Annual Report

FEDERAL RESERVE BANK *of* CLEVELAND

The Federal Reserve System is responsible for formulating and implementing U.S. monetary policy. It also supervises banks and bank holding companies and provides financial services to depository institutions and the federal government.

The Federal Reserve Bank of Cleveland is one of 12 regional Reserve Banks in the United States that, together with the Board of Governors in Washington DC, comprise the Federal Reserve System.

The Federal Reserve Bank of Cleveland, including its branch offices in Cincinnati and Pittsburgh, serves the Fourth Federal Reserve District (Ohio, western Pennsylvania, the northern panhandle of West Virginia, and eastern Kentucky).

It is the policy of the Federal Reserve Bank of Cleveland to provide equal employment opportunity for all employees and applicants without regard to race, color, religion, sex, national origin, age, or disability.

FEDERAL RESERVE BANK *of* CLEVELAND

2009 Annual Report

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President's Foreword

For central bankers, 2009 was a year of evaluating our progress in forestalling a financial meltdown and preparing for better economic and financial market conditions in the decade to come.

As a corollary to that process, the U.S. Congress is deliberating on a major financial reform package in 2010. Whatever reforms are enacted, we at the Federal Reserve Bank of Cleveland believe that they should reflect our best understanding of economic theory, the results of solid research, and the lessons we have learned firsthand by managing through the crisis of the past two years.

Leading up to the crisis, financial supervisors were concentrating on the risk profiles of the individual institutions they supervised. This entity-based approach to supervision led to gaps in regulatory oversight, and the exposure of the broader financial system was underestimated as well. The magnitude of the resulting crisis has chastened policymakers and provided ample reason to consider how we can help prevent such a situation from unfolding again.

Many thoughtful observers have proposed that greater attention be focused on identifying a mechanism for macroprudential supervision, or what some refer to as systemic risk supervision—that is, supervision with an eye toward minimizing risk to the entire financial system. I support that effort wholeheartedly.

Tanny B. Crane, chairwoman; Sandra Pianalto, president and chief executive officer; and Alfred M. Rankin Jr., deputy chairman.

A necessary first step is to accurately *define systemic risk*, and then to *construct effective measures* to address it. This year's annual report essay provides a road map to begin that journey. We describe some of the factors that can render a financial organization systemically important, explain some of the practical considerations supervisors will need to take into account, and issue a call for greater transparency and ongoing public dialogue about the state of the financial system.

Regardless of how the regulatory reform agenda works its way through Congress, I think it is clear that the practice of banking supervision has to change. Banking supervisors have to learn more about the risks taking place across the entire set of individual entities within a banking organization. They have to become more alert to the connectedness among financial institutions, and they must better understand how the macroeconomic environment alters the context of a bank's situation. Indeed, at the Federal Reserve Bank of Cleveland, we are already adapting our thinking and practices to this new way of doing business.

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Our Bank's boards of directors in Cleveland, Pittsburgh, and Cincinnati, as well as our business and consumer advisory councils, have been instrumental in helping us remain solidly on course in 2009. I am indebted to them for their dedicated service.

A huge debt of gratitude goes to Tanny Crane, president and chief executive officer of Crane Group Company in Columbus, Ohio. Tanny retired from the Board of Directors of the Federal Reserve Bank of Cleveland after having served as our chair from 2007 to 2009 and as deputy chair in 2006. She began her board service in 2003. In the past seven years, she has participated in nearly all of the board's committees, has been a tireless advocate for our Bank, and has demonstrated a true passion for the work of the Federal Reserve System. We have benefited greatly from her energy, insights, and support.

In addition, we are grateful for the leadership of Henry L. Meyer III, chairman and CEO of KeyCorp in Cleveland, who served as our Bank's representative on the Federal Advisory Council in 2009 and will continue in that capacity in 2010.

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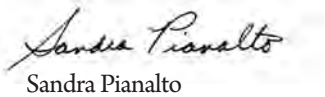
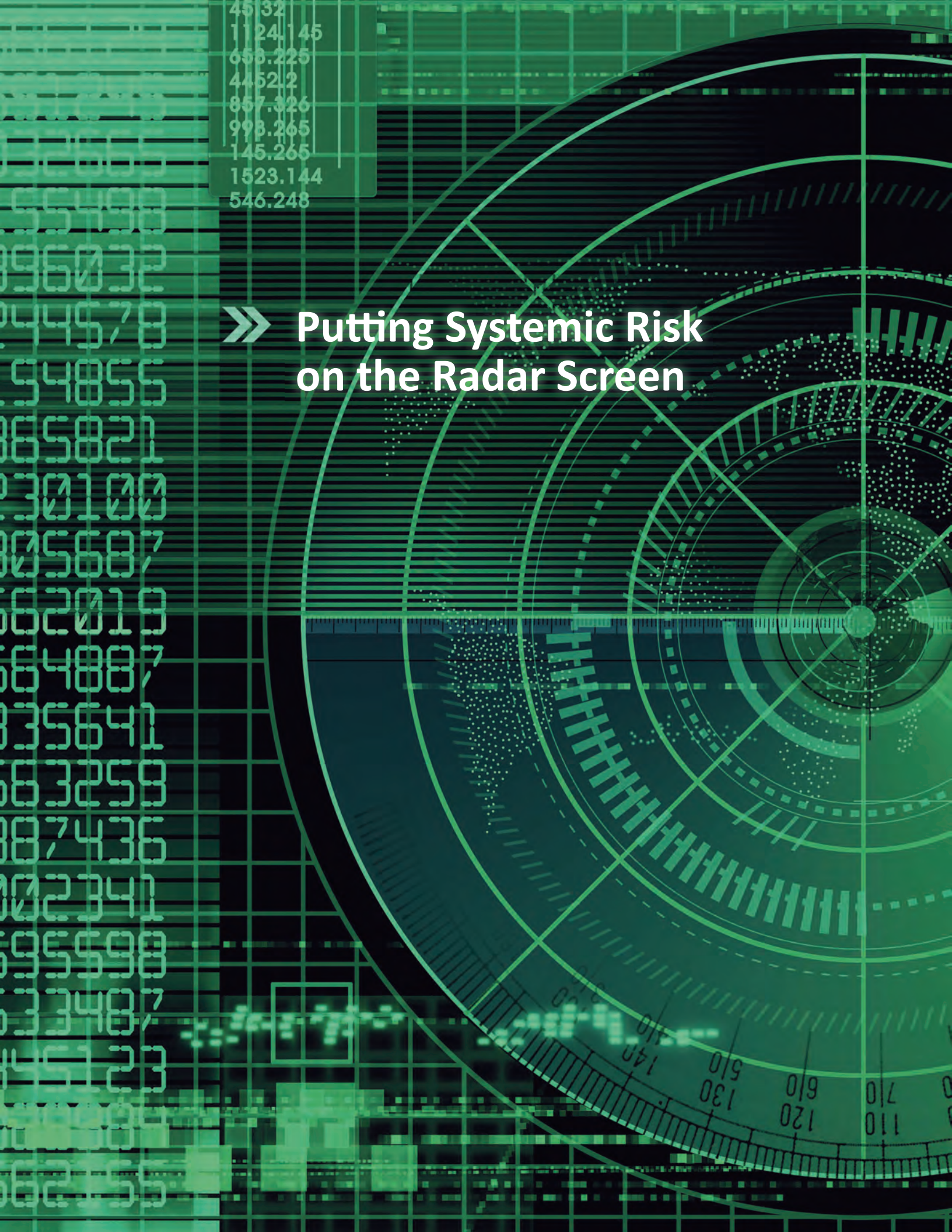
Resilience, dedication, and professionalism have defined the efforts of more than 1,300 employees at our Cleveland, Cincinnati, and Pittsburgh offices during the past year. Our officers and staff have been challenged to think as central bankers and to work collaboratively on complex policy issues across functional lines. Their innovation, learning, and agility continue to grow as we execute our strategic vision of leadership in thought and deed, external focus, and operational excellence. Their energy and commitment assure me of the ongoing success of the Federal Reserve Bank of Cleveland.



Sandra Pianalto
President and Chief Executive Officer



Putting Systemic Risk on the Radar Screen

As the nation ponders its response to the greatest financial crisis in generations, plans for regulatory reform are everywhere. Proposals to break up big financial companies, create a new agency for consumer protection, and lay out additional rules for derivatives, insurance companies, and hedge funds—they're all on the table.

Many proposals call for enhanced supervision and regulation to combat systemic risk. Some proposals would tie leverage restrictions, capital requirements, or deposit insurance to systemic risk. Federal Reserve Bank of Cleveland President Sandra Pianalto has outlined three tiers of supervision with various levels and types of systemic significance.[1] Regardless of the outcome of current regulatory reform deliberations, systemic risk and systemic risk supervision seem destined to be a part of our new financial order.

1. Pianalto (2009).

But what exactly does systemic risk *mean*? Without a clear and comprehensive definition of systemic risk, and some way to measure it, no proposal can be fully implemented. In this essay, we argue that policymakers must begin in earnest to define and measure systemic risk. Without proper measures, one regulates, or governs, by anecdote rather than by facts.[2] Even reforms about which there is little controversy—such as the need to supervise and regulate systemically important financial institutions differently—will be limited or possibly counterproductive unless systemic risk is measured accurately. Although quantifying systemic risk may sound esoteric and technical, we suggest that it is easy enough to know where to begin and absolutely critical that we do so.

2. Stigler (1975).

Without a clear and comprehensive definition of systemic risk, and some way to measure it, no proposal can be fully implemented.

What Is Systemic Risk and How Should We Measure It?

Let's accept, from the outset, that there are several plausible definitions of systemic risk, but any definition must capture the idea that a ***significant fraction*** of a financial market will be disrupted. Think about the classic banking panic, where depositors rush to convert their bank accounts into cash. In fact, scholars often emphasize the significant-fraction aspect by distinguishing between a run on a single bank and a panic, which involves many banks.[3] Today, the significant-fraction idea means recognizing disruptions both inside and outside the banking system, including disturbances at nonbank financial institutions and within financial markets more broadly.

A second concept that a systemic risk definition should embrace is that of ***contagion***: Problems at one financial institution may spread to others, just as a fire might spread through a crowded tenement. The contagion may arise because one bank's failure makes people nervous about the safety of other banks, or because financial connections at one bank lead directly to a second bank's failure. In the recent crisis, the panic quite obviously spread beyond banks. On September 16, 2008, the Reserve Primary Fund, a money market fund that held Lehman Brothers commercial paper, "broke the buck," meaning it could no longer keep its net asset value at the standard one dollar. This alarming news started a run on other money market mutual funds, leading to a near shutdown in the commercial paper market, a major source of funding for nonfinancial businesses.[4]

The twin ideas of significant fraction and contagion can help make our definition of systemic risk more concrete. The Commodity Futures Trading Commission defines systemic risk as follows: "The risk that a default by one market participant will have ***repercussions on other participants*** due to the interlocking nature of financial markets. For example, Customer A's default in X market may affect Intermediary B's ability to fulfill its obligations in markets X, Y, and Z."[5] Alternatively, here is a definition offered by several professors at New York University: "Systemic risk can be thought of as a widespread failure of financial institutions or freezing up of capital markets that can substantially ***reduce the supply of capital to the real economy***" (emphasis ours in both definitions).[6]

These definitions suggest that we recognize two dimensions of systemic risk—one looking at the risk lodged in a specific institution or market segment, and the other looking at the overall risk in the financial system. At the economy-wide level, unacceptable systemic risk is the risk that the financial system cannot perform its major functions, especially those that support production, consumption, and employment. We can also see in these definitions the beginning of the process of identifying systemically important firms—those whose problems could, in certain circumstances, lead to widespread financial and economic disruption.

3. Gorton (1985). See also Warsh (2009).

4. Dwyer and Tkac (2009).

5. Commodity Futures Trading Commission (2010).

6. Acharya, Philippon, Richardson, and Roubini (2009).

Measuring Systemic Risk

Let's say that we are satisfied, for now, that we know what we are looking for. How will we detect systemic risk? The first step is to recognize that it will likely have several defining characteristics, making it impossible to measure on a single scale. Think of an airline cockpit with its intricate display of outputs and dials. An experienced pilot watches several indicators of weather, location, and flight status as well as the plane's fuel gauge and oil pressure. Similarly, we expect that a systemic risk supervisor would consider a broad set of indicators, some giving a market-wide view and others assessing particular firms.

Legislation defines the mission of most current financial supervisors in terms of the legal entities they supervise: banks, broker–dealers, or insurance companies. The recent financial crisis revealed several gaps. Even within the most comprehensively supervised banking organizations — financial holding companies — it was difficult to assemble a comprehensive risk profile, let alone an adequate appreciation of the potential risks they might pose to the financial system.[7] But the crisis revealed that financial supervisors have to look even more broadly at the companies they supervise — they have to look at the various ways in which the firms are connected to one another and to how the financial markets themselves are functioning.

In the recent financial crisis, commercial banks as well as mortgage companies, broker–dealers, and insurance companies all fell prey to the panic. Fundamentally, the crisis revealed the instability of the "shadow banking" sector, where borrowing and lending took place outside commercial banks through financial conduits, structured investment vehicles, and financial product divisions of supposedly solid firms. And, as we learned all too painfully, the shadow banking system was quite fragile and was connected to the mainstream banking system in ways that were not fully understood. So as we seek measures of systemic risk, we will have to cast a wide net.

The Federal Reserve Bank of Cleveland has stressed four factors — the four C's — that we believe are important for understanding systemic risk and for gauging its extent: **contagion**, **concentration**, **correlation**, and **context**.[8] Eventually, we will have to find ways to quantify the first three and to contend with the fourth.

Contagion is a defining feature of systemic risk. How are different markets connected? How can a shock in one market be transmitted to another? The recent financial panic, for example, progressed quickly through the subprime mortgage market, money market mutual funds, and on to the commercial paper market.

Concentration. Seasoned travelers know that bad weather at JFK or O'Hare — major airline hubs — causes more delays than snow at airports in less-traveled cities like Akron or Topeka. In the financial sphere, this means that the more business that is concentrated in a few firms, the greater the systemic risk. Thus, problems at only a few major firms can destabilize the entire industry.

Correlation puts too many eggs in one basket. When firms take on the same risk, they can end up hobbled by the same shock. The problems of subprime mortgages infected many financial institutions and investors who held large amounts of mortgage-backed securities and collateralized debt obligations. Through the intricacies of structured finance, even the AAA-rated tranches of securities became "economic catastrophe bonds" when loans across the country began to sour and housing prices fell.[9] A more subtle correlation emerged as investors lost confidence in the ratings, making their "investment-grade" bonds hard to sell. Once confidence in the ratings methodology for securitized assets

7. This difficulty could be overcome by clarifying the Federal Reserve's role as the consolidated supervisor of financial holding companies. A consolidated supervisor has the authority to collect information from all affiliates within a holding company and to take supervisory actions that enable it to manage the consolidated risk of the entire enterprise.

8. Thomson (2009) and Haubrich and Thomson (2009).

9. Coval, Jurek, and Stafford (2009).

eroded, investors became wary of familiar products far removed from subprime mortgages, such as student and auto loans. Thanks to correlation, the panic spread.

Context. ***When*** something happens is often as important as ***what*** happens. For example, the hedge fund Amaranth Advisors LLC collapsed in September 2006 after a deep loss in its derivatives investments, yet its failure did not have a systemic impact. In contrast, the hedge fund Long-Term Capital Management, with losses only half as large, suffered large capital losses and liquidity problems in fall 1998, right on the heels of the Asian crisis and the Russian default, and its difficulties had a significant effect on broader markets.[10] Similarly, the treatment of Drexel Burnham Lambert in 1990 was much different from the assisted merger of Bear Stearns into JPMorgan Chase in early 2008, when the economic crisis was unfolding.

10. Greenspan (1998).

The four C's describe broad characteristics of firms and markets that should matter to a systemic supervisor. Ultimately, having good metrics for the first three C's—contagion, concentration, and correlation—will prove quite helpful to financial supervisors. But even now, with these guideposts, we can move to a more operational level for defining and measuring systemic risk.

Professor Andrew Lo of MIT's Sloan School of Management has suggested that systemic supervisors should consider looking at **leverage**, **liquidity**, **sensitivities**, and **implicit guarantees** associated with specific financial organizations. All of these are subject to measurement, to varying degrees of precision.[11]

11. Lo (2009).

Financial Decoupling

Properly understanding the positions of firms requires coming to grips with the recent practice of decoupling legal and economic ownership rights.[1] This possibility became most famously apparent in the payments from AIG to Goldman Sachs.[2] AIG paid $7 billion (borrowed from the Federal Reserve and the Treasury) to Goldman, even though Goldman had earlier reported that it had no exposure to AIG. Presumably, Goldman could do this because its position was fully hedged—that is, offset by gains on other contracts that would pay out if AIG could not. How certain such a hedge actually was in the intense days of September 2008 is another question, but this case illustrates how derivatives and hedging make it difficult to gauge the true exposure of any firm. In some sense, the accounting and disclosure rules have not yet caught up with marketplace practices.

One form of decoupling goes by the name of stealth ownership, where large investors such as hedge funds can use derivatives to take an economic interest in a firm that would require disclosure if it were held in traditional instruments such as stocks. Indeed, the hedge fund Atticus Capital told the *Wall Street Journal* that it routinely used such strategies to keep its competitors in the dark.[3] Lack of disclosure makes it even harder to understand the links and possible contagion between firms.

Clearly, stealth ownership hides the connections needed to assess contagion, correlation, and other aspects of systemic risk. It can also make it hard to judge how a firm will behave. Would investors seek to shut down a firm losing money, hoping to stop the drain? Or would they make more money from their derivatives if things continue to go badly? Would regulators (or anyone) find it harder to form a coherent picture, even with a mass of data? "Connecting the dots" might not be easy.

1. Hu and Black (2008).
2. Hu (2009).
3. Zuckerman (2007).

The four C's—contagion, concentration, correlation, and context—describe broad characteristics of firms and markets that should matter to a systemic supervisor.

Leverage describes how much a firm borrows based on its size. Leverage is commonly defined as the value of a firm's assets divided by its shareholders' equity. The portion of assets not financed with equity must be financed with debt. More leverage allows higher profits, but leverage also means that a huge loss becomes more likely to bankrupt the firm, since capital may be depleted and the debts must be repaid. The subtle ways leverage can affect a firm might best be illustrated by AIG: The firm's AAA rating allowed it to be quite highly leveraged. But when AIG lost that rating, it had to put up more collateral for its derivative positions—collateral it did not have—causing the crisis that led to its bailout.[12] Leverage may seem easy to measure, but it becomes complicated in practice. Even when measured reasonably well, there is always the question: How much leverage is too much? And should the nature of a firm's assets and liabilities figure into the setting of a leverage limit?

12. Sjostrom (2009).

Liquidity measures how easily an asset can be sold or how much its price drops if the asset is sold quickly. If a firm needs cash, the safest asset in the world will be useless if no one will buy it. At the firm level, a distinction is often made between insolvency and illiquidity. For an ***insolvent*** firm, the value of its liabilities exceeds the value of its assets. An ***illiquid*** firm, even though it may be solvent, cannot meet its short-term obligations with valuable but hard-to-sell assets. Illiquidity can also create contagion. A desperate firm sells assets at fire-sale prices, which reduces the market value of similar assets at other firms, undermining market confidence in these firms. If the firms are forced to sell assets because of that loss of confidence, the problem spirals out of control. As is the case with leverage, financial analysts have put forward several liquidity measures. Supervisors will have to determine which one is the best benchmark and how much liquidity to require in various financial environments.

Sensitivities, which option traders call "the Greeks" (because they are usually denoted by Greek letters in the textbooks), measure how asset values change with interest rates and market conditions. This set of gauges is intended to describe how exposed and vulnerable the firm is to different shocks or scenarios that may plausibly arise. Supervisors would find it difficult to compute these measures based on regulatory reports, but sophisticated firms should already be tracking these measures. Obviously, the more volatile a firm's asset valuation, the more quickly its leverage and liquidity ratios are likely to change.

Implicit guarantees are a less obvious source of risk, but they make it difficult for both firms and their supervisors to accurately gauge exposures. Both the firms themselves and the government offer these guarantees, which further complicates matters. The poster children for implicit firm guarantees were the structured investment vehicle and the related asset-backed commercial paper vehicle. Structured investment vehicles were legally structured as a way to remove assets from bank balance sheets, so had only limited guarantees from the sponsoring bank. Nonetheless, after the crisis hit, many banks provided recourse. On the government side, the recent crisis also provides examples, most notably Fannie Mae and Freddie Mac.

Making Measures Work

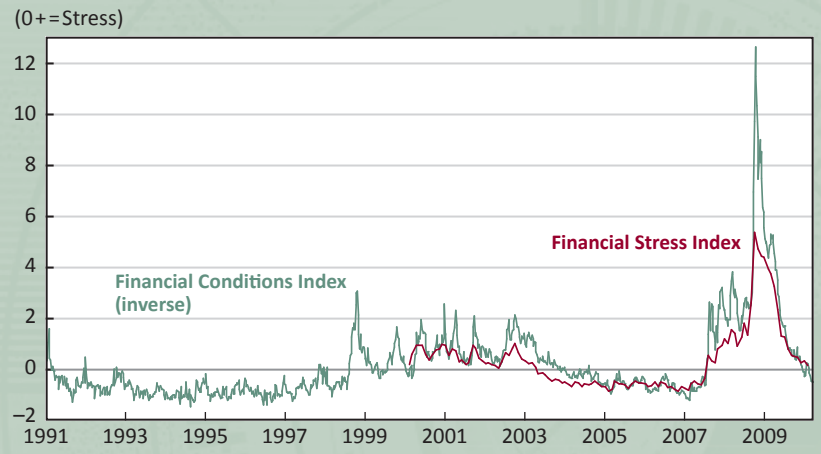
Integrating these concepts into something that financial supervisors can use requires another level of detail and, in some cases, extra care. Supervisors who want an early signal that markets are getting dangerous should follow a broad set of measures (and develop a healthy skepticism about their use). Supervisors seeking measures that signal actionable steps against individual firms will have to exercise greater caution, however. Waiting for near-certainty could be costly to market stability, but acting prematurely could needlessly harm the firm in question.

Several promising steps are being taken already to gauge both market risk and firm risk. One direction is to construct an early warning system for systemic problems at the broad market level.[13] Sometimes this takes the form of a financial stress index such as the Bloomberg Financial Conditions Index, which looks at a variety of interest rates and prices (see figure 1).[14] Other versions look at both prices and quantities, issuing a warning when asset prices shoot up at the same time as total credit (see figure 2).[15] Yet another approach treats the entire economy as one big portfolio and looks at the "distance to default," or roughly how large a shock it takes to destabilize the system.[16]

13. For example, De Nicolo and Lucchetta (2010). The Federal Reserve Bank of Cleveland has also been working on developing and piloting a model.
14. Bloomberg (2010). The Federal Reserve Bank of Kansas City also puts out a Financial Stress Index.
15. Borio and Drehman (2009).
16. Gray, Merton, and Bodie (2007).

FIGURE 1

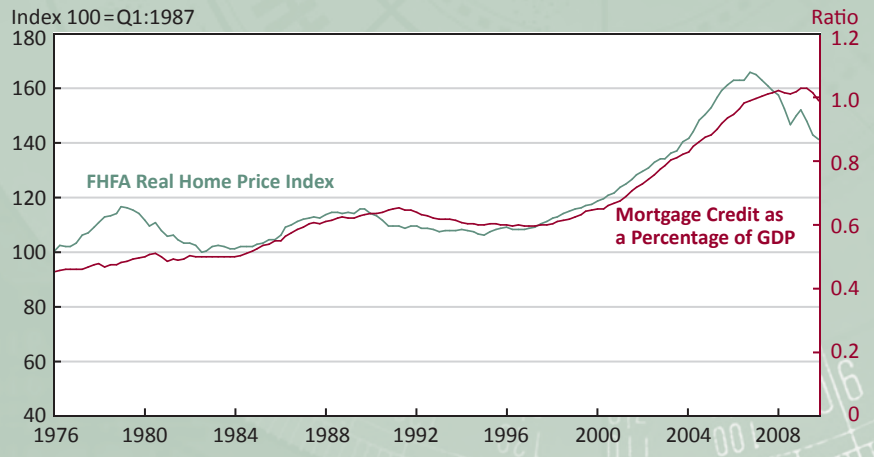
Financial Stress Index and Inverse of the Financial Conditions Index



Sources: Federal Reserve Bank of Kansas City; and Bloomberg.

FIGURE 2

Real Home Price Index and Mortgage Credit as a Percentage of GDP



Sources: Federal Housing Finance Agency; Bureau of Labor Statistics, Flow of Funds; and Bureau of Economic Analysis.

Some proposed reforms—particularly those that would classify some firms as being systemically important and subject them to enhanced supervision—require a set of institution-specific systemic risk measures.

Some proposed reforms, however—particularly those that would classify some firms as being systemically important and subject them to enhanced supervision—require a set of institution-specific systemic risk measures. Going down this path means looking more closely at individual firms, assessing which ones are either highly vulnerable or highly dangerous. The vulnerable firms are those with a high chance of failing when the system gets a shock.[17] One way to identify these is to look for firms whose stock price plummets when the overall market drops. Knowing a firm is sensitive to systemic risk is not the same as knowing it is a likely source of contagion, however. To identify dangerous firms, we can turn the question around and ask which firms will bring down the market.[18] In the data, this means looking at how much the market falls when the firm has a bad day.

17. Acharya, Pedersen, Philippon, and Richardson (2009).

18. Adrian and Brunnermeier (2009).

Getting the details right is tricky and important: Nobody wants to close a bank, cap its leverage, or lend it billions of dollars based on a bad measure of systemic risk. For instance, what counts as a "big drop" in the market, and do you use stock prices, bond yields, or derivatives? Not only can each give different results, but as market-based measures, each reflects the market's view of risk, which may not be grounded in reality.

Furthermore, using data from quiet times to infer behavior in crisis situations has its perils. The space shuttle *Challenger*'s O-rings performed acceptably in cool conditions, but failed dramatically in freezing temperatures.[19] Long-Term Capital Management had a sophisticated risk control system that indicated a well-hedged portfolio: Market shifts would have offsetting effects on different assets, keeping the firm balanced. But when the crisis came, the offsets didn't work, all prices moved together, and the firm needed a rescue. Clearly, it will take time to implement the systemic risk tools, to calibrate them in different ways, and to learn how successful they can be over time. The work is certain to be frustrating and contentious—and yet, it must be done.

19. An extended discussion is in Tufte (1997).

Data Needs and Beyond

Knowing a firm's stock price in real time is straightforward. It is quite another matter to observe a firm's leverage, liquidity, sensitivity, and counterparty exposures on a nearly constant basis. This information will be among the most important data the systemic supervisor will collect, particularly in times of crisis, when the supervisor must quickly make tactical decisions about which firms to save, recapitalize, or close. But many, if not most, firms consider details about their portfolios and investment strategies as proprietary information, so supervisors should anticipate that firms may look for ways to avoid disclosing it.

A start would be to collect basic aggregate information about the firm: assets under management, leverage, portfolio holdings, counterparties, and investors. For commercial banks, much of this information is already collected, but for firms in less-regulated areas, such as hedge funds, it is not. According to Andrew J. Donohue, director of the Securities and Exchange Commission's Division of Investment Management, "It is not uncommon that our first contact with a manager of a significant amount of assets is during an investigation by our Enforcement Division."[20] Indeed, the exposures generated by AIG's credit

20. Donohue (2009).

default swap contracts went unappreciated, even though the company was regulated as both an insurance company and a thrift holding company.

Just as airline safety requires more than assessing the metal fatigue on jetliners—crew rotation schedules, maintenance reviews, and air traffic patterns all matter as well—financial market safety requires many coordinated pieces of information. Data about individual firms build on knowledge of market structure and performance, such as clearing and settlement practices, market volume, patterns of counterparty relationships, and market liquidity. Clearly, supervisors will need to acquire some combination of firm- and market-level data to assess the overall state of the system.

A New Information Infrastructure?

Several proposals have been advanced to create a new "information infrastructure" for the financial system. Federal Reserve Board Governor Daniel K. Tarullo recently provided a rationale for, and a set of principles to guide, an enhanced data collection regime.[21] As Tarullo notes, data collection can be costly, and data overload can create problems for supervisors, so it pays to think carefully in advance about what information needs to be collected.

21. Tarullo (2010a).

Can a Stock Option Predict Financial System Chaos?

Martín Saldías Zambrana, a visiting scholar at the Federal Reserve Bank of Cleveland, takes what's known as a "contingent claims" approach in his proposal for a forward-looking systemic risk indicator. In the simplest terms, a contingent claim gives the holder the right to something else depending on what happens in the future. An option to buy a share of AIG at a certain price level during a certain time period is a type of contingent claim, for example.

Zambrana uses the option-based "distance-to-default" measure developed by Moody's KMV, a credit analysis firm. Distance to default is a measure of the probability that a firm will default, so we use the term "probability of default" in this explanation. The measure uses estimates of the market value of a firm's assets, the volatility of the asset value, and the bankruptcy threshold (that is, the point at which the firm will become insolvent). These estimates are typically backed out of observed accounting data and the price of the firm's traded equity using an option pricing model.

Although it may sound skull-cracking—and indeed, this process typically involves sophisticated mathematics and analytic tools—it is a fairly straightforward procedure. The probability-of-default measure can be constructed for any firm if the minimum information requirements are met.

Zambrana computes probability of default both for a traded index of European bank stocks (the index is called DJ STOXX) and for each of the banks in the index. He then constructs an index of the probability-of-default measures using individual banks' probability of default.

Zambrana's innovation is to use a well-known fact in finance: An option on a portfolio of stocks is not worth the same amount as a portfolio of options on the individual stocks in the portfolio. (That's simply because the option to buy or sell an entire portfolio of stocks does not come with the same inherent flexibility as having an entire portfolio of options to buy or sell stocks.) This means that his two probability-of-default measures for the European banking system will not be the same, *except when there is perfect correlation between the stocks in the portfolio*.

Why is this important? A lesson learned from the demise of the hedge fund Long-Term Capital Management and from research by Andy Lo at MIT is that during periods of financial distress, asset returns in the financial system become more correlated. That makes increased correlation in financial markets a handy indicator of increased systemic risk. So tracking the differences between Zambrana's two probability-of-default measures for the European banking system provides an indicator of increased systemic risk.

Knowing a firm's stock price in real time is straightforward. It is quite another matter to observe a firm's leverage, liquidity, sensitivity, and counterparty exposures on a nearly constant basis.

The academics behind the Squam Lake proposal are primarily worried about counterparty risk and fire-sale risk.[22] They would have large financial institutions report quarterly on their asset positions and risk, and regulators would aggregate and release the data with a delay (to allay confidentiality concerns). Regulators would "standardize the process used to measure values and risk exposure" to allow for easier comparison across firms and greater information sharing among different regulators. Whatever the advantages of the fragmented U.S. financial regulatory system, it does mean that sharing information among agencies takes a concerted effort, particularly among regulators of different industries, such as state insurance commissions, the Federal Reserve, the Securities and Exchange Commission, and the Commodity Futures Trading Commission.

22. Squam Lake Working Group on Financial Regulation (2009).

Tarullo and others note that data requirements are likely to be substantial. Some have called for the creation of a new agency, such as a National Institute of Finance, to gather, prepare, and house the required data.[23] Federal Reserve Bank of Philadelphia economist Leonard Nakamura proposes a U.S. financial regulatory database that would register every direct claim against firms, households, or other legal entities and would include derivatives contracts such as futures, options, and swaps.[24] In his proposal, institutions that buy, sell, or hold a registered asset would report their holdings and activities quarterly. Note that this requirement is not restricted to large, or even financial, firms. Some have called for even more frequent reporting—for instance, having financial institutions submit same-day details of all transactions to a highly secure non-public database accessible to regulators.[25]

23. Mendelowitz and Liechty (2010).

24. Nakamura (2010).

25. Rowe (2009).

Reporting all of this information could be onerous, so it would probably make sense to pilot the system on a smaller scale before expanding it, to compare costs and benefits. Regular and timely reporting of a firm's aggregate exposure to different counterparties, with full details available by close of business in case of an authentic emergency, would give a more manageable set of information for supervisors without imposing a burden that would send firms scurrying to an offshore tax haven.

The Changing Face of Supervision

A world in which systemic risk is measured and managed will require new skill sets and processes for regulators and, quite possibly, new forms of supervision. Analyzing the new information, searching for trends and vulnerabilities, and developing and refining better measures of systemic risk will take teams of analysts drawn from various fields. Few people will have the necessary expertise in network theory, risk analysis, and statistics, to say nothing of the legal background, to process all of the information.

Although regulatory reform legislation has not yet been enacted as of this writing, it is quite clear that supervision must change. Systemic risk will be monitored in some fashion, and the information collected will be incorporated into supervisory practices. Indeed, the Federal Reserve has already made a number of changes in its practices and is contemplating additional ones. In response to the financial crisis, the Federal Reserve has found it useful to create cross-functional teams of examiners, economists, and market and legal experts. These teams were involved with the Supervisory Capital Assessment Program (SCAP)—also known as the stress test—for the nation's largest banks. The SCAP, announced in February 2009, when confidence in the banking system was still very shaky, has been widely regarded as successful in bolstering public confidence and in quelling the turmoil in financial markets.[26] The program has also had a profound effect on how Federal Reserve officials are thinking about systemic risk supervision going forward.[27]

The SCAP demonstrated the value of conducting cross-firm, horizontal reviews of all activities within holding companies that can create risk for the firm and the financial system. The Federal Reserve will be combining firm-specific data analysis and market-based indicators to identify situations that may affect multiple firms. By using scenario analysis, the Federal Reserve would be able to gauge the effect of possible market developments on the capital, liquidity, and leverage positions of systemically important financial institutions. Eventually, more sophisticated modeling would attempt to link traditional and enhanced supervisory information about a collection of financial institutions with market-based stress indicators to build a more comprehensive picture of emerging systemic problems. Although supervisors will always use judgment in interpreting the results obtained from such models, the modeling itself will require measures that quantify possible sources of systemic risk.

26. Similar teams have been formed to assess the effects of incentive compensation on financial firms. See Alvarez (2010).

27. Tarullo (2010b).

Bridges and Hedge Funds: Endogenous Risk

One reason to be careful about using measures of systemic risk is that the wrong measure can make problems worse. In a systemic context, some measures of risk can create feedback loops that increase market instability. Construction engineers, outdoing even economists in the realm of jargon, call this "synchronous lateral excitation," an effect seen in London's Millennial Bridge, where pedestrians, adjusting to small wobbles caused by wind, swayed in step, reinforcing the swings and causing even bigger wobbles.[1] This endogenous risk can show up in financial markets. For example, if traders in a firm have a hard risk limit, a small increase in volatility means they must reduce their position. As traders in many firms do this, prices fall, and the market price change leads to a higher measured level of risk in the market, forcing traders to sell even more.

The lesson is that too naïve a measure of risk, when implemented as a policy, may create the very thing it was intended to prevent. Indeed, something quite similar most likely occurred in one section of the hedge fund industry in August 2007.[2] Losses (or portfolio rebalances) probably led at least one large fund employing a statistical arbitrage strategy to sell, moving market prices enough to trigger other funds following similar quantitative strategies to deleverage in turn. The resulting movements were so large relative to previous movements that one participant described them in the lingo of quantitative risk management as "25-standard-deviation moves," something generally not expected before the collapse of the universe.[3]

1. Strogatz, Abrams, McRobie, Eckhardt, and Ott (2005).

2. Lo (2008).

3. Thal Larsen (2008).

Systemic risk will be monitored in some fashion, and the information collected will be incorporated into supervisory practices.

A Call for Transparency and Dialogue

The recent financial crisis should serve as a powerful reminder that financial markets are dynamic and will adapt to changes in supervision and regulation. We should anticipate that some market participants will look for ways to minimize the restrictions placed on their activities by developing new financial instruments and legal structures, and by expanding the use of implicit guarantees. Financial supervisors will need all the help they can get to stay current with evolving conditions. For its part, the public will want its own assurances that the supervisors are keeping a watchful eye.

In monetary policy, the public has many opportunities to observe the Federal Reserve's progress in achieving its dual mandate to promote stable prices and maximum sustainable economic growth. The Federal Reserve's monetary policy body, the Federal Open Market Committee (FOMC), meets regularly and immediately publishes its policy decisions and rationale. More information follows in meeting minutes, speeches by Fed officials, and Congressional testimony, providing the public with a good understanding of how inflation and unemployment can affect the Federal Reserve's actions. Many highly sophisticated "Fed watchers" frequently comment on the FOMC's strategy and actions, a situation that enables the FOMC to recognize when its own views might differ markedly from those of others. Over time, the FOMC has come to appreciate that a thoughtful communication strategy is a useful component of the policymaking process itself, and that its dialogue with the public leads to better policymaking.

Likewise, we think that supervisory efforts to limit systemic risk could benefit from the credibility and accountability that would arise from an expanded public dialogue. Wall Street gurus and others can criticize the measures of risk—or feel free to propose their own. Pundits can bemoan the supervisors' slow response to rising levels of risk—or their overreaction to noisy data. Public discourse about supervisory strategy and actions could help market participants understand how supervisors are identifying and mitigating systemic risk, and ultimately sharpen the tools and refine the gauges in the supervisors' toolboxes.

More research, data collection, analysis, and practical experience are likely to considerably improve supervisors' ability to tie specific measures of systemic risk to requirements for deposit insurance premiums, capital, liquidity, and leverage. In a very real sense, the supervision of systemic risk stands at the early stages of an evolution that prudential supervision has been undergoing for decades. Even as late as the 1970s, different federal supervisors (primarily the Federal Reserve and the Comptroller's Office of the Treasury) had very different approaches to bank supervision. Attempts to provide a more standardized approach began in the Johnson administration, but progress was slow.[28] In 1978,

28. Robertson (1995).

Congress formalized the convergence, creating the Federal Financial Institutions Examination Council, which introduced the CAMEL system (for Capital, Assets, Management, Earnings, and Liquidity).[29] The system continued to evolve: Concerns that banks held too little capital prompted supervisors to add a risk-based approach in 1988. That approach did not account for market risk, so in 1997 supervisors added an S for Sensitivity to market risk. As banks used securitization to further reduce capital, other changes were implemented.[30] The next step in that evolution could well be a similar system for macrostability ratings, such as the recent proposal by Gary Stern and Ron Feldman.[31]

29. Tarullo (2008).

30. Tarullo (2008).

31. Stern and Feldman (2009).

In this essay, we have explained why we think it is important to learn more about systemic risk measurement. We have shared some of our thinking about the topic and summarized the thinking of others. But this one-way communication does not constitute dialogue. What do *you* think about designing ways to measure systemic risk and a platform to manage it? Take this as a request for public comment: Send your ideas to us at *SystemicRisk@clev.frb.org*.

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2009 Operational Highlights

As economic conditions began to stabilize in 2009, the Federal Reserve Bank of Cleveland enhanced its approach to identifying and addressing critical issues with policy and supervisory implications for the Fourth District. The Bank also continued to provide effective supervision of the District's financial institutions and to maintain operational excellence in serving the needs of the U.S. Treasury and the public.

The Bank's "Power to the People: Regulation and Change" exhibit highlighted the origins of U.S. regulatory agencies and the public's important role in the regulatory process.

Central Bank Operations Although economic conditions gradually improved during the year, many banks continued to struggle. The **Supervision and Regulation** function responded to deteriorating banking conditions by implementing new credit programs to help support a weakened financial market and stress tests to evaluate capital adequacy at large Fourth District institutions. Under demanding conditions, our banking supervisors met their responsibilities and contributed to System initiatives that included operational, credit, and market/liquidity risk discussions.

Throughout the year, the **Community Development** function expanded its outreach efforts to help support access to credit and capital for low- to moderate-income communities. The group actively contributed to policy discussions about mortgage foreclosures, vacant and abandoned properties, and Community Reinvestment Act reform and provided insightful analysis on loan modification programs and Neighborhood Stabilization Program funds. In addition, the group collaborated with Research on a proposal submitted to the Board of Governors that would use the Board's existing rule-writing authority to modify the Community Reinvestment Act. The annual Community Development Policy Summit focused on community stabilization strategies in transitional times.

Jeff Gatica, senior community affairs advisor, moderates a session at the 2009 Community Development Policy Summit.

The **Research** function worked closely with Banking Supervision and Community Development colleagues to complete high-priority initiatives involving financial stability, systemic risk, and mortgage foreclosures. At industry and Federal Reserve System conferences, researchers presented the Bank's framework for assessing and identifying systemic risks. Research also expanded its outreach activities to explain economic conditions and the role of the Federal Reserve and to gain insights on emerging issues through meetings with business, government, and civic leaders across the Fourth District. Throughout the year, the staff maintained comprehensive support for the president's policy contributions to the Federal Open Market Committee.

The Bank's **Learning Center and Money Museum** opened a special exhibit that explored the origins of regulatory agencies in the United States, including the Federal Reserve System, and the public's important role in the regulatory process. "Power to the People: Regulation and Change" was reprised in all Fourth District offices and displayed at the Board of Governors in Washington DC.

Treasury Retail Securities staff earned the Chris Moore "Spirit of Innovation" Award for creativity in implementing new technology and business processes to support the U.S. Treasury.

Core Business Operations The Bank's core business operations improved the efficiency and effectiveness of our nation's payments systems. The **Check** function successfully consolidated five additional paper check capture operations into the Cleveland office in support of the System's strategy of streamlining operations while maintaining strong operational performance. The function met internal targets for productivity and quality.

The Bank continued to provide critical services to the U.S. Treasury across several platforms. The **eGovernment** function provided strong support for the U.S. Treasury's Collections and Cash Management Modernization initiative. The group received the highest possible rating from the U.S. Treasury and met all internal cost targets. Two applications were successfully prepared to process tenfold increases in ACH transactions for the Department of Education's student loan buy-back program. The **Treasury Retail Securities** function received the highest possible rating from the Bureau of the Public Debt and met timeliness and accuracy standards. The function automated a significant portion of the savings bonds redemption process using 2D barcode technology, greatly increasing efficiency.

The Bank also worked to improve the efficiency and effectiveness of its own historic main building. The **Facilities** function advanced the Bank's commitment to operational excellence by making the Bank "greener," earning the Cleveland office an Energy Star certification.

• • •

To support all of these outcomes, the Bank continued its progress toward leadership in thought and deed by effectively responding to the aftermath of financial turmoil. Throughout the year, Federal Reserve Bank of Cleveland officers and staff met with business leaders, community groups, bankers, public officials, and educators in every major city in the District to share the Bank's key messages about the economy and the financial crisis. The Bank expanded its outreach initiative by establishing a foundation for new business advisory councils, developing creative approaches to reach new audiences through social media outlets, and launching a new economic policy publication, *Forefront*.

The Bank launched a new publication to showcase key messages on critical economic policy issues.

Financial Statements as of and for the Years Ended December 31, 2009 and 2008

Auditor Independence

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.[1] 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.

1. 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.

Cleveland, OH 44101
216.579.2000

Management's Report on Internal Control Over Financial Reporting

To the Board of Directors of the Federal Reserve Bank of Cleveland:

The management of the Federal Reserve Bank of Cleveland ("FRBC") is responsible for the preparation and fair presentation of the Statements of Condition, Statements of Income and Comprehensive Income, and Statements 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.

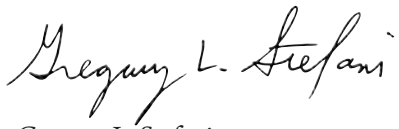
The management of the FRBC is responsible for establishing and maintaining effective internal control over financial reporting as it relates to the Financial Statements. Such internal control is designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation 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 Cleveland
April 21, 2010

Sandra Pianalto
President & Chief Executive Officer



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Independent Auditors' Report

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

We have audited the accompanying statements of condition of the Federal Reserve Bank of Cleveland ("FRB Cleveland") 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 Cleveland 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 Cleveland'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 Cleveland'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 Cleveland's internal control over financial reporting is a process designed by, or under the supervision of, FRB Cleveland's principal executive and principal financial officers, or persons performing similar functions, and effected by FRB Cleveland'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 Cleveland'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 Cleveland; (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 Reserve System, and that receipts and expenditures of FRB Cleveland are being made only in accordance with authorizations of management and directors of FRB Cleveland; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of FRB Cleveland'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 Cleveland 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 Cleveland 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 Cleveland 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

Statements of Condition

(in millions)

	As of December 31, 2009 and December 31, 2008	
	2009	2008
ASSETS		
Gold certificates	$ 467	$ 423
Special drawing rights certificates	237	104
Coin	154	136
Items in process of collection	182	164
Prepaid interest on Federal Reserve notes	–	19
Loans to depository institutions	753	15,622
System Open Market Account:		
Securities purchased under agreements to resell	–	3,034
Treasury securities, net	31,842	18,256
Government-sponsored enterprise debt securities, net	6,612	787
Federal agency and government-sponsored enterprise mortgage-backed securities, net	36,305	–
Investments denominated in foreign currencies	1,861	1,736
Central bank liquidity swaps	757	38,749
Accrued interest receivable	499	312
Interdistrict settlement account	–	16,708
Bank premises and equipment, net	162	168
Other assets	24	34
Total assets	$ 79,855	$ 96,252
LIABILITIES AND CAPITAL		
Federal Reserve notes outstanding, net	$ 37,387	$ 39,263
System Open Market Account:		
Securities sold under agreements to repurchase	3,071	3,350
Other liabilities	24	–
Deposits:		
Depository institutions	15,198	49,963
Other deposits	4	4
Deferred credit items	422	456
Accrued interest on Federal Reserve notes	23	–
Interdistrict settlement account	19,789	–
Interest due to depository institutions	2	7
Accrued benefit costs	108	96
Other liabilities	7	9
Total liabilities	76,035	93,148
Capital paid-in	1,910	1,552
Surplus (including accumulated other comprehensive loss of $19 million and $16 million at December 31, 2009 and 2008, respectively)	1,910	1,552
Total capital	3,820	3,104
Total liabilities and capital	$ 79,855	$ 96,252

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

Statements of Income and Comprehensive Income

(in millions)

	For the years ended December 31, 2009 and December 31, 2008	
	2009	2008
INTEREST INCOME		
Loans to depository institutions	$ 18	$ 132
System Open Market Account:		
Securities purchased under agreements to resell	–	73
Treasury securities	896	996
Government-sponsored enterprise debt securities	80	4
Federal agency and government-sponsored enterprise mortgage-backed securities	804	–
Investments denominated in foreign currencies	22	44
Central bank liquidity swaps	158	252
Total interest income	1,978	1,501
INTEREST EXPENSE		
System Open Market Account:		
Securities sold under agreements to repurchase	4	29
Depository institution deposits	65	28
Total interest expense	69	57
Net interest income	1,909	1,444
NON-INTEREST INCOME		
System Open Market Account:		
Treasury securities gains	–	151
Federal agency and government-sponsored enterprise mortgage-backed securities gains, net	35	–
Foreign currency gains, net	16	89
Compensation received for services provided	35	68
Reimbursable services to government agencies	48	63
Other income	8	33
Total non-interest income	142	404
OPERATING EXPENSES		
Salaries and other benefits	130	129
Occupancy expense	16	20
Equipment expense	10	11
Assessments by the Board of Governors	52	49
Other expenses	24	62
Total operating expenses	232	271
Net income prior to distribution	1,819	1,577
Change in funded status of benefit plans	(3)	1
Comprehensive income prior to distribution	$ 1,816	$ 1,578
Distribution of comprehensive income:		
Dividends paid to member banks	$ 100	$ 85
Transferred to surplus and change in accumulated other comprehensive loss	358	261
Payments to Treasury as interest on Federal Reserve notes	1,358	1,232
Total distribution	$ 1,816	$ 1,578

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

Statements of Changes in Capital

(in millions, except share data)

For the years ended December 31, 2009 and December 31, 2008

		Surplus			
	Capital paid-in	Net income retained	Accumulated other comprehensive loss	Total surplus	Total capital
Balance at January 1, 2008 (25,821,394 shares)	$ 1,291	$ 1,308	$ (17)	$ 1,291	$ 2,582
Net change in capital stock issued (5,220,514 shares)	261	–	–	–	261
Transferred to surplus and change in accumulated other comprehensive loss	–	260	1	261	261
Balance at December 31, 2008 (31,041,908 shares)	$ 1,552	$ 1,568	$ (16)	$ 1,552	$ 3,104
Net change in capital stock issued (7,166,154 shares)	358	–	–	–	358
Transferred to surplus and change in accumulated other comprehensive loss	–	361	(3)	358	358
Balance at December 31, 2009 (38,208,062 shares)	$ 1,910	$ 1,929	$ (19)	$ 1,910	$ 3,820

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

Notes to Financial Statements

1. Structure

The Federal Reserve Bank of Cleveland ("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 Fourth Federal Reserve District, which includes Ohio and portions of Kentucky, Pennsylvania, and West Virginia.

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 Check Adjustments, Retail Payments Office, Treasury Retail Services Technology, Cash Technology, Check Restructuring Projects, National Check Automation Services, and National Billing Operations.

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 Fourth 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 $133 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 interdistrict 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 or 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 $7,535 million and $7,240 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 depositary 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

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. Similarly, 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. The FRBA and the FRBNY compensate the applicable Reserve Banks for the costs incurred to provide these services. The Bank reports this compensation as "Compensation received for services provided" 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 $2 million for each of the years ended December 31, 2009 and 2008, and are reported as a component of "Occupancy expense."

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.

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 consolidated 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	$ 1	$ 47
TAF	752	15,575
Loans to depository institutions	$ 753	$ 15,622

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.

The remaining maturity distributions of loans outstanding at December 31were as follows (in millions):

	2009	
	Primary, secondary, and seasonal credit	TAF
Within 15 days	$ –	$ 752
16 days to 90 days	1	–
Total loans	$ 1	$ 752

	2008	
	Primary, secondary, and seasonal credit	TAF
Within 15 days	$ 47	$ 8,825
16 days to 90 days	–	6,750
Total loans	$ 47	$ 15,575

Allowance for Loan Loss

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 3.951 percent and 3.792 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					
	Bills	Notes	Bonds	Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
Par	$ 728	$ 22,453	$ 7,500	$ 30,681	$ 6,316	$ 35,888
Unamortized premiums	–	259	966	1,225	297	478
Unaccreted discounts	–	(39)	(25)	(64)	(1)	(61)
Total amortized cost	$ 728	$ 22,673	$ 8,441	$ 31,842	$ 6,612	$ 36,305
Fair Value	$ 728	$ 23,035	$ 9,115	$ 32,878	$ 6,615	$ 36,122

	2008					
	Treasury Securities					
	Bills	Notes	Bonds	Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
Par	$ 699	$ 12,695	$ 4,653	$ 18,047	$ 747	$ –
Unamortized premiums	–	10	254	264	41	–
Unaccreted discounts	–	(32)	(23)	(55)	(1)	–
Total amortized cost	$ 699	$ 12,673	$ 4,884	$ 18,256	$ 787	$ –
Fair Value	$ 699	$ 13,564	$ 6,425	$ 20,688	$ 791	$ –

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					
	Bills	Notes	Bonds	Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
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					
	Bills	Notes	Bonds	Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
Amortized Cost	$ 18,422	$ 334,217	$ 128,810	$ 481,449	$ 20,740	$ –
Fair Value	18,422	357,709	169,433	545,564	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%	$ 6,721	$ 6,548
4.5%	17,160	17,053
5.0%	7,721	7,760
5.5%	4,084	4,132
6.0%	502	510
Other[1]	117	119
Total	$ 36,305	$ 36,122
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[1]	2,949	3,009
Total	$ 918,927	$ 914,290

[1] 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	$ –	$ 3,034	$ 3,071	$ 3,350
Average daily amount outstanding, during the year	137	3,317	2,647	2,127
Maximum month-end balance outstanding, during the year	–	4,512	3,071	3,737
Securities pledged, end of year			3,076	2,992
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 the 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 $3,680 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 $2,482 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 sold under agreements to repurchase (Contract amount)
Within 15 days	$ 459	$ 3	$ –	$ 3,071
16 days to 90 days	1,140	120	–	–
91 days to 1 year	2,006	850	–	–
Over 1 year to 5 years	12,914	3,927	–	–
Over 5 years to 10 years	8,443	1,335	1	–
Over 10 years	5,719	81	35,887	–
Total allocated to the Bank	$ 30,681	$ 6,316	$ 35,888	$ 3,071

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 $854 million and $6,855 million, respectively, were allocated to the Bank.

At December 31, 2009, the total of other investments was $5 million, of which the Bank's allocated share was immaterial. Other investments consist 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 $24 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 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 $6,325 million, of which $1,297 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 $6,277 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 $35 million was allocated to the Bank. These net gains are reported as "Non-Interest Income: 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 7.364 percent and 6.998 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	$ 545	$ 389
Securities purchased under agreements to resell	191	285
Government debt instruments	363	323
Japanese yen:		
Foreign currency deposits	251	244
Government debt instruments	511	495
Total allocated to the Bank	$ 1,861	$ 1,736

At December 31, 2009 and 2008, the fair value of investments denominated in foreign currencies, including accrued interest, allocated to the Bank was $1,876 million and $1,751 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	$ 447	$ 267	$ 714
16 days to 90 days	185	34	219
91 days to 1 year	177	174	351
Over 1 year to 5 years	290	287	577
Total allocated to the Bank	$ 1,099	$ 762	$ 1,861

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 7.364 percent and 6.998 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 $757 million and $38,749 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	Within 15 days	16 days to 90 days	Total
Australian dollar	$ –	$ 700	$ 898	$ 1,598
Danish krone	–	–	1,050	1,050
Euro	479	10,565	9,824	20,389
Japanese yen	40	3,351	5,236	8,587
Korean won	–	–	724	724
Mexican peso	238	–	–	–
Norwegian krone	–	154	422	576
Swedish krona	–	700	1,049	1,749
Swiss franc	–	1,345	417	1,762
U.K. pound	–	8	2,306	2,314
Total	$ 757	$ 16,823	$ 21,926	$ 38,749

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	$ 10	$ 9
Buildings	171	173
Building machinery and equipment	60	60
Furniture and equipment	53	63
Subtotal	294	305
Accumulated depreciation	(132)	(137)
Bank premises and equipment, net	$ 162	$ 168
Depreciation expense, for the years ended December 31	$ 12	$ 16

The Bank leases space to outside tenants with remaining lease terms ranging from one to fifteen years. Rental income from such leases was $1 million for each of the years ended December 31, 2009 and 2008, 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	$ 2
2011	1
2012	2
2013	2
2014	1
Thereafter	6
Total	$ 14

The Bank had capitalized software assets, net of amortization, of $6 million and $8 million at December 31, 2009 and 2008, respectively. Amortization expense was $3 million and $18 million for the years ended December 31, 2009 and 2008, respectively. Capitalized software assets are reported as a component of "Other assets" in the Statements of Condition and the related amortization is reported as a component of "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 a noncancelable lease for premises with a remaining term of less than one year.

Rental expense under operating leases for certain operating facilities, data processing and office equipment (including taxes, insurance, and maintenance when included in rent), net of sublease rentals, was $300 thousand and $219 thousand for the years ended December 31, 2009 and 2008, respectively.

Future minimum rental payments under noncancelable operating leases, net of sublease rentals, with terms of one year or more, at December 31, 2009, were not material.

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 $5 million and $4 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	$ 86.0	$ 81.2
Service cost benefits earned during the period	3.6	3.5
Interest cost on accumulated benefit obligation	5.2	5.3
Net actuarial loss (gain)	2.5	(0.8)
Curtailment gain	–	(0.2)
Contributions by plan participants	0.6	0.6
Benefits paid	(4.5)	(3.8)
Medicare Part D subsidies	0.3	0.2
Accumulated postretirement benefit obligation at December 31	$ 93.7	$ 86.0

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	3.6	3.0
Contributions by plan participants	0.6	0.6
Benefits paid	(4.5)	(3.8)
Medicare Part D subsidies	0.3	0.2
Fair value of plan assets at December 31	$ –	$ –
Unfunded obligation and accrued postretirement benefit cost	$ 93.7	$ 86.0
Amounts included in accumulated other comprehensive loss are shown below:		
Prior service cost	$ 1.5	$ 3.8
Net actuarial loss	(20.8)	(19.8)
Total accumulated other comprehensive loss	$ (19.3)	$ (16.0)

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	12.7	(10.5)

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	$ 3.6	$ 3.5
Interest cost on accumulated benefit obligation	5.2	5.3
Amortization of prior service cost	(2.3)	(2.3)
Amortization of net actuarial loss	1.4	2.1
Net periodic postretirement benefit expense	$ 7.9	$ 8.6

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	$ (1.4)
Net actuarial loss	1.6
Total	$ 0.2

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 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 $0.3 million and $0.2 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	$ 4.5	$ 4.2
2011	5.0	4.6
2012	5.4	4.9
2013	5.8	5.3
2014	6.2	5.7
2015–2019	38.6	35.1
Total	$ 65.5	$ 59.8

Postemployment Benefits

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined using a December 31 measurement date 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 $12.7 million and $8.0 million, respectively. This cost is included as a component of "Accrued benefit costs" in the Statements of Condition. Net periodic postemployment benefit expense included in 2009 and 2008 operating expenses were $6.1 million and $1.5 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	$ (17)
Change in funded status of benefit plans:	
Net actuarial gain arising during the year	1
Amortization of prior service cost	(2)
Amortization of net actuarial loss	2
Change in funded status of benefit plans—other comprehensive loss	1
Balance at December 31, 2008	$ (16)
Change in funded status of benefit plans:	
Net actuarial loss arising during the year	(2)
Amortization of prior service cost	(2)
Amortization of net actuarial loss	1
Change in funded status of benefit plans—other comprehensive loss	(3)
Balance at December 31, 2009	$ (19)

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

14. Business Restructuring Charges

2007 and Prior Restructuring Plans

The Bank incurred various restructuring charges prior to 2008 related to the restructuring of Check Operations and Electronic Treasury Financial Services.

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

	2007 and prior restructuring plans
Information related to restructuring plans as of December 31, 2009:	
Total expected costs related to restructuring activity	$ 2.1
Expected completion date	2010
Reconciliation of liability balances:	
Balance at January 1, 2008	$ 2.9
Employee separation costs	0.2
Adjustments	(1.0)
Payments	(1.1)
Balance at December 31, 2008	$ 1.0
Payments	(0.9)
Balance at December 31, 2009	$ 0.1

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.

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

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.

Officers and Consultants

As of December 31, 2009

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Chief Executive Officer

Mark S. Sniderman
Executive Vice President and
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Economic Research,
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Susan G. Schueller
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Douglas A. Banks
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Kelly A. Banks
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Ruth M. Clevenger
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Cheryl L. Davis
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Executive/Corporate Information
Management, Diversity

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Business Continuity

Federal Reserve Banks each have a main office board of nine directors. Directors supervise the Bank's budget and operations, make recommendations on the discount rate on primary credit and, with the Board of Governors' approval, appoint the Bank's president and first vice president.

In addition, directors provide the Federal Reserve System with a wealth of information on economic conditions. This information is used by the Federal Open Market Committee and the Board of Governors in reaching decisions about monetary policy.

Class A directors are elected by and represent Fourth District member banks. Class B directors are also elected by Fourth District member banks and represent diverse industries within the District. Class C directors are selected by the Board of Governors and also represent the wide range of businesses and industries in the Fourth District. Two Class C directors are designated as chairman and deputy chairman of the board.

The Cincinnati and Pittsburgh branch offices each have a board of seven directors who are appointed by the Board of Governors and the Board of Directors of the Federal Reserve Bank of Cleveland.

Terms for all directors are generally limited to two three-year terms to ensure that the individuals who serve the Federal Reserve System represent a diversity of backgrounds and experience.

Cleveland Board of Directors

As of December 31, 2009

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Chief Executive Officer
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Columbus, Ohio

Alfred M. Rankin Jr.
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Chairman, President, and
Chief Executive Officer
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Cleveland, Ohio

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Chief Executive Officer
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Chief Executive Officer
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Gahanna, Ohio

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Chief Executive Officer
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(back) Roy W. Haley, C. Daniel DeLawder, Les C. Vinney, and James E. Rohr.
(front) Tilmon F. Brown, Susan Tomasky, Charlotte W. Martin, Tanny B. Crane, and Alfred M. Rankin Jr.

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As of December 31, 2009

James M. Anderson
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Gregory B. Kenney, Janet B. Reid, Donald E. Bloomer, Paul R. Poston, James M. Anderson, Daniel B. Cunningham, and Peter S. Strange.

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As of December 31, 2009

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Pittsburgh, Pennsylvania

Margaret Irvine Weir, Glenn R. Mahone, Robert A. Paul, Sunil T. Wadhwani, Petra Mitchell, Howard W. Hanna III, and Todd D. Brice.

Business Advisory Councils

As of December 31, 2009

Business Advisory Council members are a diverse group of Fourth District businesspeople who advise the president and senior officers on current business conditions.

Each council — in Cleveland, Cincinnati, Lexington, and Pittsburgh — meets with senior Bank leaders at least twice yearly. These meetings provide anecdotal information that is useful in the consideration of monetary policy direction and economic research activities.

Cleveland

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of Western Pennsylvania
Pittsburgh, Pennsylvania

Consumer Advisory Council

As of December 31, 2009

The Federal Reserve System's Consumer Advisory Council advises the Federal Reserve's Board of Governors on the exercise of the Board's responsibilities under various consumer financial services laws and on other related matters.

The council membership represents interests of consumers, communities, and the financial services industry. Members are appointed by the Board of Governors and serve three-year terms. The council meetings, held three times a year in Washington DC, are open to the public.

The following members represent the Fourth Federal Reserve District on the Consumer Advisory Council:

Kathleen Engel
Professor of Law
Suffolk University Law School
Boston, Massachusetts
(formerly Cleveland, Ohio)

Louise J. Gissendaner
Akron City President and Director of Community Development
Fifth Third Bank
Cleveland, Ohio

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