the related statements of income and comprehensive income, and changes in capital for the years then ended, which have been prepared in conformity with accounting principles established by the Board of Governors of the Federal Reserve System. We also have audited the internal control over financial reporting of FRB Chicago as of December 31, 2009, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. FRB Chicago’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 reporting, included in the accompanying Management’s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on FRB Chicago’s internal control over financial reporting based on our audits.

We conducted our audits in accordance with generally accepted auditing standards as established by the Auditing Standards Board (United States) and in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States). 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 audits 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 included obtaining 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

FRB Chicago’s internal control over financial reporting is a process designed by, or under the supervision of, FRB Chicago’s principal executive and principal financial officers, or persons performing similar functions, and effected by FRB Chicago’s board of directors, management, and other personnel 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. FRB Chicago’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 FRB Chicago; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with the accounting principles established by the Board of Governors of the Federal



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Reserve System, and that receipts and expenditures of FRB Chicago are being made only in accordance with authorizations of management and directors of FRB Chicago; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of FRB Chicago's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the 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 4 to the financial statements, FRB Chicago has prepared these financial statements in conformity with accounting principles established by the Board of Governors of the Federal Reserve System, as set forth in the *Financial Accounting Manual for Federal Reserve Banks*, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America. The effects on such financial statements of the differences between the accounting principles established by the Board of Governors of the Federal Reserve System and accounting principles generally accepted in the United States of America are also described in Note 4.

In our opinion, such financial statements present fairly, in all material respects, the financial position of FRB Chicago as of December 31, 2009 and 2008, and the results of its operations for the years then ended, on the basis of accounting described in Note 4. Also, in our opinion, FRB Chicago maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Deloitte & Touche LLP

April 21, 2010

# 2009 and 2008 Financial Statements

## Federal Reserve Bank of Chicago

### Statements of Condition

As of December 31, 2009 and December 31, 2008 (in millions)

2009

2008

#### Assets

Gold certificates	\$	911	\$	913
Special drawing rights certificates		424		212
Coin		301		194
Items in process of collection		30		111
Loans to depository institutions		2,393		6,922
System Open Market Account:				
Securities purchased under agreements to resell		–		7,060
Treasury securities, net		87,215		42,493
Government-sponsored enterprise debt securities, net		18,110		1,830
Federal agency and government-sponsored enterprise mortgage-backed securities, net		99,438		–
Investments denominated in foreign currencies		844		1,100
Central bank liquidity swaps		343		24,559
Other investments		1		–
Accrued interest receivable		1,365		552
Interdistrict settlement account		–		34,760
Bank premises and equipment, net		236		235
Other assets		22		22
<b>Total assets</b>	<b>\$</b>	<b>211,633</b>	<b>\$</b>	<b>120,963</b>

#### Liabilities and Capital

Federal Reserve notes outstanding, net	\$	73,201	\$	70,135
System Open Market Account:				
Securities sold under agreements to repurchase		8,411		7,798
Other liabilities		65		–
Deposits:				
Depository institutions		52,624		41,013
Other deposits		33		2
Deferred credit items		179		323
Accrued interest on Federal Reserve notes		204		127
Interdistrict settlement account		75,510		–
Interest due to depository institutions		4		6
Accrued benefit costs		143		127
Other liabilities		21		26
<b>Total liabilities</b>		<b>210,395</b>		<b>119,557</b>
<b>Capital paid-in</b>		<b>619</b>		<b>703</b>
Surplus (including accumulated other comprehensive loss of \$38 million and \$31 million at December 31, 2009 and 2008, respectively)		619		703
<b>Total capital</b>		<b>1,238</b>		<b>1,406</b>
<b>Total liabilities and capital</b>	<b>\$</b>	<b>211,633</b>	<b>\$</b>	<b>120,963</b>

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

# 2009 and 2008 Financial Statements

## Federal Reserve Bank of Chicago

### Statements of Income and Comprehensive Income

For the years ended December 31, 2009 and December 31, 2008 (in millions)

2009 2008

#### Interest income:

Loans to depository institutions	\$ 19	\$ 78
System Open Market Account:		
Securities purchased under agreements to resell	1	165
Treasury securities	2,381	2,212
Government-sponsored enterprise debt securities	217	9
Federal agency and government-sponsored enterprise mortgage-backed securities	2,180	–
Investments denominated in foreign currencies	10	28
Central bank liquidity swaps	78	161
<b>Total interest income</b>	<b>4,886</b>	<b>2,653</b>

#### Interest expense:

System Open Market Account:		
Securities sold under agreements to repurchase	10	64
Depository institution deposits	69	29
<b>Total interest expense</b>	<b>79</b>	<b>93</b>
<b>Net interest income</b>	<b>4,807</b>	<b>2,560</b>

#### Non-interest income (loss):

System Open Market Account:		
Treasury securities gains	–	322
Federal agency and government-sponsored enterprise mortgage-backed securities gains, net	101	–
Foreign currency gains (losses), net	(3)	62
Income from services	70	63
Compensation received for services provided	35	57
Reimbursable services to government agencies	5	5
Other income	18	75
<b>Total non-interest income</b>	<b>226</b>	<b>584</b>

#### Operating expenses:

Salaries and other benefits	161	150
Occupancy expense	23	25
Equipment expense	11	11
Compensation paid for services costs incurred	11	11
Assessments by the Board of Governors	60	61
Other expenses	77	94
<b>Total operating expenses</b>	<b>343</b>	<b>352</b>

#### Net income prior to distribution

4,690 2,792

#### Change in funded status of benefit plans

(7) (4)

#### Comprehensive income prior to distribution

**\$ 4,683** **\$ 2,788**

#### Distribution of Comprehensive Income:

Dividends paid to member banks	\$ 44	\$ 66
Transferred from surplus and change in accumulated other comprehensive loss	(84)	(111)
Payments to Treasury as interest on Federal Reserve notes	4,723	2,833

#### Total distribution

**\$ 4,683** **\$ 2,788**

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



# 2009 and 2008 Financial Statements

## Federal Reserve Bank of Chicago Statements of Changes in Capital

For the years ended December 31, 2009 and December 31, 2008 (in millions, except share data)

	Surplus				Total capital
	Capital paid-in	Net income retained	Accumulated other comprehensive income (loss)	Total surplus	
<b>Balance at January 1, 2008</b> (16,289,176 shares)	\$ 814	\$ 841	\$ (27)	\$ 814	\$ 1,628
Net change in capital stock redeemed (2,219,987 shares)	(111)	–	–	–	(111)
Transferred from surplus and change in accumulated other comprehensive loss	–	(107)	(4)	(111)	(111)
<b>Balance at December 31, 2008</b> (14,069,189 shares)	\$ 703	\$ 734	\$ (31)	\$ 703	\$ 1,406
Net change in capital stock redeemed (1,679,308 shares)	(84)	–	–	–	(84)
Transferred from surplus and change in accumulated other comprehensive loss	–	(77)	(7)	(84)	(84)
<b>Balance at December 31, 2009</b> (12,389,881 shares)	\$ 619	\$ 657	\$ (38)	\$ 619	\$ 1,238

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

# Federal Reserve Bank of Chicago Notes to Financial Statements

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## 1. Structure

The Federal Reserve Bank of Chicago (“Bank”) is part of the Federal Reserve System (“System”) and is one of the twelve 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 Seventh Federal Reserve District, which includes Iowa, and portions of Michigan, Illinois, Wisconsin and Indiana.

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 national 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 payments system, including large-dollar 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 individuals, partnerships, and corporations 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, and U.S. offices of foreign banking organizations. 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 annually 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, Federal agency and government-sponsored enterprise (“GSE”) debt securities, 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 executes these transactions at the direction of the FOMC and holds the resulting securities and agreements in a portfolio known as the System Open Market Account (“SOMA”). The FRBNY is authorized to lend the Treasury securities and Federal agency and GSE debt securities that are held in the SOMA.

In addition to authorizing and directing operations in the domestic securities market, the FOMC authorizes the FRBNY to execute operations in foreign markets in order to counter disorderly conditions in exchange markets or to meet other needs specified by the FOMC to carry out the System’s central bank responsibilities. Specifically, the FOMC authorizes and directs the FRBNY to hold balances of, and to execute spot and forward foreign exchange and securities contracts for, fourteen foreign currencies and to invest such foreign currency holdings, while maintaining adequate liquidity. The FRBNY is authorized and directed by the FOMC to maintain reciprocal currency arrangements (“FX swaps”) with two central banks and to “warehouse” foreign currencies for the Treasury and the Exchange

Stabilization Fund (“ESF”). The FRBNY is also authorized and directed by the FOMC to maintain U.S. dollar currency liquidity swap arrangements with fourteen central banks. The FOMC has also authorized the FRBNY to maintain foreign currency liquidity swap arrangements with four foreign central banks.

Although the Reserve Banks are separate legal entities, they collaborate in 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 and for which the costs were not reimbursed by the other Reserve Banks include national business development and customer support.

### 3. Financial Stability Activities

The Reserve Banks have implemented the following programs that support the liquidity of financial institutions and foster improved conditions in financial markets.

#### *Expanded Open Market Operations and Support for Mortgage Related-Securities*

The Single-Tranche Open Market Operation Program allows primary dealers to initiate a series of 28-day term repurchase transactions while pledging Treasury securities, Federal agency and GSE debt securities, and Federal agency and GSE MBS as collateral.

The Federal Agency and GSE Debt Securities and MBS Purchase Program provides support to the mortgage and housing markets and fosters improved conditions in financial markets. Under this program, the FRBNY purchases housing-related GSE debt securities and Federal agency and GSE MBS. Purchases of housing-related GSE debt securities began in November 2008 and purchases of Federal agency and GSE MBS began in January 2009. The FRBNY is authorized to purchase up to \$200 billion in fixed rate, non-callable GSE debt securities and up to \$1.25 trillion in fixed rate Federal agency and GSE MBS. The activities of both of these programs are allocated to the other Reserve Banks.

#### *Central Bank Liquidity Swaps*

The FOMC authorized and directed the FRBNY to establish central bank liquidity swap arrangements, which may be structured as either U.S. dollar liquidity or foreign currency liquidity swap arrangements.

U.S. dollar liquidity swap arrangements were authorized with fourteen foreign central banks to provide liquidity in U.S. dollars to overseas markets. Such arrangements were authorized with the following central banks: the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Canada, Danmarks Nationalbank, the Bank of England, the European Central Bank, the Bank of Japan, the Bank of Korea, the Banco de Mexico, the Reserve Bank of New Zealand, Norges Bank, the Monetary Authority of Singapore, the Sveriges Riksbank, and the Swiss National Bank. The maximum amount that could be drawn under these swap arrangements varied by central bank. The authorization for these swap arrangements expired on February 1, 2010.

Foreign currency liquidity swap arrangements provided the Reserve Banks with the capacity to offer foreign currency liquidity to U.S. depository institutions. Such arrangements were authorized with the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank. The maximum amount that could be drawn under the swap arrangements varied by central bank. The authorization for these swap arrangements expired on February 1, 2010.

#### *Lending to Depository Institutions*

The Term Auction Facility (“TAF”) promotes the efficient dissemination of liquidity by providing term funds to depository institutions. Under the TAF, Reserve Banks auction term funds to depository institutions against any collateral eligible to secure primary, secondary, and seasonal credit less a margin, which is a reduction in the assigned collateral value that is intended to provide the Banks additional credit protection. All depository institutions that are considered to be in generally sound financial condition by their Reserve Bank and



that are eligible to borrow under the primary credit program are eligible to participate in TAF auctions. All loans must be collateralized to the satisfaction of the Reserve Banks.

#### *Lending to Primary Dealers*

The Term Securities Lending Facility (“TSLF”) promoted liquidity in the financing markets for Treasury securities. Under the TSLF, the FRBNY could lend up to an aggregate amount of \$200 billion of Treasury securities held in the SOMA to primary dealers secured for a term of 28 days. Securities were lent to primary dealers through a competitive single-price auction and were collateralized, less a margin, by a pledge of other securities, including Treasury securities, municipal securities, Federal agency and GSE MBS, non-agency AAA/Aaa-rated private-label residential MBS, and asset-backed securities (“ABS”). The authorization for the TSLF expired on February 1, 2010.

The Term Securities Lending Facility Options Program (“TOP”) offered primary dealers, through a competitive single-price auction, to purchase an option to draw upon short-term, fixed-rate TSLF loans in exchange for eligible collateral. The program enhanced the effectiveness of the TSLF by ensuring additional liquidity during periods of heightened collateral market pressures, such as around quarter-end dates. The program was suspended effective with the maturity of the June 2009 TOP options and the program authorization expired on February 1, 2010.

#### *Other Lending Facilities*

The Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (“AMLF”) provided funding to depository institutions and bank holding companies to finance the purchase of eligible high-quality asset-backed commercial paper (“ABCP”) from money market mutual funds. The program assisted money market mutual funds that hold such paper to meet the demands for investor redemptions and to foster liquidity in the ABCP market and money markets more generally. The Federal Reserve Bank of Boston (“FRBB”) administered the AMLF and was authorized to extend these loans to eligible borrowers on behalf of the other Reserve Banks. All loans extended under the AMLF were non-recourse and were recorded as assets by the FRBB, and if the borrowing institution settles to a depository account in the Seventh Federal Reserve District, the funds were credited to the depository institution account and settled between the Reserve Banks through the interdistrict settlement account. The credit risk related to the AMLF was assumed by the FRBB. The authorization for the AMLF expired on February 1, 2010.

#### **4. Significant Accounting Policies**

Accounting principles for entities with the unique powers and responsibilities of a 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* (“Financial Accounting Manual” or “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 and the financial statements have been prepared in accordance with the FAM.

Limited differences exist between the accounting principles and practices in the FAM and generally accepted accounting principles in the United States (“GAAP”), primarily due to the unique nature of the Bank’s powers and responsibilities as part of the nation’s central bank. The primary difference is the presentation of all SOMA securities holdings at amortized cost rather than the fair value presentation required by GAAP. Treasury securities, GSE debt securities, Federal agency and GSE MBS, and investments denominated in foreign currencies comprising the SOMA are recorded at cost, on a settlement-date basis rather than the trade-date basis required by GAAP. The cost basis of Treasury securities, GSE debt securities, and foreign government debt instruments is adjusted for amortization of premiums or accretion of discounts on a straight-line basis. Amortized cost more appropriately reflects the Bank’s securities holdings given the System’s unique responsibility to conduct monetary policy. Accounting for these securities on a settlement-date basis more appropriately reflects the timing of the transaction’s effect on the quantity of reserves in the banking system. Although the application of fair value measurements to the securities holdings may result in values substantially above or below 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 prospects for future Bank earnings or capital. Both the domestic and foreign components of the SOMA portfolio may involve transactions that result in gains or losses when holdings are sold prior to 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 the open market operations and do not motivate decisions related to policy or open market activities.

In addition, the Bank has elected not to present a Statement of Cash Flows because the liquidity and cash position of the Bank are not a primary concern given the Reserve Banks' unique powers and responsibilities. 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. There are no other 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. Certain amounts relating to the prior year have been reclassified to conform to the current-year presentation. Unique accounts and significant accounting policies are explained below.

#### *a. Gold and Special Drawing Rights Certificates*

The Secretary of the Treasury is authorized to issue gold and special drawing rights ("SDR") certificates to the Reserve Banks.

Payment for the gold certificates by the Reserve Banks is made by crediting equivalent amounts in dollars into the account established for the Treasury. The gold certificates held by the Reserve Banks are required to be backed by the gold of 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. The Board of Governors allocates the gold certificates among the Reserve Banks once a year based on the average Federal Reserve notes outstanding in each Reserve Bank.

SDR certificates are issued by the International Monetary Fund (the "Fund") to its members in proportion to each member's quota in the Fund at the time of issuance. SDR certificates 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 transactions occur, the Board of Governors allocates SDR certificate transactions among the Reserve Banks based upon each Reserve Bank's Federal Reserve notes outstanding at the end of the preceding year. There were no SDR transactions in 2008, and in 2009 the Treasury issued \$3 billion in SDR certificates to the Reserve Banks, of which \$212 million was allocated to the Bank.

#### *b. Loans to Depository Institutions*

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

Loans are impaired when, based on current information and events, it is probable that the Bank will not receive the principal or interest that is due in accordance with the contractual terms of the loan agreement. 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 reflect the assessment of credit risk. 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 for each program. Generally, the Bank discontinues recognizing interest income on impaired loans until the borrower's repayment performance

demonstrates principal and interest will be received in accordance with the term 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.

*c. 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 executed through a tri-party arrangement (“tri-party transactions”). Tri-party transactions are conducted with two commercial custodial banks that manage the clearing, settlement, and pledging of collateral. The collateral pledged must exceed the principal amount of the transaction. Acceptable collateral under tri-party repurchase transactions primarily includes Treasury securities; pass-through mortgage securities of Fannie Mae, Freddie Mac, and Ginnie Mae; STRIP Treasury securities; and “stripped” securities of Federal agencies. The tri-party transactions are accounted for as financing transactions with the associated interest income accrued over the life of the transaction. Repurchase transactions are reported at their contractual amount as “System Open Market Account: Securities purchased under agreements to resell” in the Statements of Condition and the related accrued interest receivable is reported as a component of “Accrued interest receivable.”

The FRBNY may engage in sales of securities with primary dealers under agreements to repurchase (“reverse repurchase transactions”). These reverse repurchase transactions may be executed through a tri-party arrangement, similar to repurchase transactions. Reverse repurchase transactions may also be executed with foreign official and international accounts. 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 in the Statements of Condition and the related accrued interest payable is reported as a component of “Other liabilities.”

Treasury securities and GSE debt securities held in the SOMA are lent to primary dealers to facilitate the effective functioning of the domestic securities market. Overnight securities lending transactions are fully collateralized by other Treasury securities. TSLF transactions are fully collateralized with investment-grade debt securities, collateral eligible for tri-party repurchase agreements arranged by the FRBNY, or both. The collateral taken in both overnight and term securities lending transactions is in excess of the fair value of the securities lent. The FRBNY charges the primary dealer a fee for borrowing securities, and these fees are reported as a component of “Other income.” In addition, TOP fees are reported as a component of “Other 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 April each year. The settlement also equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding in each District.

*d. Treasury Securities; Government-Sponsored Enterprise Debt Securities; Federal Agency and Government-Sponsored Enterprise Mortgage-Backed Securities; Investments Denominated in Foreign Currencies; and Warehousing Agreements*

Interest income on Treasury securities, GSE debt securities, and investments denominated in foreign currencies comprising the SOMA is accrued on a straight-line basis. Interest income on Federal agency and GSE MBS is accrued using the interest method and includes amortization of premiums, accretion of discounts, and paydown gains or losses. Paydown gains or losses result from scheduled payment and prepayment of principal and represent the difference between the principal amount and the carrying value of the related security. Gains and losses resulting from sales of securities are determined by specific issue based on average cost.

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 combined with an agreement to sell or purchase TBA MBS on a specified future date. The FRBNY’s participation in the dollar roll market furthers the MBS Purchase Program goal of providing support to the mortgage and housing markets and fostering improved conditions in financial markets. The FRBNY accounts for outstanding commitments to sell or purchase TBA MBS on a settlement-date basis. Based on the terms



of the FRBNY dollar roll transactions, transfers of MBS upon settlement of the initial TBA MBS transactions are accounted for as purchases or sales in accordance with FASB ASC Topic 860 (ASC 860), *Accounting for Transfers of Financial Assets and Repurchase Financing Transactions*, (previously SFAS 140), and the related outstanding commitments are accounted for as sales or purchases upon settlement.

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 inter-district settlement account that occurs in April of each year. The settlement also equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding in each District. Activity related to investments denominated in foreign currencies, including the premiums, discounts, and realized and unrealized gains and losses, is allocated to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31.

Foreign-currency-denominated assets are revalued daily at current foreign currency market exchange rates in order to report these assets in U.S. dollars. Realized and unrealized gains and losses on investments denominated in foreign currencies are reported as "Foreign currency gains (losses), net" in the Statements of Income and Comprehensive Income.

Warehousing is an arrangement under which the FOMC agrees to exchange, at the request of the Treasury, U.S. dollars for foreign currencies held by the Treasury or ESF over a limited period of time. The purpose of the warehousing facility is to supplement the U.S. dollar resources of the Treasury and ESF for financing purchases of foreign currencies and related international operations.

Warehousing agreements are designated as held-for-trading purposes and are valued daily at current market exchange rates. Activity related to these agreements is allocated to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31.

#### *e. Central Bank Liquidity Swaps*

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

Activity related to U.S. dollar and foreign currency swap transactions, including the related income and expense, is allocated to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31. Similar to investments denominated in foreign currencies, the foreign currency amounts associated with these central bank liquidity swap arrangements are revalued 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 is reported as "Central bank liquidity swaps" on 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 foreign currency amounts held for the FRBNY. The FRBNY recognizes compensation during the term of the swap transaction and reports it as "Interest income: Central bank liquidity swaps" in the Statements of Income and Comprehensive Income.

##### *Foreign currency liquidity swaps*

At the initiation of each foreign currency liquidity swap transaction, the FRBNY will transfer, at the prevailing market exchange rate, a specified amount of U.S. dollars to an account for the foreign central bank in exchange for its currency. The foreign currency amount received would be reported as a liability by the Bank. Concurrent with this transaction, the FRBNY and the foreign central bank agree to a second transaction that obligates the FRBNY to return the foreign currency and the foreign central bank to return the U.S. dollars on a specified future date. The FRBNY compensates the foreign central bank based on the foreign currency transferred to the FRBNY. For each foreign currency swap transaction with a foreign central bank it is anticipated that the FRBNY will enter into a

corresponding transaction with a U.S. depository institution in order to provide foreign currency liquidity to that institution. No foreign currency liquidity swap transactions occurred in 2008 or 2009.

*f. Interdistrict Settlement Account*

At the close of business each day, 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.

*g. 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 two to fifty 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.

Costs incurred for software during the application development stage, whether developed internally or acquired for internal use, are capitalized based on the purchase cost and 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 range from two to five years. Maintenance costs related to software are charged to 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.

*h. 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. Assets eligible to be pledged as collateral security include all of the Bank’s assets. 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 pledged for securities sold under agreements to repurchase is deducted.

The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize the 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. At December 31, 2009 and 2008, all Federal Reserve notes issued to the Reserve Banks were fully collateralized.

“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 \$12,092 million and \$12,938 million at December 31, 2009 and 2008, respectively.

*i. Items in Process of Collection and Deferred Credit Items*

“Items in process of collection” in the Statements of Condition primarily represents amounts attributable to checks that have been deposited for collection and that, as of the balance sheet date, have not yet been presented to the paying bank. “Deferred credit items” are the counterpart liability to items in process of collection. The amounts in this account arise from deferring credit for deposited items until the amounts are collected. The balances in both accounts can vary significantly.

*j. 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 is required to pay each member bank an annual dividend of 6 percent on the paid-in capital stock. This cumulative dividend is paid semiannually. To reflect the Federal Reserve Act requirement that annual dividends be deducted from net earnings, dividends are presented as a distribution of comprehensive income in the Statements of Income and Comprehensive Income.

*k. Surplus*

The Board of Governors requires the Reserve Banks to maintain a surplus equal to the amount of 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. The balance of accumulated other comprehensive income is comprised of expenses, gains, and losses related to other postretirement benefit plans that, under GAAP, are included in other comprehensive income, but excluded from net income. Additional information regarding the classifications of accumulated other comprehensive income is provided in Notes 12 and 13.

*l. Interest on Federal Reserve Notes*

The Board of Governors requires 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. This amount is reported as "Payments to U.S. Treasury as interest on Federal Reserve notes" in the Statements of Income and Comprehensive Income. The amount due to the Treasury is reported as "Accrued interest on Federal Reserve notes" in the Statements of Condition. If overpaid during the year, the amount is reported as "Prepaid interest on Federal Reserve notes" in the Statements of Condition. Payments are made weekly to the Treasury.

In the event of losses or an increase in capital paid-in at a Reserve Bank, payments to the Treasury are suspended and earnings are retained until the surplus is equal to the capital paid-in.

In the event of a decrease in capital paid-in, the excess surplus, after equating capital paid-in and surplus at December 31, is distributed to the Treasury in the following year.

*m. Interest on Depository Institution Deposits*

On October 9, 2008, the Reserve Banks began paying interest to depository institutions on qualifying balances held at the Banks. 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 effective federal funds rate.

*n. Income and Costs Related to Treasury Services*

The Bank is required by the Federal Reserve Act to serve as fiscal agent and depository of the United States Government. By statute, the Department of the Treasury has appropriations to pay for these services. During the years ended December 31, 2009 and 2008, the Bank was reimbursed for all services provided to the Department of the Treasury as its fiscal agent.

*o. Compensation Received for Services Provided and Compensation Paid for Service Costs Incurred*

The Federal Reserve Bank of Atlanta ("FRBA") has overall responsibility for managing the Reserve Banks' provision of check and ACH services to depository institutions and, as a result, recognizes total System revenue for these services on its Statements of Income



and Comprehensive Income. The FRBNY manages the Reserve Banks' provision of Fedwire funds and securities services and recognizes total System revenue for these services on its Consolidated Statements of Income and Comprehensive Income. Similarly, the Bank has overall responsibility for managing the Reserve Banks' provision of electronic access services to depository institutions and, as a result, recognizes total System revenue for these services on its Statements of Income and Comprehensive Income. The FRBA, the FRBNY, and the Bank compensate the applicable Reserve Banks for the costs incurred to provide these services. Compensation received by the Bank for providing check, ACH, and Fedwire funds and securities services is reported as "Compensation received for services provided" in the Statements of Income and Comprehensive Income. Compensation paid by the Bank for electronic access services is reported as "Compensation paid for service costs incurred" in the Statements of Income and Comprehensive Income.

*p. Assessments by the Board of Governors*

The Board of Governors assesses the Reserve Banks to fund its operations based on each Reserve Bank's capital and surplus balances as of December 31 of the prior year. The Board of Governors also assesses each Reserve Bank for the expenses incurred by the Treasury to produce and retire 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.

*q. Taxes*

The Reserve Banks are exempt from federal, state, and local taxes, except for taxes on real property. The Bank's real property taxes were \$1 million and \$3 million for the years ended December 31, 2009 and 2008, respectively, and are reported as a component of "Occupancy expense." During the year ended December 31, 2009, the Bank received refunds in the amount of \$2 million related to taxes on real property.

*r. 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 employee 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.

Note 14 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 of the Bank's assets are discussed in Note 9. 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 12.

The Bank had no significant restructuring activities in 2008 and 2009.

*s. Recently Issued Accounting Standards*

In February 2008, FASB issued FSP SFAS 140-3, *Accounting for Transfers of Financial Assets and Repurchase Financing Transactions*, (codified in FASB ASC Topic 860 (ASC 860), *Transfers and Servicing*). ASC 860 requires that an initial transfer of a financial asset and a repurchase financing that was entered into contemporaneously with, or in contemplation of, the initial transfer be evaluated together as a linked transaction unless certain criteria are met. These provisions of ASC 860 are effective for the Bank's financial statements for the year beginning on January 1, 2009 and have not had a material effect on the Bank's financial statements. The requirements of this standard have been reflected in the accompanying footnotes.

In June 2009, FASB issued SFAS 166, *Accounting for Transfers of Financial Assets – an amendment to FASB Statement No. 140*, (codified in ASC 860). The new guidance modifies existing guidance to eliminate the scope exception for qualifying special purpose vehicles (“SPVs”) and clarifies that the transferor must consider all arrangements of the transfer of financial assets when determining if the transferor has surrendered control. These provisions of ASC 860 are effective for the Bank’s financial statements for the year beginning on January 1, 2010, and earlier adoption is prohibited. The adoption of this standard is not expected to have a material effect on the Bank’s financial statements.

In May 2009, FASB issued SFAS No. 165, *Subsequent Events*, (codified in FASB ASC Topic 855 (ASC 855), *Subsequent Events*), which establishes general standards of accounting for and disclosing events that occur after the balance sheet date but before financial statements are issued or are available to be issued. ASC 855 sets forth (i) the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements; (ii) the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements; and (iii) the disclosures that an entity should make about events or transactions that occurred after the balance sheet date, including disclosure of the date through which an entity has evaluated subsequent events and whether that represents the date the financial statements were issued or were available to be issued. The Bank adopted ASC 855 for the period ended December 31, 2009 and the required disclosures are reflected in Note 15.

In June 2009, the FASB issued SFAS No. 168, *The Statement of Financial Accounting Standards Codification and the Hierarchy of Generally Accepted Accounting Principles, a replacement of SFAS No. 162, “The Hierarchy of Generally Accepted Accounting Principles”* (SFAS 168). SFAS 168 establishes the FASB ASC as the source of authoritative accounting principles recognized by the FASB to be applied by non-governmental entities in the preparation of financial statements in conformity with GAAP. The ASC does not change current GAAP, but it introduces a new structure that organizes the authoritative standards by topic. SFAS 168 is effective for financial statements issued for periods ending after September 15, 2009. As a result, both the ASC and the legacy standard are referenced in the Bank’s financial statements and footnotes.

## 5. Loans

The loan amounts outstanding at December 31 were as follows (in millions):

	2009		2008
Primary, secondary, and seasonal credit	\$ 459	\$	1,828
TAF	1,934		5,094
<b>Loans to depository institutions</b>	<b>\$ 2,393</b>	<b>\$</b>	<b>6,922</b>

### *Loans to depository institutions*

The Bank offers primary, secondary, and seasonal credit to eligible borrowers. Each program has its own interest rate. Interest is accrued using the applicable interest rate established at least every fourteen days by the board of directors of the Bank, subject to review and determination by the Board of Governors. Primary and secondary credit are extended on a short-term basis, typically overnight, whereas seasonal credit may be extended for a period of up to nine months.

Primary, secondary, and seasonal credit lending is 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; ABS; 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 or face value reduced by a margin.

Depository institutions that are eligible to borrow under the Bank's primary credit program are also eligible to participate in the TAF program. Under the TAF program, the Reserve Banks conduct auctions for a fixed amount of funds, with the interest rate determined by the auction process, subject to a minimum bid rate. TAF loans are extended on a short-term basis, with terms ranging from 28 to 84 days. All advances under the TAF program must be collateralized to the satisfaction of the Bank. Assets eligible to collateralize TAF loans include the complete list noted above for loans to depository institutions. Similar to the process used for primary, secondary, and seasonal credit, a lending value is assigned to each asset that is accepted as collateral for TAF loans reduced by a margin.

Loans to depository institutions are monitored on a daily basis to ensure that borrowers continue to meet eligibility requirements for these programs. The financial condition of borrowers is monitored by the Bank and, if a borrower no longer qualifies for these programs, the Bank will generally request full repayment of the outstanding loan or, for primary and seasonal credit lending, 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.

	2009	
	Primary, secondary, and seasonal credit	TAF
Within 15 days	\$ 219	\$ 1,934
16 days to 90 days	240	–
<b>Total loans</b>	<b>\$ 459</b>	<b>\$ 1,934</b>

	2008	
	Primary, secondary, and seasonal credit	TAF
Within 15 days	\$ 970	\$ 3,950
16 days to 90 days	858	1,144
<b>Total loans</b>	<b>\$ 1,828</b>	<b>\$ 5,094</b>

#### *Allowance for loan loss and restructuring*

At December 31, 2009 and 2008, the Bank did not have any impaired loans and no allowance for loan losses was required.

#### **6. Treasury Securities; Government-Sponsored Enterprise Debt Securities; Federal Agency and Government-Sponsored Enterprise Mortgage-Backed Securities; Securities Purchased Under Agreements to Resell; Securities Sold Under Agreements to Repurchase; and Securities Lending**

The FRBNY, on behalf of the Reserve Banks, holds securities bought outright in the SOMA. The Bank's allocated share of SOMA balances was approximately 10.821 percent and 8.826 percent at December 31, 2009 and 2008, respectively.



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

2009						
	Treasury securities			Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
	Bills	Notes	Bonds			
Par	\$ 1,993	\$ 61,499	\$ 20,543	\$ 84,035	\$ 17,301	\$ 98,296
Unamortized premiums	–	708	2,647	3,355	812	1,310
Unaccreted discounts	–	(107)	(68)	(175)	(3)	(168)
<b>Total amortized cost</b>	<b>\$ 1,993</b>	<b>\$ 62,100</b>	<b>\$ 23,122</b>	<b>\$ 87,215</b>	<b>\$ 18,110</b>	<b>\$ 99,438</b>
<b>Fair Value</b>	<b>\$ 1,993</b>	<b>\$ 63,091</b>	<b>\$ 24,966</b>	<b>\$ 90,050</b>	<b>\$ 18,119</b>	<b>\$ 98,936</b>

2008						
	Treasury securities			Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
	Bills	Notes	Bonds			
Par	\$ 1,626	\$ 29,548	\$ 10,831	\$ 42,005	\$ 1,739	\$ –
Unamortized premiums	–	24	592	616	94	–
Unaccreted discounts	–	(74)	(54)	(128)	(3)	–
<b>Total amortized cost</b>	<b>\$ 1,626</b>	<b>\$ 29,498</b>	<b>\$ 11,369</b>	<b>\$ 42,493</b>	<b>\$ 1,830</b>	<b>\$ –</b>
<b>Fair Value</b>	<b>\$ 1,626</b>	<b>\$ 31,571</b>	<b>\$ 14,954</b>	<b>\$ 48,151</b>	<b>\$ 1,841</b>	<b>\$ –</b>

The total of the 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):

2009						
	Treasury securities			Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
	Bills	Notes	Bonds			
Amortized Cost	\$ 18,423	\$ 573,877	\$ 213,672	\$ 805,972	\$ 167,362	\$ 918,927
Fair Value	18,423	583,040	230,717	832,180	167,444	914,290

2008						
	Treasury securities			Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
	Bills	Notes	Bonds			
Amortized Cost	\$ 18,422	\$ 334,217	\$ 128,810	\$ 481,449	\$ 20,740	\$ –
Fair Value	18,423	357,709	169,433	545,565	20,863	–

The fair value amounts in the above tables are presented solely for informational purposes. Although the fair value of 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. Fair value was determined by reference to quoted market values for identical securities, except for Federal agency and GSE MBS for which fair values were determined using a model-based approach based on observable inputs for similar securities.

The fair value of the fixed-rate Treasury securities, GSE debt securities, and Federal agency and GSE MBS in the SOMA's holdings is subject to market risk, arising from movements in market variables, such as interest rates and securities prices. The fair value of Federal agency and GSE MBS is also affected by the rate of prepayments of mortgage loans underlying the securities.

The following table provides additional information on the amortized cost and fair values of the Federal agency and GSE MBS portfolio at December 31, 2009 (in millions):

Distribution of MBS holdings by coupon rate	Amortized cost	Fair value
Allocated to the Bank:		
4.0%	\$ 18,409	\$ 17,935
4.5%	47,002	46,709
5.0%	21,146	21,254
5.5%	11,187	11,317
6.0%	1,375	1,396
Other <sup>1</sup>	319	325
<b>Total</b>	<b>\$ 99,438</b>	<b>\$ 98,936</b>
System Total:		
4.0%	\$ 170,119	\$ 165,740
4.5%	434,352	431,646
5.0%	195,418	196,411
5.5%	103,379	104,583
6.0%	12,710	12,901
Other <sup>1</sup>	2,949	3,009
<b>Total</b>	<b>\$ 918,927</b>	<b>\$ 914,290</b>

<sup>1</sup> -Represents less than one percent of the total portfolio

Financial information related to securities purchased under agreements to resell and securities sold under agreements to repurchase for the years ended December 31, 2009 and 2008, was as follows (in millions):

	Securities purchased under agreements to resell		Securities sold under agreements to repurchase	
	2009	2008	2009	2008
Allocated to the Bank:				
Contract amount outstanding, end of year	\$ -	\$ 7,060	\$ 8,411	\$ 7,798
Average daily amount outstanding, during the year	319	7,542	6,922	4,818
Maximum month-end balance outstanding, during the year	-	10,503	8,411	8,699
Securities pledged, end of year	-	-	8,425	6,963
System total:				
Contract amount outstanding, end of year	\$ -	\$ 80,000	\$ 77,732	\$ 88,352
Average daily amount outstanding, during the year	3,616	86,227	67,837	55,169
Maximum month-end balance outstanding, during the year	-	119,000	77,732	98,559
Securities pledged, end of year	-	-	77,860	78,896

The Bank has revised its disclosure of securities purchased under agreements to resell and securities sold under agreements to repurchase from a weighted average calculation, disclosed in 2008, to simple daily average calculation, disclosed above. The previously reported System total 2008 weighted average amount outstanding for securities purchased under agreements to resell was \$97,037 million of which \$8,564 million was allocated to the Bank. The previously reported System total 2008 weighted average amount outstanding for securities sold under agreements to repurchase was \$65,461 million of which \$5,778 million was allocated to the Bank.

The contract amounts for securities purchased under agreements to resell and securities sold under agreements to repurchase approximate fair value.

The remaining maturity distribution of Treasury securities, GSE debt securities, Federal agency and GSE MBS bought outright, securities purchased under agreements to resell, and securities sold under agreements to repurchase that were allocated to the Bank at December 31, 2009 was as follows (in millions):

	Treasury securities (Par value)	GSE debt securities (Par value)	Federal agency and GSE MBS (Par value)	Securities purchased under agreements to resell (Contract amount)	Securities sold under agreements to repurchase (Contract amount)
Within 15 days	\$ 1,257	\$ 7	\$ –	\$ –	\$ 8,411
16 days to 90 days	3,122	330	–	–	–
91 days to 1 year	5,494	2,330	–	–	–
Over 1 year to 5 years	35,371	10,756	2	–	–
Over 5 years to 10 years	23,127	3,656	2	–	–
Over 10 years	15,664	222	98,292	–	–
<b>Total allocated to the Bank</b>	<b>\$ 84,035</b>	<b>\$ 17,301</b>	<b>\$ 98,296</b>	<b>\$ –</b>	<b>\$ 8,411</b>

Federal agency and GSE MBS are reported at stated maturity in the table above. The estimated weighted average life of these securities at December 31, 2009, which differs from the stated maturity primarily because it factors in prepayment assumptions, is approximately 6.4 years.

At December 31, 2009 and 2008, Treasury securities and GSE debt securities with par values of \$21,610 million and \$180,765 million, respectively, were loaned from the SOMA, of which \$2,338 million and \$15,954 million, respectively, were allocated to the Bank.

At December 31, 2009, the total of other investments was \$5 million, of which \$1 million was allocated to the Bank. Other investments consists of cash and short-term investments related to the Federal agency and GSE MBS portfolio.

At December 31, 2009, the total of other liabilities was \$601 million, of which \$65 million was allocated to the Bank. These other liabilities, which are related to purchases of Federal agency and GSE MBS, arise from the failure of a seller to deliver securities to the FRBNY on the settlement date. Although the Bank has ownership of and records its investments in the MBS securities as of the contractual settlement date, it is not obligated to make payment until the securities are delivered, and the amount reported as other liabilities represents the Bank's obligation to pay for the securities when delivered.

The FRBNY enters into commitments to buy Federal agency and GSE MBS and records the related MBS on a settlement-date basis. As of December 31, 2009, the total purchase price of the Federal agency and GSE MBS under outstanding commitments was \$160,099 million, of which \$32,838 million was related to dollar roll transactions. The amount of outstanding commitments allocated to the Bank was \$17,324 million, of which \$3,553 million was related to dollar roll transactions. These commitments, which had contractual settlement dates extending through March 2010, are primarily 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. These commitments are subject to market and counterparty risks that result from their future settlement. As of December 31, 2009, the fair value of Federal agency and GSE MBS under outstanding commitments was \$158,868 million, of which \$17,191 million was allocated to the Bank. During the year ended December 31, 2009, the Reserve Banks recorded net gains from dollar roll related sales of \$879 million, of which \$101 million was allocated to the Bank. These



net gains are reported as “Non-Interest Income (Loss): Federal agency and government-sponsored enterprise mortgage-backed securities gains, net” in the Statements of Income and Comprehensive Income.

## 7. Investments Denominated in Foreign Currencies

The FRBNY, on behalf of the Reserve Banks, holds foreign currency deposits with foreign central banks and with the Bank for International Settlements and invests in foreign government debt instruments. These investments are guaranteed as to principal and interest by the issuing foreign governments. In addition, the FRBNY enters into transactions to purchase foreign-currency-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.

The Bank’s allocated share of investments denominated in foreign currencies was approximately 3.338 percent and 4.435 percent at December 31, 2009 and 2008, respectively.

The Bank’s allocated share of investments denominated in foreign currencies, including accrued interest, valued at amortized cost and foreign currency market exchange rates at December 31, was as follows (in millions):

	2009	2008
Euro:		
Foreign currency deposits	\$ 247	\$ 247
Securities purchased under agreements to resell	86	181
Government debt instruments	165	204
Japanese yen:		
Foreign currency deposits	114	154
Government debt instruments	232	314
<b>Total allocated to the Bank</b>	<b>\$ 844</b>	<b>\$ 1,100</b>

At December 31, 2009 and 2008, the fair value of investments denominated in foreign currencies, including accrued interest, allocated to the Bank was \$850 million and \$1,110 million, respectively. The fair value of government debt instruments was determined by reference to quoted prices for identical securities. The cost basis of foreign currency deposits and securities purchased under agreements to resell, adjusted for accrued interest, approximates fair value. Similar to the Treasury securities, GSE debt securities, and Federal agency and GSE MBS discussed in Note 6, unrealized gains or losses have no effect on the ability of a Reserve Bank, as the central bank, to meet its financial obligations and responsibilities. The fair value is presented solely for informational purposes.

Total Reserve Bank investments denominated in foreign currencies were \$25,272 million and \$24,804 million at December 31, 2009 and 2008, respectively. At December 31, 2009 and 2008, the fair value of the total Reserve Bank investments denominated in foreign currencies, including accrued interest, was \$25,480 million and \$25,021 million, respectively.

The remaining maturity distribution of investments denominated in foreign currencies that were allocated to the Bank at December 31, 2009 was as follows (in millions):

	Euro	Japanese yen	Total
Within 15 days	\$ 202	\$ 121	\$ 323
16 days to 90 days	84	16	100
91 days to 1 year	80	79	159
Over 1 year to 5 years	132	130	262
<b>Total allocated to the Bank</b>	<b>\$ 498</b>	<b>\$ 346</b>	<b>\$ 844</b>

At December 31, 2009 and 2008, the authorized warehousing facility was \$5.0 billion, with no balance outstanding.

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

## 8. Central Bank Liquidity Swaps

### U.S. Dollar Liquidity Swaps

The Bank's allocated share of U.S. dollar liquidity swaps was approximately 3.338 percent and 4.435 percent at December 31, 2009 and 2008, respectively.

At December 31, 2009 and 2008, the total Reserve Bank amount of foreign currency held under U.S. dollar liquidity swaps was \$10,272 million and \$553,728 million, respectively, of which \$343 million and \$24,559 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):

	2009			2008		
	Within 15 days	16 days to 90 days	Total	Within 15 days	16 days to 90 days	Total
Australian dollar	\$ -	\$ -	\$ -	\$ 444	\$ 569	\$ 1,013
Danish krone	-	-	-	-	665	665
Euro	217	-	217	6,696	6,227	12,923
Japanese yen	18	-	18	2,124	3,319	5,443
Korean won	-	-	-	-	459	459
Mexican peso	108	-	108	-	-	-
Norwegian krone	-	-	-	98	267	365
Swedish krona	-	-	-	443	665	1,108
Swiss franc	-	-	-	852	264	1,116
U.K. pound	-	-	-	5	1,462	1,467
<b>Total</b>	<b>\$ 343</b>	<b>\$ -</b>	<b>\$ 343</b>	<b>\$ 10,662</b>	<b>\$ 13,897</b>	<b>\$ 24,559</b>

### Foreign Currency Liquidity Swaps

There were no transactions related to the foreign currency liquidity swaps during the years ended December 31, 2008 and 2009.

## 9. Bank Premises, Equipment, and Software

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

	2009	2008
Bank premises and equipment:		
Land	\$ 17	\$ 15
Buildings	249	242
Building machinery and equipment	34	33
Construction in progress	10	11
Furniture and equipment	60	60
<b>Subtotal</b>	<b>370</b>	<b>361</b>
Accumulated depreciation	(134)	(126)
<b>Bank premises and equipment, net</b>	<b>\$ 236</b>	<b>\$ 235</b>
Depreciation expense, for the years ended December 31	\$ 16	\$ 16

The Bank leased equipment under a capital lease during the year ended December 31, 2008. Depreciation expense related to the capitalized lease was \$26 thousand for the year ended December 31, 2008.

The Bank leases space to outside tenants with remaining lease terms ranging from two to thirteen years. Rental income from such leases was \$6 million and \$5 million for the years ended December 31, 2009 and 2008, respectively, and is reported as a component of "Other income" in the Statements of Income and Comprehensive Income. Future minimum lease payments that the Bank will receive under noncancelable lease agreements in existence at December 31, 2009 are as follows (in millions):

2010	\$	5
2011		6
2012		4
2013		3
2014		3
Thereafter		19
<b>Total</b>	<b>\$</b>	<b>40</b>

The Bank had capitalized software assets, net of amortization, of \$2 million and \$1 million at December 31, 2009 and 2008, respectively. Amortization expense was \$1 million for each of the years ended December 31, 2009 and 2008. 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 "Other expenses" in the Statements of Income and Comprehensive Income.

#### 10. Commitments and Contingencies

In the normal course of 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, 2009, the Bank was obligated under noncancelable leases for premises and equipment with remaining terms ranging from two to approximately three years. These leases provide for increased rental payments based upon increases in real estate taxes, operating costs, or selected price indices.

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 and \$2 million for the years ended December 31, 2009 and 2008, respectively.

Future minimum rental payments under noncancelable operating leases, net of sublease rentals, with remaining terms of one year or more, at December 31, 2009 are as follows (in thousands):

	Operating leases	
2010	\$	439
2011		437
2012		314
Future minimum rental payments	<b>\$</b>	<b>1,190</b>

At December 31, 2009, there were no material unrecorded unconditional purchase commitments or obligations in excess of one year.

Under the Insurance Agreement of the Federal Reserve Banks, each of the Reserve Banks has agreed to bear, on a per incident basis, a pro rata share of losses in excess of one 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, 2009 or 2008.



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 aforementioned litigation and claims will be resolved without material adverse effect on the financial position or results of operations of the Bank.

## 11. 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 ("OEB") participate in the Retirement Plan for Employees of the Federal Reserve System ("System Plan"). 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 Bank ("SERP").

The System Plan provides retirement benefits to employees of the Federal Reserve Banks, the Board of Governors, and OEB. The FRBNY, on behalf of the System, recognizes the net asset or net liability and costs associated with the System Plan in its financial statements. Costs associated with the System Plan are not reimbursed by other participating employers.

The Bank's projected benefit obligation, funded status, and net pension expenses for the BEP and the SERP at December 31, 2009 and 2008, 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 employee contributions based on a specified formula. For the year ended December 31, 2008 and for the first three months of the year ended December 31, 2009, the Bank matched 80 percent of the first 6 percent of employee contributions for employees with less than five years of service and 100 percent of the first 6 percent of employee contributions for employees with five or more years of service. Effective April 1, 2009, 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 one percent of eligible pay. The Bank's Thrift Plan contributions totaled \$6 million and \$5 million for the years ended December 31, 2009 and 2008, respectively, and are reported as a component of "Salaries and other benefits" in the Statements of Income and Comprehensive Income.

## 12. 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 benefits and life insurance coverage during retirement.

The Bank funds benefits payable under the medical and life insurance plans as due and, accordingly, has no plan assets.

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

	2009	2008
Accumulated postretirement benefit obligation at January 1	\$ 114.6	\$ 105.6
Service cost benefits earned during the period	2.9	2.7
Interest cost on accumulated benefit obligation	7.0	6.6
Net actuarial loss	10.4	5.8
Curtailement loss	-	0.1
Special termination benefits loss	0.4	-
Contributions by plan participants	1.8	1.7
Benefits paid	(9.2)	(8.4)
Medicare Part D subsidies	0.6	0.5
Plan amendments	(2.5)	-
Accumulated postretirement benefit obligation at December 31	<u>\$ 126.0</u>	<u>\$ 114.6</u>

At December 31, 2009 and 2008, the weighted-average discount rate assumptions used in developing the postretirement benefit obligation were 5.75 percent and 6.00 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.

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

	2009	2008
Fair value of plan assets at January 1	\$ -	\$ -
Contributions by the employer	6.8	6.2
Contributions by plan participants	1.8	1.7
Benefits paid	(9.2)	(8.4)
Medicare Part D subsidies	0.6	0.5
Fair value of plan assets at December 31	\$ -	\$ -
<b>Unfunded obligation and accrued postretirement benefit cost</b>	<b>\$ 126.0</b>	<b>\$ 114.6</b>
Amounts included in accumulated other comprehensive loss are shown below:		
Prior service cost	\$ 4.8	\$ 4.3
Net actuarial loss	(42.6)	(36.1)
Deferred curtailment gain	0.1	1.2
<b>Total accumulated other comprehensive loss</b>	<b>\$ (37.7)</b>	<b>\$ (30.6)</b>

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 as follows:

	2009	2008
Health care cost trend rate assumed for next year	7.50%	7.50%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2015	2014

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, 2009 (in millions):

	One percentage point increase	One percentage point decrease
Effect on aggregate of service and interest cost components of net periodic postretirement benefit costs	\$ 1.5	\$ (1.2)
Effect on accumulated postretirement benefit obligation	14.2	(11.9)

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

	2009	2008
Service cost for benefits earned during the period	\$ 2.8	\$ 2.7
Interest cost on accumulated benefit obligation	7.0	6.6
Amortization of prior service cost	(1.9)	( 1.9)
Amortization of net actuarial loss	3.9	3.4
Total periodic expense	11.8	10.8
Curtailment gain	(1.2)	(0.1)
Special termination benefits loss	0.4	–
Net periodic postretirement benefit expense	\$ 11.0	\$ 10.7
Estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic postretirement benefit expense in 2010 are shown below:		
Prior service cost	\$ (2.2)	
Net actuarial loss	4.1	
<b>Total</b>	<b>\$ 1.9</b>	

Net postretirement benefit costs are actuarially determined using a January 1 measurement date. At January 1, 2009 and 2008, the weighted-average discount rate assumptions used to determine net periodic postretirement benefit costs were 6.00 percent and 6.25 percent, respectively.

Net periodic postretirement benefit expense is reported as a component of “Salaries and other 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 14. A net curtailment gain associated with restructuring programs that are described in Note 14 was recognized in net income in the year ended December 31, 2009, related to employees who terminated employment during 2009. A deferred curtailment gain was recorded in 2007 as a component of accumulated other comprehensive loss; the gain will be recognized in net income in future years when the related employees terminate employment.

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 health care 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 \$0.8 million and \$0.4 million in the years ended December 31, 2009 and 2008, respectively. Expected receipts in 2010, related to benefits paid in the years ended December 31, 2009 and 2008, are \$0.1 million.

Following is a summary of expected postretirement benefit payments (in millions):

	Without subsidy	With subsidy
2010	\$ 8.5	\$ 7.8
2011	8.9	8.1
2012	9.2	8.4
2013	9.6	8.7
2014	9.8	8.8
2015 – 2019	50.5	44.6
<b>Total</b>	<b>\$ 96.5</b>	<b>\$ 86.4</b>

#### Postemployment Benefits

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined and include the cost of medical and dental insurance, survivor income, disability benefits, and self-insured workers' compensation expenses. The accrued postemployment benefit costs recognized by the Bank at December 31, 2009 and 2008, were \$14 million and \$9 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 2009 and 2008 operating expenses were \$5 million and \$(1) million, respectively, and are recorded as a component of "Salaries and other benefits" in the Statements of Income and Comprehensive Income.

#### 13. Accumulated Other Comprehensive Income and Other Comprehensive Income

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

	Amount related to postretirement benefits other than retirement plans
Balance at January 1, 2008	\$ (27)
Change in funded status of benefit plans:	
Prior service costs arising during the year	1
Net actuarial loss arising during the year	(6)
Amortization of prior service cost	(2)
Amortization of net actuarial gain	3
Change in funded status of benefit plans — other comprehensive loss	(4)
<b>Balance at December 31, 2008</b>	<b>\$ (31)</b>
Change in funded status of benefit plans:	
Prior service costs arising during the year	2
Net actuarial loss arising during the year	(10)
Amortization of prior service cost	(2)
Amortization of net actuarial loss	4
Amortization of deferred curtailment gain	(1)
Change in funded status of benefit plans — other comprehensive income	(7)
<b>Balance at December 31, 2009</b>	<b>\$ (38)</b>

Additional detail regarding the classification of accumulated other comprehensive loss is included in Note 12.



## 14. Business Restructuring Charges

### 2007 and 2006 Restructuring Plans

The Bank incurred various restructuring charges prior to 2008 related to the restructuring of check adjustment and operations. Following is a summary of financial information related to the restructuring plans (in thousands):

	<b>2007 and 2006 restructuring plans</b>	
<i>Information related to restructuring plans as of December 31, 2009:</i>		
Total expected costs related to restructuring activity	\$	5,510
Estimated future costs related to restructuring activity		—
Expected completion date		2008
<i>Reconciliation of liability balances:</i>		
Balance at January 1, 2008	\$	6,059
Employee separation costs		25
Contract termination costs		113
Adjustments		(855)
Payments		(849)
<b>Balance at December 31, 2008</b>	<b>\$</b>	<b>4,493</b>
Adjustments		(228)
Payments		(3,066)
<b>Balance at December 31, 2009</b>	<b>\$</b>	<b>1,199</b>

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 “Salaries and other benefits” in the Statements of Income and Comprehensive Income.

Contract termination costs include the charges resulting from terminating an existing lease and are shown as a component of “Other expenses” in the Statements of Income and Comprehensive Income.

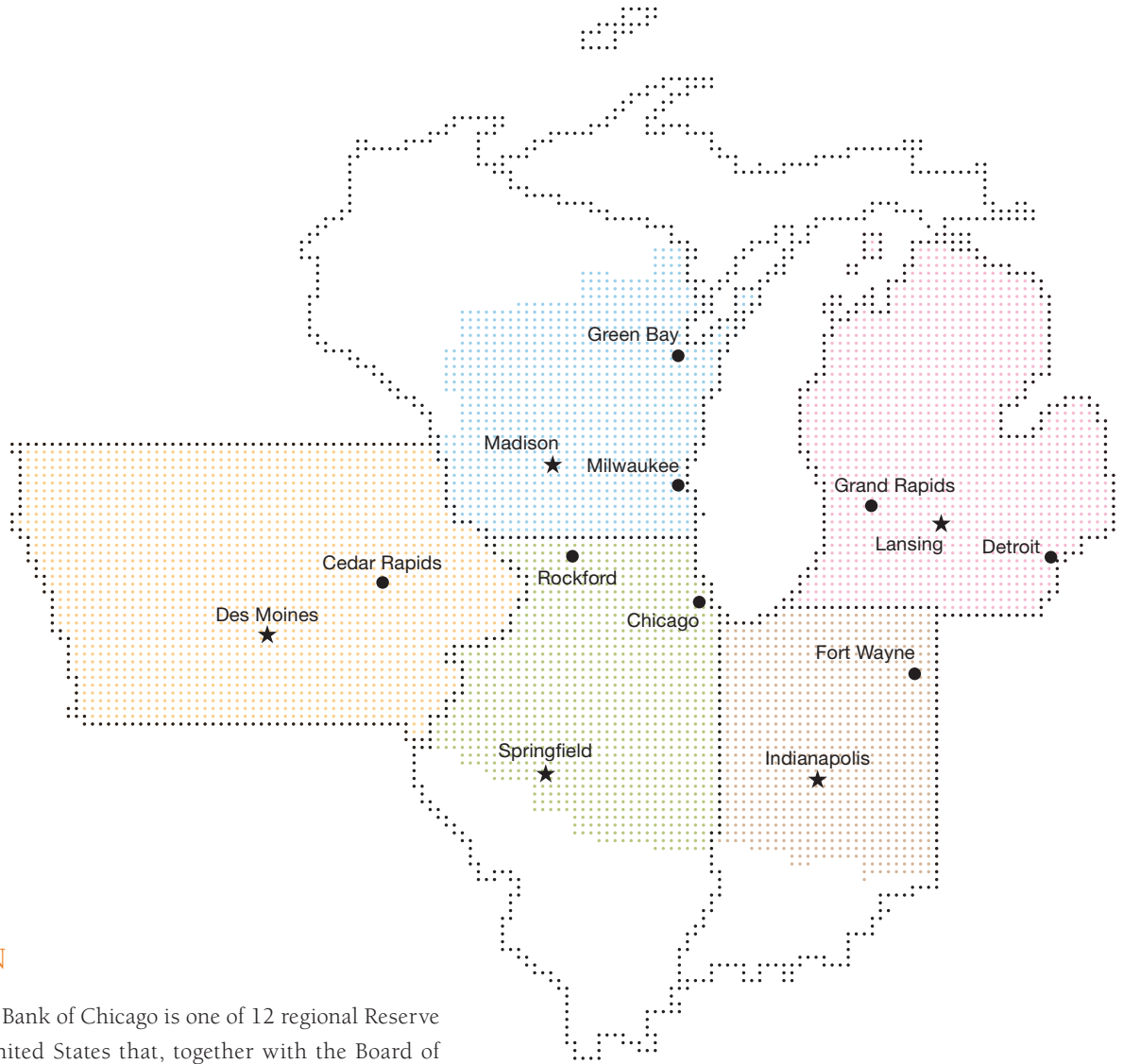
Adjustments to the accrued liability are primarily due to changes in the estimated restructuring costs and are shown as a component of the appropriate expense category in the Statements of Income and Comprehensive Income.

Costs associated with enhanced pension benefits for all Reserve Banks are recorded on the books of the FRBNY as discussed in Note 11. Costs associated with enhanced postretirement benefits are disclosed in Note 12.

## 15. Subsequent Events

There were no subsequent events that require adjustments to or disclosures in the financial statements as of December 31, 2009. Subsequent events were evaluated through April 21, 2010, which is the date that the Bank issued the financial statements.

## THE SEVENTH FEDERAL RESERVE DISTRICT



### OUR MISSION

The Federal Reserve Bank of Chicago is one of 12 regional Reserve Banks across the United States that, together with the Board of Governors in Washington, D.C., serve as the nation's central bank. The role of the Federal Reserve System, since its establishment by an act of Congress passed in 1913, has been to foster a strong economy, supported by a stable financial system.

To this end, the Federal Reserve Bank of Chicago participates in the formulation and implementation of national monetary policy; supervises and regulates state-member banks, bank holding companies and foreign bank branches; and provides financial services to depository institutions and the U.S. government. Through its head office in Chicago, branch in Detroit and check-processing facility in Bedford Park, Ill., the Federal Reserve Bank of Chicago serves the Seventh Federal Reserve District, which includes most of Illinois, Indiana, Michigan and Wisconsin, plus all of Iowa.

### OUR VISION

We serve the public interest by fostering a strong economy and promoting financial stability. We accomplish this with talented and innovative people working within a collaborative and inclusive culture.

# FEDERAL RESERVE BANK OF CHICAGO

## Head Office

230 South LaSalle Street  
P.O. Box 834  
Chicago, Illinois 60690-0834  
312-322-5322

## Detroit Branch

1600 East Warren Avenue  
Detroit, Michigan 48207-1063  
313-961-6880

## Midway Facility

4944 West 73rd Street  
Bedford Park, Illinois 60638  
708-924-8900