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Testimony

Actions by the New York Fed in Response to Liquidity Pressures in Financial Markets

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Good morning, Chairman Dodd, Ranking Member Shelby, and other members of the Committee. Thank you for giving me the opportunity to appear before you today. I am here to outline the actions by the Federal Reserve Bank of New York in response to present challenges in financial markets, including those in relation to the proposed merger of Bear Stearns and JPMorgan Chase.

On the evening of Thursday, March 13, 2008, I took part in a conference call with representatives from the Securities and Exchange Commission, the Board of Governors of the Federal Reserve and the Treasury Department. On that call, the SEC staff informed us that Bear Stearns' funding resources were inadequate to meet its obligations and that the firm had concluded that it would have to file for bankruptcy protection the next morning. The SEC said it concurred in that judgment, and it would spend the evening discussing with Bear what kind of bankruptcy filing was appropriate.

The conference call that evening took place against the backdrop of an extraordinarily challenging period in the U.S. financial system. This context was critical to the decisions we made over the next several days. And I think it's important to start with an explanation of the broad risks to the economy posed by the crisis now working through the financial system.

The intensity of the crisis we now face in U.S. and global financial markets is a function of the size and character of the financial boom that preceded it. This was a period of rapid financial innovation—particularly in credit risk transfer instruments such as credit derivatives and securitized and structured products. There was considerable growth in leverage, greater reliance on ratings on structured credit products and a marked deterioration in underwriting standards.

The innovation in financial products was accompanied by a dramatic increase in the amount of financial intermediation occurring outside the core banking system. The importance of securities broker-dealers, hedge funds, and mutual funds in the financial system rose steadily. Off-balance-sheet vehicles of various forms proliferated, and increased concentrations of longer-dated assets were held in funding vehicles with substantial liquidity risk.

The deterioration in the U.S. housing market late in the summer of 2007 precipitated a sharp rise in uncertainty about the value of securitized or structured assets. Demand for these assets contracted dramatically and the securitization market for mortgages and other credit assets stopped working. This, in turn, increased funding pressures for a diverse mix of financial institutions. Uncertainty about the magnitude and the level of losses for financial institutions fueled concern about credit risk in exposure to those institutions.

Part of the dynamic at work was that banks were forced to provide financing for—or take over—the assets in a range of structured investment vehicles and conduits financed by asset-backed commercial paper. As some investors attempted to liquidate their holdings of these assets, many of the traditional providers of unsecured funding to banks pulled back from their counterparties in anticipation of the potential

withdrawals of funds by their own investors.

Market participants' willingness to provide term funding even against high-quality collateral declined dramatically. As a consequence, the cost of unsecured term funding rose precipitously and the volume shrunk. Banks were funding themselves at shorter and shorter maturities. As unsecured term funding markets deteriorated, the premium on liquid, marketable collateral—such as Treasury securities—rose considerably.

Even with the dramatic actions by the Federal Reserve and other central banks to address these liquidity pressures, the strains in financial markets persisted. In many respects, conditions worsened materially in February and March. Credit spreads on financial institutions widened, equity prices declined and market functioning deteriorated sharply. By the early part of March, the threat of a disorderly adjustment was growing.

What we were observing in U.S. and global financial markets was similar to the classic pattern in financial crises. Asset price declines—triggered by concern about the outlook for economic performance—led to a reduction in the willingness to bear risk and to margin calls. Borrowers needed to sell assets to meet the calls; some highly leveraged firms were unable to meet their obligations and their counterparties responded by liquidating the collateral they held. This put downward pressure on asset prices and increased price volatility. Dealers raised margins further to compensate for heightened volatility and reduced liquidity. This, in turn, put more pressure on other leveraged investors. A self-reinforcing downward spiral of higher haircuts forced sales, lower prices, higher volatility and still lower prices.

This dynamic poses a number of risks to the functioning of the financial system. It reduces the effectiveness of monetary policy, as the widening in spreads and risk premia worked to offset part of the reduction in the fed funds rate. Contagion spreads, transmitting waves of distress to other markets, from subprime to prime mortgages and even to agency mortgage-backed securities, to commercial mortgage-backed securities and to corporate bonds and loans. In the current situation, effects were felt in the municipal and student loan markets.

The most important risk is systemic: if this dynamic continues unabated, the result would be a greater probability of widespread insolvencies, severe and protracted damage to the financial system and, ultimately, to the economy as a whole. This is not theoretical risk, and it is not something that the market can solve on its own. It carries the risk of significant damage to economic activity. Absent a forceful policy response, the consequences would be lower incomes for working families, higher borrowing costs for housing, education, and the expenses of everyday life, lower value of retirement savings and rising unemployment.

Federal Reserve Response

The Federal Reserve has taken a series of policy actions to help contain the risks to the economy posed by this financial crisis. The Federal Open Market Committee (FOMC) has reduced the nominal federal funds rate target by 300 basis points since August of 2007. Alongside these appropriately aggressive monetary actions, the Federal Reserve has taken a series of initiatives aimed at improving market liquidity and overall market functioning. A more detailed description of these liquidity initiatives is included as [Annex I](#).

These actions are designed to allow financial intermediaries to finance with the central bank assets they can no longer finance as easily in the market. And in this way these liquidity facilities reduce the need for those institutions to take the types of actions, such as selling other assets into distressed markets or withdrawing credit lines extended to other financial institutions, that would serve to amplify the pressures in markets.

In addition to these monetary policy and liquidity actions, the Federal Reserve has been working with community groups and housing advocates across the country to help homeowners navigate the complex challenges of higher resets and falling home prices. The Federal Reserve is actively working with homeowners and communities to identify solutions to avoid foreclosures and their negative effects, support appropriate consumer protection and responsible lending practices, and apply our expertise in research and evaluation to provide community groups, counseling agencies, regulators, and others with detailed analysis

to support efforts to help troubled borrowers and communities.

I believe that the Federal Reserve System's response has helped reduce the risk of systemic damage to the financial system, and thereby helped mitigate a potential source of downside risk to growth. This in turn has helped mitigate the risks to the broader economy. It is important to recognize that a substantial adjustment, recognition of losses, and reduction in risk has already taken place. And a range of different prices of financial assets now reflect a very cautious view of the future. The severity of the pressures in markets evident over the last few months are in part a reflection of the speed and force with which markets and institutions in our financial system adapt to fundamental changes in the outlook. This capacity to adjust and adapt is one of the great strengths of our system. Nevertheless, we still face a number of challenges ahead. The seeds of this crisis took a long time to build up, and they will take some time to work through.

The Role of Banks and Investment Banks in Our Financial System

A driving force behind Congress' creation of the Federal Reserve System in 1914 was its recognition of the need for a public institution to perform the role of lender of last resort. The financial landscape in 1914 (and continuing until relatively recent times) was one dominated by traditional banks. When the Federal Reserve was founded, there was no deposit insurance, so the willingness of individuals and businesses to hold deposits at a particular bank depended wholly on their degree of trust that the bank would be able to promptly furnish them with the money they had deposited—whenever they might request it. But—as Congress understood—the business of banking involves making loans as well as taking deposits. Because banks, in order to make money, needed to extend long-term credit to customers for things like the purchases of homes or investments in business equipment, not all of the money taken in by banks could be readily available to be paid out if depositors were to request it. In fact, only a small fraction of a typical bank's assets were kept in liquid enough form to be immediately paid to depositors upon demand. This fundamental fact of bank operation left banks—and the banking system—open to liquidity shocks that, nearly a century later, have their echoes in recent market developments.

The financial crises around the turn of the century were the historic catalyst for the Federal Reserve's creation by Congress. It is panic or fear that drives depositors *en masse* to the door of the banking house to demand their money back. In such a case, even an institution that is fundamentally solvent—i.e., whose assets (mostly longer-term loans) are worth more than its liabilities—may find that it does not have enough cash on hand—that is, enough liquidity—to satisfy its customers.

The function of a lender of last resort in such a case is to lend to the institution that is facing heightened customer demand for repayment in an amount sufficient to satisfy customer demands, while taking assets of the institution as security for the lending. If the lender of last resort does not act to fulfill this role, the institution facing heightened customer demands for repayment may be forced to begin a "fire sale" of its assets, the distressed and hurried nature of which will cause them to be sold at less than their true long-run value, which may quickly lead to the insolvency of the institution. The insolvency may precipitate further downward pressure on the market value of such assets magnifying the risk to other financial institutions.

Over the past 30 years, we have moved from a bank-dominated financial system to a system in which credit is increasingly extended, securitized and actively traded in a combination of centralized and decentralized markets. In many ways, the business models of banks and non-bank financial institutions—especially large securities firms—have converged, with banks playing a greater agency role in the credit process, and securities firms doing more of the financing.

It is important to understand that investment banks now perform many of the economic functions traditionally associated with commercial banks, and they are also vulnerable to a sudden loss of liquidity. Unlike commercial banks, which rely significantly on deposits for funding, investment banks operate according to a business model in which they fund large portions of their balance sheets on a secured, short-term basis in what is known as the repo market. Because the assurance of access to short-term secured funding on a daily basis is such a critical component of business functioning for these entities, they are vulnerable to the possibility of a sudden pullback in short-term lending, or a reduction in the willingness of investors to lend against certain classes of securities.

As we have seen throughout the past nine months, these changes in the relative roles of traditional commercial banks and investment banks have changed the nature of financial stability. In the United States, the regulatory framework and most of the tools that were created to prevent and manage financial crises were developed in a bank-dominated era, and we have had to adapt those tools to deal with current market realities.

Bear Stearns

With this important context, let me return to the actions taken by the Federal Reserve in response to the situation that arose at Bear Stearns. That response was shaped in roughly four stages: (1) the decision on the morning of March 14 to extend a non-recourse loan through the discount window to JPMorgan Chase so that JPMorgan Chase could in turn lend that money to Bear Stearns; (2) the decision on March 16 by JPMorgan Chase and Bear Stearns for JPMorgan Chase to acquire Bear and guarantee certain of its liabilities, along with an agreement in principle that the Federal Reserve Bank of New York would provide certain financing in the context of that acquisition; (3) the launching of the Primary Dealer Credit Facility; and (4) the events of the following week, culminating in the March 24 announcement of revised merger agreement and guaranty terms between JPMorgan Chase and Bear, and the finalizing of the terms and structure of the associated loan from the Federal Reserve Bank of New York.

Let me begin with the market situation in which Bear was operating in the days leading up to March 13. Fixed-income traders had begun hearing rumors that European financial institutions had stopped doing fixed income trades with Bear. Fearing that their funds might be frozen if Bear wound up in bankruptcy, a number of U.S.-based fixed-income and stock traders that had been actively involved with Bear had reportedly decided to halt such involvement. Many firms started pulling back from doing business with Bear. Some hedge funds that had used Bear to borrow money and clear trades were withdrawing cash from their accounts. Some large investment banks stopped accepting trades that would expose them to Bear, and some money market funds reduced their holdings of short-term Bear-issued debt. The rumors of Bear's failing financial health caused its balance of unencumbered liquidity on March 13 to decline sharply to levels that were not adequate to cover maturing obligations and funds that could be withdrawn freely. This precipitated the phone call that I described in the beginning of my testimony.

The news that Bear's liquidity position was so dire that a bankruptcy filing was imminent presented us with a very difficult set of policy judgments. In our financial system, the market sorts out which companies survive and which fail. However, under the circumstances prevailing in the markets the issues raised in this specific instance extended well beyond the fate of one company. It became clear that Bear's involvement in the complex and intricate web of relationships that characterize our financial system, at a point in time when markets were especially vulnerable, was such that a sudden failure would likely lead to a chaotic unwinding of positions in already damaged markets. Moreover, a failure by Bear to meet its obligations would have cast a cloud of doubt on the financial position of other institutions whose business models bore some superficial similarity to Bear's, without due regard for the fundamental soundness of those firms.

The sudden discovery by Bear's derivatives counterparties that important financial positions they had put in place to protect themselves from financial risk were no longer operative would have triggered substantial further dislocation in markets. This would have precipitated a rush by Bear's counterparties to liquidate the collateral they held against those positions and to attempt to replicate those positions in already very fragile markets.

In short, we judged that a sudden, disorderly failure of Bear would have brought with it unpredictable but severe consequences for the functioning of the broader financial system and the broader economy, with lower equity prices, further downward pressure on home values, and less access to credit for companies and households.

Following that initial call with the SEC on March 13, my colleagues in New York and in Washington spent the night focusing on the implications of a large-scale default by Bear and how we might contain the consequential damage. Bear renewed conversations that began earlier that day with JPMorgan Chase, which is Bear's clearing bank for its repo arrangements, to explore a range of possible financing options. The New York Fed dispatched a team of examiners to Bear Stearns to look at its books so that we could get a better handle on what could be done. We gathered the best information we could, evaluated the

risks involved, and explored a range of possible actions.

At 5:00 a.m., we participated in a conference call with our colleagues at the Board of Governors and the Treasury to review the options and decide on the way forward. After careful deliberation, together we decided on a course of action that would at least buy some time to explore options to mitigate the foreseeable damage to the financial system. With the support of the Secretary of the Treasury, Chairman Bernanke and the Board of Governors agreed that the New York Fed would extend an overnight non-recourse loan through the discount window to JPMorgan Chase, so that JPMorgan Chase could then "on-lend" that money to Bear Stearns.

This action was designed to allow us to get to the weekend, and to enable us to pursue work along two tracks: first, for Bear to continue to explore options with other financial institutions that might enable it to avoid bankruptcy; and second, for policymakers to continue the work begun on Thursday night to try to contain the risk to financial markets in the event no private-sector solution proved possible.

Over the course of that day, March 14, Bear was downgraded by the credit rating agencies, and the flight of customer business from Bear accelerated. This set in motion a chain of decisions across the financial system as market participants prepared for the possibility that Bear would not be open for business once Asian markets opened on Sunday night. This highlighted the urgency of working toward a solution over the weekend, ideally a solution that would definitively address the prospect of default by Bear.

Bear approached several major financial institutions, beginning on March 13. Those discussions intensified on Friday and Saturday. Bear's management provided us with periodic progress reports about a possible merger. Although several different institutions expressed interest in acquiring all or part of Bear, it was clear that the size of Bear, the apparent risk in its balance sheet, and the limited amount of time available for a possible acquirer to conduct due diligence compounded the difficulty. Ultimately, only JPMorgan Chase was willing to consider an offer of a binding commitment to acquire the firm and to stand behind Bear's substantial short-term obligations.

As JPMorgan Chase and other institutions conducted due diligence, my colleagues in New York and Washington continued to examine ways to contain the effects of a default by Bear. As part of these discussions, we began to design a new facility that would build on other liquidity initiatives taken by the Federal Reserve System, and provide a more powerful form of liquidity to major financial institutions.

Following the announcement on March 11 of the Term Securities Lending Facility, which allowed primary dealers to pledge a wider range of collateral in order to borrow Treasury securities, we had consulted with market participants on how to structure the auctions to maximize their potential benefits to market functioning. Those discussions yielded a number of helpful suggestions. In view of those suggestions, and after considering the greater risks to the financial system posed by the Bear situation, we were able to work quickly on a companion facility that would transmit liquidity to parts of the market where it could be most powerful.

This is what led the Board of Governors of the Federal Reserve System to approve the establishment of the Primary Dealer Credit Facility on March 16. Under Section 13(3) of the Federal Reserve Act, the Board of Governors is empowered to authorize a Federal Reserve Bank like the New York Fed to lend to a corporation, such as an investment bank, in extraordinary circumstances under which there is evidence that the corporation cannot "secure adequate credit accommodations from other banking institutions." The Board of Governors needed to make the statutory finding that the circumstances were exigent and extraordinary, and it did so, based on the situation prevailing in the financial markets and the distinct possibility that absent an assurance of liquidity to major investment banks the deterioration in financial conditions likely would have continued with substantial effects on the economy.

We recognized, of course, that the use of this legal authority was, in itself, an extraordinary step. At the same time, we were mindful that Congress included this lending power in the Federal Reserve Act for a reason, and it seemed irresponsible for us not to use that authority in this unique situation. Even with an agreement in place that might reduce the probability of a default by Bear, we decided that independent of that outcome, it was important to get assured liquidity to primary dealers by Monday morning, to address

the accelerating process of deleveraging and tightening liquidity seen in the financial system.

On Sunday morning, executives at JPMorgan Chase informed us that they had become significantly more concerned about the scale of the risk that Bear and its many affiliates had assumed. They were also concerned about the ability of JPMorgan Chase to absorb some of Bear's trading portfolio, particularly given the uncertainty ahead about the ultimate scale of losses facing the financial system. In this context, we began to explore ways in which we could help facilitate a more orderly solution to the Bear situation. We did not have the authority to acquire an equity interest in either Bear or JPMorgan Chase, nor were we prepared to guarantee Bear's very substantial obligations. And the only feasible option for buying time would have required open ended financing by the Fed to Bear into an accelerating withdrawal by Bear's customers and counterparties.

We did, however, have the ability to lend against collateral, as in the back-to-back non-recourse arrangement that carried Bear into the weekend. After extensive discussion with my colleagues at the New York Fed, Chairman Bernanke, and Secretary Paulson, and with their full support, the New York Fed and JPMorgan Chase reached an agreement in principle that the New York Fed would assist with non-recourse financing. Using Section 13(3) of the Federal Reserve Act, the New York Fed agreed in principle to lend \$30 billion to JPMorgan Chase and to secure the lending with a pledge of Bear Stearns assets valued by Bear on March 14 at approximately \$30 billion. This step made it possible for JPMorgan to agree to acquire Bear and to step in immediately to guarantee all of Bear's short-term obligations. This guarantee was especially important to stave off the feared systemic effects that would be triggered by the panic of a Bear bankruptcy filing and of the failure to honor its obligations. And by agreeing to lend against a portfolio of securities, we reduced the risk that those assets would be liquidated quickly, exacerbating already fragile conditions in markets. The portfolio of securities is described in [Annex II](#) to this testimony.

On the evening of Sunday the 16th, I sent a letter to James Dimon, the CEO of JPMorgan Chase, to memorialize the fact that we had reached a preliminary agreement that the New York Fed would assist the acquisition with \$30 billion in financing, with the understanding that the parties would continue working during the week towards a formal contract. We also provided regulatory approvals, including under Section 23A, to assist with the merger and a transitional period for phasing in the assets under our capital rules.

The announcement of the agreement between Bear Stearns and JPMorgan Chase and the announcement of the Primary Dealer Credit Facility were finalized just before Asian markets opened on Sunday night, and the announcement of these actions helped avert the damage that would have accompanied default.

On Monday morning, March 17, the \$13 billion back-to-back non-recourse loan through JPMorgan Chase to Bear was repaid to the Fed, with weekend interest of nearly \$4 million. The Primary Dealer Credit Facility was made available to the market. And at the request of and with the full cooperation of the SEC, examiners from the New York Fed were sent into the major investment banks to give the Federal Reserve the direct capacity to assess the financial condition of these institutions.

Discussions were also continuing regarding the details of the Fed's financial arrangement with JPMorgan Chase. Our legal teams engaged in the meticulous work of finalizing the legal structure of the lending arrangement that had been agreed to in principle, including defining the precise pool of collateral and related hedges that would secure the \$30 billion loan.

At the same time, several infirmities became evident in the agreement between JPMorgan and Bear during the week of March 17th that needed to be cured.

Negotiations between the two sets of counterparties proceeded almost immediately between the New York Fed and JPMorgan Chase on the one hand, and between JPMorgan Chase and Bear Stearns on the other. The New York Fed and JPMorgan discussed the details for the secured financing. Bear Stearns and JPMorgan continued to negotiate changes to the merger agreement that would tighten the guarantee and provide the necessary certainty that the merger would be consummated. All the parties shared an overriding common interest: to move toward a successful merger and avoid the situation in which they found themselves on March 14.

The extended Easter weekend saw intense sets of bilateral negotiations among the three parties. The deal, finally struck in the early morning hours on March 24, held benefits for all parties. That deal included a new, more precise guaranty from JPMorgan, which lifted the cloud of default risk that had been hanging over the transaction. Bear stockholders were to receive a higher share price. In addition to fixing the guaranty, JPMorgan gained assurance that its merger with Bear would take place. And the New York Fed obtained significant downside protection on the loan and a tighter guaranty on its exposure. The new Fed financing facility will be in place for a maximum of ten years, though it could be repaid earlier, at the discretion of the Fed. This is an important feature: the assets that are being pledged as collateral can be managed on a long-term basis so as to minimize the risks to the market and the risk of loss. They can be held or disposed of at any time over the next decade. A summary of Terms and Conditions is attached as [Annex III](#).

In keeping with the traditional role of a lender of last resort, the extensions of credit to Bear Stearns that the Fed made to facilitate the merger were secured by collateral. The \$29 billion loan will be extended only when and if JPMorgan Chase and Bear merge. We will be protected from loss by three different risk mitigants: first, a substantial pool of professionally-managed collateral that, as of March 14, was valued at \$30 billion; second, the agreement on the part of JPMorgan Chase to absorb the first \$1 billion of any loss that ultimately occurs in connection with this arrangement; and third—and perhaps most importantly—a long-term horizon during which our collateral will be safe-kept and, if sold, will be sold in an orderly fashion that is not affected by the unnaturally strong downward market pressures that have been associated with the recent liquidity crisis.

Are there risks here? Yes, but the risks are modest in comparison to the substantial damage to the economy and economic well-being that potentially would have accompanied Bear's insolvency. Congress created the Federal Reserve after the Panic of 1907 with broad authority and a range of instruments to assume precisely this type of risk, in support of overall financial stability and economic growth. Assisting the JPMorgan Chase merger with Bear was the best option available in the unique circumstances that prevailed at the time.

There are those who have suggested that by intervening to forestall, and ultimately prevent, a bankruptcy filing by Bear Stearns, the Federal Reserve risks magnifying the chance of future financial crises, by insulating market participants from the consequences of excessive risk taking. It is important to recognize that had we not acted we would in effect have penalized those individuals, companies and financial institutions that had behaved more prudently, but would have suffered significant damage from the effects of default by a major institution.

The negative consequences to Bear's owners and employees from recent events have been very real—so real that no owner or executive or director of a financial firm would want to be in Bear Stearns' position. While we clearly knew that our actions, both in the context of the JPMorgan Chase transaction and in the establishment of the Primary Dealer Credit Facility would affect incentives for financial market participants, adding to the risk of "moral hazard," we believe that the lesson of the actual outcome for equity holders will serve to check and even diminish incentives for undue risk-taking.

I believe that the actions taken by the Federal Reserve on a number of fronts in recent months have reduced some of the risk to the economy that is inherent in this adjustment in financial markets. By reducing the probability of a systemic financial crisis, the actions taken by the Fed on and after March 14 have helped avert substantial damage to the economy, and they have brought a measure of tentative calm to global financial markets. Relative to the conditions that existed on March 14, risk premia have narrowed, foreign exchange markets are somewhat more stable, energy and commodity prices are lower, perceptions of risk in the financial system have diminished, and the flight to quality is less pronounced.

Nevertheless, liquidity conditions in markets are still substantially impaired and the process of de-leveraging remains underway. And this will amplify the headwinds facing the U.S. and global economy. In this context, policymakers and financial market participants need to continue to act forcefully. And their actions need to be proportionate to the challenges.

Financial institutions need to continue to improve the quality of disclosure, and even the strongest

institutions face compelling incentives to raise new equity capital so that they can take advantage of the opportunities ahead.

Actions to strengthen the capacity of the major government sponsored enterprises, the Federal Housing Finance Board and the Federal Housing Administration to provide finance to the mortgage market and help reduce the risk of avoidable foreclosures are a very important complement to the broader policy actions already in place to contain the downside risks to the economy.

The Federal Reserve, working closely with other major central banks, will continue to provide liquidity to markets to help facilitate the process of financial repair.

Looking forward, we face as a nation a number of very important policy questions. This financial crisis, as all past crises, has highlighted vulnerabilities that require action. No economy is stronger than its financial system, and as we continue to focus on the immediate challenges of financial repair and supporting economic growth, we need to begin the process of building consensus on a comprehensive set of change to our regulatory framework.

In addition to a stronger set of protections for consumers, the overwhelming imperative of reform must be to put in place a stronger framework for financial stability. Our objective should be a system that preserves the unique strengths of our financial markets in providing individuals and entrepreneurs access to capital and credit, but with a greater capacity to withstand stress.

This will require significant changes to regulatory policy and the supervisory framework. And the focus has to be on changing the incentives that all financial market participants face in managing the risk in exposure to adverse outcomes.

In my view, there are a set of important objectives and principles that should guide this effort.

- We need to ensure there is a stronger set of shock absorbers, in terms of capital and liquidity, in those institutions, banks and a limited number of the largest investment banks, that are critical to market functioning and economic health, with a stronger form of consolidated supervision over those institutions.
- We need to substantially simplify and consolidate the regulatory framework, to reduce the opportunity for regulatory arbitrage, not just in the mortgage market, but more broadly.
- We need to make the financial infrastructure more robust, particularly in the derivatives and repo markets, so that the system can better withstand the effects of default by a major participant.
- We need to redesign the set of liquidity facilities that we maintain in normal times, and *in extremis*, in the United States and across other major central banks. And these changes will have to come with a stronger set of incentives and requirements for the management of liquidity risk by financial institutions with access to central bank liquidity.
- And we need to make sure that the Federal Reserve has the mix of authority and responsibility to respond with adequate speed and force to the prospects of systemic threats to financial stability.

Conclusion

We look forward to working with the Congress and the Executive Branch to put in place a system of financial sector oversight and crisis management that works well in the context of a 21st-century financial system.

The actions that we took were intended to protect the economy from the consequences of risks to the financial system that could have decreased the availability of home mortgage and other credit, put further downward pressure on home values, eroded retirement savings and ultimately led to a loss of jobs and incomes as businesses faced added difficulties in financing expanded operations and job creation.

Policymakers—both in the Federal Reserve and in the federal government—must continue to be proactive in their response to rapidly changing circumstances.

Finally, I want to express my admiration and appreciation to members of my staff who have performed

with great skill and care under extreme pressure. And I would like to also thank Chairman Bernanke, Secretary Paulson, Chairman Cox and my many other colleagues in the Fed and the supervisory community.

Thank you again for giving me the opportunity to appear before you today.

[Annex I](#): Understanding the Recent Changes to Federal Reserve Liquidity Provision

[Annex II](#): Portfolio Overview

[Annex III](#): March 28, 2008 Contract  PDF