

## Ben S Bernanke: Some reflections on the crisis and the policy response

Speech by Mr Ben S Bernanke, Chairman of the Board of Governors of the Federal Reserve System, at the Russell Sage Foundation and The Century Foundation Conference on “Rethinking Finance”, New York, 13 April 2012.

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I would like to thank the conference organizers for the opportunity to offer a few remarks on the causes of the 2007–09 financial crisis as well as on the Federal Reserve’s policy response. The topic is a large one, and today I will be able only to lay out some basic themes. In doing so, I will draw from talks and testimonies that I gave during the crisis and its aftermath, particularly my testimony to the Financial Crisis Inquiry Commission in September 2010.<sup>1</sup> Given the time available, I will focus narrowly on the financial crisis and the Federal Reserve’s response in its capacity as liquidity provider of last resort, leaving discussions of monetary policy and the aftermath of the crisis to another occasion.

### Triggers and vulnerabilities

In its analysis of the crisis, my testimony before the Financial Crisis Inquiry Commission drew the distinction between triggers and vulnerabilities. The *triggers* of the crisis were the particular events or factors that touched off the events of 2007–09 – the proximate causes, if you will. Developments in the market for subprime mortgages were a prominent example of a trigger of the crisis. In contrast, the *vulnerabilities* were the structural, and more fundamental, weaknesses in the financial system and in regulation and supervision that served to propagate and amplify the initial shocks. In the private sector, some key vulnerabilities included high levels of leverage; excessive dependence on unstable short-term funding; deficiencies in risk management in major financial firms; and the use of exotic and nontransparent financial instruments that obscured concentrations of risk. In the public sector, my list of vulnerabilities would include gaps in the regulatory structure that allowed systemically important firms and markets to escape comprehensive supervision; failures of supervisors to effectively apply some existing authorities; and insufficient attention to threats to the stability of the system as a whole (that is, the lack of a macroprudential focus in regulation and supervision).

The distinction between triggers and vulnerabilities is helpful in that it allows us to better understand why the factors that are often cited as touching off the crisis seem disproportionate to the magnitude of the financial and economic reaction. Consider subprime mortgages, on which many popular accounts of the crisis focus. Contemporaneous data indicated that the total quantity of subprime mortgages outstanding in 2007 was well less than \$1 trillion; some more-recent accounts place the figure somewhat higher. In absolute terms, of course, the potential for losses on these loans was large – on the order of hundreds of billions of dollars. However, judged in relation to the size of global financial markets, aggregate exposures to subprime mortgages were quite modest. By way of comparison, it is not especially uncommon for one day’s paper losses in global stock markets to exceed the losses on subprime mortgages suffered during the entire crisis, without obvious ill effect on market functioning or on the economy. Thus, losses on subprime mortgages can plausibly account for the massive reaction seen during the crisis only insofar as they interacted with other factors – more fundamental vulnerabilities – that served to amplify their effects.

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<sup>1</sup> See Ben S. Bernanke (2010), “Causes of the Recent Financial and Economic Crisis,” statement before the Financial Crisis Inquiry Commission, Washington, September 2.

On the surface, the puzzle of disproportionate cause and effect seems somewhat less stark if one takes the boom and bust in the U.S. housing market as the trigger of the crisis, as the paper gains and losses associated with the swing in house prices were many times the losses associated directly with subprime loans. Indeed, the 30 percent or so aggregate decline in house prices since their peak has by now eliminated nearly \$7 trillion in paper wealth. However, on closer examination, it is not clear that even the large movements in house prices, in the absence of the underlying weaknesses in our financial system, can account for the magnitude of the crisis. First, much of the decline in house prices has occurred since the most intense phase of the crisis; the decline in prices since September 2008 is probably better viewed as largely the result of, rather than a cause of, the crisis and ensuing recession. More fundamentally, however, any theory of the crisis that ties its magnitude to the size of the housing bust must also explain why the fall of dot-com stock prices just a few years earlier, which destroyed as much or more paper wealth – more than \$8 trillion – resulted in a relatively short and mild recession and no major financial instability.<sup>2</sup> Once again, the explanation of the differences between the two episodes must be that the problems in housing and mortgage markets interacted with deeper vulnerabilities in the financial system in ways that the dot-com bust did not. So let me turn, then, to a discussion of those vulnerabilities and how they amplified the effects of triggers like the collapse of the subprime mortgage market.

A number of the vulnerabilities I listed a few moments ago were associated with the increased importance of the so-called shadow banking system. Shadow banking, as usually defined, comprises a diverse set of institutions and markets that, collectively, carry out traditional banking functions – but do so outside, or in ways only loosely linked to, the traditional system of regulated depository institutions. Examples of important components of the shadow banking system include securitization vehicles, asset-backed commercial paper (ABCP) conduits, money market mutual funds, markets for repurchase agreements (repos), investment banks, and mortgage companies. Before the crisis, the shadow banking system had come to play a major role in global finance.

Economically speaking, as I noted, shadow banking bears strong functional similarities to the traditional banking sector. Like traditional banking, the shadow banking sector facilitates maturity transformation (that is, it is used to fund longer-term, less-liquid assets with short-term, more-liquid liabilities), and it channels savings into specific investments, mostly debt-like instruments. In part, the rapid growth of shadow banking reflected various types of regulatory arbitrage – for example, the minimization of capital requirements. However, instruments that fund the shadow banking system, such as money market mutual funds and repos, also met a rapidly growing demand among investors, generally large institutions and corporations, seeking cash-like assets for use in managing their liquidity. Commercial banks were limited in their ability to meet this growing demand by prohibitions on the payment of interest on business checking accounts and by relatively low limits on the size of deposit accounts that can be insured by the Federal Deposit Insurance Corporation (FDIC).

As became apparent during the crisis, a key vulnerability of the system was the heavy reliance of the shadow banking sector, as well as some of the largest global banks, on

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<sup>2</sup> According to the Federal Reserve's statistical release "Flow of Funds Accounts of the United States," the value of real estate held by households fell from \$22.7 trillion in the first quarter of 2006 to \$20.9 trillion in the fourth quarter of 2007 (down 8.1 percent from the first quarter of 2006). It then declined to \$18.5 trillion in the third quarter of 2008 (down 18.6 percent from the first quarter of 2006) and to \$16.0 trillion in the fourth quarter of 2011 (down 29.7 percent from the first quarter of 2006). The stock market wealth of U.S. households peaked at \$18.1 trillion in the first quarter of 2000 and fell \$6.2 trillion to \$11.9 trillion through the third quarter of 2001. After a short-lived recovery, stock market wealth bottomed at \$9.9 trillion in the third quarter of 2002. Overall, stock market wealth fell \$8.3 trillion (or 46 percent) between its peak in the first quarter of 2000 and its trough in the third quarter of 2002. The flow of funds accounts are published quarterly and are available at [www.federalreserve.gov/releases/z1](http://www.federalreserve.gov/releases/z1).

various forms of short-term wholesale funding, including commercial paper, repos, securities lending transactions, and interbank loans. The ease, flexibility, and low perceived cost of short-term funding also supported a broader trend toward higher leverage and greater maturity mismatch in individual shadow banking institutions and in the sector as a whole.

While banks also rely on short-term funding and leverage, they benefit from a government-provided safety net, including deposit insurance and backstop liquidity provision by the central bank. Shadow banking activities do not have these safeguards, so they employ alternative mechanisms to gain investor confidence. Among these mechanisms are the collateralization of many shadow banking liabilities; regulatory or contractual restrictions placed on portfolio holdings, such as the liquidity and credit quality requirements applicable to money market mutual funds; and the imprimaturs of credit rating agencies. Indeed, the very foundation of shadow banking and its rapid growth before the crisis was the widely held view (among both investors and regulators) that these safeguards would protect shadow banking activities against runs and panics, similar to the protection given to commercial banking by the government safety net. Unfortunately, this view turned out to be wrong. When it became clear to investors that these alternative protections might not be adequate to protect against losses, widespread flight from the shadow banking system occurred, with pernicious dynamics reminiscent of the banking panics of an earlier era.

Although the vulnerabilities associated with short-term wholesale funding and excessive leverage can be seen as structural weaknesses of the global financial system, they can also be viewed as a consequence of poor risk management by financial institutions and investors, which I would count as another major vulnerability of the system before the crisis. Unfortunately, the crisis revealed a number of significant defects in private-sector risk management and risk controls, importantly including insufficient capacity by many large firms to track firmwide risk exposures, such as off-balance-sheet exposures.

This lack of capacity by major financial institutions to track firmwide risk exposures led in turn to inadequate risk diversification, so that losses – rather than being dispersed broadly – proved in some cases to be heavily concentrated among relatively few, highly leveraged companies. Here, I think, is the principal explanation of why the busts in dot-com stock prices and in the housing and mortgage markets had such markedly different effects. In the case of dot-com stocks, losses were spread relatively widely across many types of investors. In contrast, following the housing and mortgage bust, losses were felt disproportionately at key nodes of the financial system, notably highly leveraged banks, broker-dealers, and securitization vehicles. Some of these entities were forced to engage in rapid asset sales at fire-sale prices, which undermined confidence in counterparties exposed to these assets, led to sharp withdrawals of funding, and disrupted financial intermediation, with severe consequences for the economy.

Private-sector risk management also failed to keep up with financial innovation in many cases. An important example is the extension of the traditional originate-to-distribute business model to encompass increasingly complex securitized credit products, with wholesale market funding playing a key role. In general, the originate-to-distribute model breaks down the process of credit extension into components or stages – from origination to financing and to the postfinancing monitoring of the borrower's ability to repay – in a manner reminiscent of how manufacturers distribute the stages of production across firms and locations. This general approach has been used in various forms for many years and can produce significant benefits, including lower credit costs and increased access of consumers and small and medium-sized businesses to capital markets. However, the expanded use of this model to finance subprime mortgages through securitization was mismanaged at several points, including the initial underwriting, which deteriorated markedly, in part because of incentive schemes that effectively rewarded originators for the quantity rather than the quality of the mortgages extended. Loans were then packaged into securities that proved complex, opaque, and unwieldy; for example, when defaults became widespread, the legal agreements underlying the securitizations made reasonable modifications of troubled

mortgages difficult. Rating agencies' ratings of asset-backed securities were revealed to be subject to conflicts of interest and faulty models. At the end of the chain were investors who often relied mainly on ratings and did not make distinctions among AAA-rated securities. Even if the ultimate investors wanted to do their own credit analysis, the information needed to do so was often difficult or impossible to obtain.

Dependence on short-term funding, high leverage, and inadequate risk management were critical vulnerabilities of the private sector prior to the crisis. Derivative transactions further increased risk concentrations and the vulnerability of the system, notably by shifting the location and apparent nature of exposures in ways that were not transparent to many market participants. But even as private-sector activities increased systemic risk, the public sector also failed to appreciate or sufficiently respond to the building vulnerabilities in the financial system – both because the statutory framework of financial regulation was not well suited to addressing some key vulnerabilities and because some of the authorities that did exist were not used effectively.

In retrospect, it is clear that the statutory framework of financial regulation in place before the crisis contained serious gaps. Critically, shadow banking activities were, for the most part, not subject to consistent and effective regulatory oversight. Much shadow banking lacked meaningful prudential regulation, including various special purpose vehicles, ABCP conduits, and many nonbank mortgage-origination companies. No regulatory body restricted the leverage and liquidity policies of these entities, and few if any regulatory standards were imposed on the quality of their risk management or the prudence of their risk-taking. Market discipline, imposed by creditors and counterparties, helped on some dimensions but did not effectively limit the systemic risks these entities posed.

Other shadow banking activities were potentially subject to some prudential oversight, but weaknesses in the statutory and regulatory framework meant that in practice they were inadequately regulated and supervised. For example, the Securities and Exchange Commission supervised the largest broker-dealer holding companies but only through an opt-in arrangement that lacked the force of a statutory regulatory regime. Large broker-dealer holding companies faced serious losses and funding problems during the crisis, and the instability of such firms as Bear Stearns and Lehman Brothers severely damaged the financial system. Similarly, the insurance operations of American International Group, Inc. (AIG), were supervised and regulated by various state and international insurance regulators, and the Office of Thrift Supervision had authority to supervise AIG as a thrift holding company. However, oversight of AIG Financial Products, which housed the derivatives activities that imposed major losses on the firm, was extremely limited in practice.

The gaps in statutory authority had the additional effect of limiting the information available to regulators and, consequently, may have made it more difficult to recognize the underlying vulnerabilities and complex linkages in the overall financial system. Shadow banking institutions that were unregulated or lightly regulated were typically not required to report data that would have adequately revealed their risk positions or practices. Moreover, the lack of preexisting reporting and supervisory relationships hindered systematic gathering of information that might have helped policymakers in the early days of the crisis.

A broader failing was that regulatory agencies and supervisory practices were focused on the safety and soundness of individual financial institutions or markets – what we now refer to as microprudential supervision. In the United States and most other advanced economies, no governmental entity had either a mandate or sufficient authority – now often called macroprudential authority – to take actions to limit systemic risks that could result from the collective behavior of financial institutions and markets.

Gaps in the statutory framework were an important reason for the buildup of risk in certain parts of the system and for the inadequate response of the public sector to that buildup. But even when the relevant statutory authorities did exist, they were not always used forcefully or effectively enough by regulators and supervisors, including the Federal Reserve. Notably,

bank regulators did not do enough to force large financial institutions to strengthen their internal risk-management systems or to curtail risky practices. The Federal Reserve's Supervisory Capital Assessment Program, undertaken in the spring of 2009 and popularly known as the "stress tests," played a critical role in restoring confidence in the U.S. banking system, but it also demonstrated that many institutions' information systems could not provide timely, accurate information about bank exposures to counterparties or complete information about the aggregate risks posed by different positions and portfolios. Regulators had recognized these problems in some cases but did not press firms vigorously enough to fix them.

Even without a macroprudential mandate, regulators could also have done more to try to mitigate risks to the broader financial system. In retrospect, stronger bank capital standards – notably those relating to the quality of capital and the amount of capital required for banks' trading book assets – and more attention to the liquidity risks faced by the largest, most interconnected firms would have made the financial system as a whole more resilient.

### **The crisis as a classic financial panic**

Having laid out some of the triggers and vulnerabilities that set the stage for the crisis, I can briefly sketch the evolution of the crisis itself. As I have noted, developments in housing and mortgage markets played an important role as triggers. Beginning in 2007, declining house prices and rising rates of foreclosure raised serious concerns about the values of mortgage-related assets and considerable uncertainty about where those losses would fall. The economy officially fell into recession in December 2007, following several months of financial stress. However, the most severe economic consequences followed the extreme market movements in the fall of 2008.

To a significant extent, the crisis is best understood as a classic financial panic – differing in details but fundamentally similar to the panics described by Bagehot and many others.<sup>3</sup> The most familiar type of panic that has occurred historically, involving runs on banks by retail depositors, had been made largely obsolete by deposit insurance, central bank backstop liquidity facilities, and the associated government supervision of banks. But a panic is possible in any situation in which longer-term, illiquid assets are financed by short-term, liquid liabilities and in which providers of short-term funding either lose confidence in the borrower or become worried that other short-term lenders may lose confidence. The combination of dependence on wholesale, short-term financing; excessive leverage; generally poor risk management; and the gaps and weaknesses in regulatory oversight created an environment in which a powerful, self-reinforcing panic could begin.<sup>4</sup>

Indeed, panic-like phenomena arose in multiple contexts and in multiple ways during the crisis. The repo market, a major source of short-term credit for many financial institutions, notably including the independent investment banks, was an important example. In repo agreements, loans are collateralized by financial assets, and the maximum amount of the loan is the current assessed value of the collateral less a safety margin, or haircut. The secured nature of repo agreements gave firms and regulators confidence that runs were

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<sup>3</sup> See Walter Bagehot ([1873] 1897), *Lombard Street: A Description of the Money Market* (New York: Charles Scribner's Sons). The classic theoretical analysis of "pure" banking panics is in Douglas W. Diamond and Philip H. Dybvig (1983), "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy*, vol. 91 (3), pp. 401–19). Note that the term "panic" does not necessarily imply irrational behavior on the part of depositors or investors; it is perfectly rational to participate in a run if one fears that the bank will be forced to close. However, the collective action of many depositors or investors can lead to outcomes that are undesirable from the point of view of the economy as a whole.

<sup>4</sup> For further discussion, see Ben S. Bernanke (2009), "Reflections on a Year of Crisis," speech delivered at "Financial Stability and Macroeconomic Policy," a symposium sponsored by the Federal Reserve Bank of Kansas City, held in Jackson Hole, Wyo., August 20–22.

unlikely. But this confidence was misplaced. Once the crisis began, repo lenders became increasingly concerned about the possibility that they would be forced to receive collateral instead of cash, collateral that would then have to be disposed of in falling and illiquid markets. In some contexts, lenders responded by imposing increasingly higher haircuts, cutting the effective amount of funding available to borrowers. In other contexts, lenders simply pulled away, as in a deposit run; in these cases, some borrowers lost access to repo entirely, and some securities became unfundable in the repo market. In either case, absent sufficient funding, borrowers were frequently left with no option but to sell assets into illiquid markets. These forced sales drove down asset prices, increased volatility, and weakened the financial positions of all holders of similar assets. Volatile asset prices and weaker borrower balance sheets in turn heightened the risks borne by repo lenders, further boosting the incentives to demand higher haircuts or withdraw funding entirely. This unstable dynamic was operating in full force around the time of the near failure of Bear Stearns in March 2008, and again during the worsening of the crisis in mid-September of that year.<sup>5</sup>

Classic panic-type phenomena occurred in other contexts as well. Early in the crisis, structured investment vehicles and many other asset-backed programs were unable to roll over their commercial paper as investors pulled back, and the programs were forced to draw on liquidity lines from banks or to sell assets.<sup>6</sup> The resulting pressure on the bank liquidity providers, evident especially in the market for dollar-denominated loans in short-term funding markets, impeded the functioning of the financial system throughout the crisis. Following the Lehman collapse and the “breaking of the buck” by a money market mutual fund that held commercial paper issued by Lehman, both money market mutual funds and the commercial paper market were also subject to runs.<sup>7</sup> More generally, during the crisis, runs of short-term uninsured creditors created severe funding problems for a number of financial firms, including several large broker-dealers and also some bank holding companies. In some cases, withdrawals of funds by creditors were augmented by “runs” in other guises – for example, by prime brokerage customers of investment banks concerned about the safety of cash and securities held at those firms or by derivatives counterparties demanding additional margin.<sup>8</sup> Overall, the emergence of run-like phenomena in a variety of contexts helps explain the remarkably sharp and sudden intensification of the financial crisis, its rapid global spread, and the fact that standard market indicators largely failed to forecast the abrupt deterioration in financial conditions.

The multiple instances of run-like behavior during the crisis, together with the associated sharp increases in liquidity premiums and dysfunction in many markets, motivated much of

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<sup>5</sup> For a theoretical discussion of “margin spirals” and related phenomena, see Markus K. Brunnermeier and Lasse Heje Pedersen (2009), “Market Liquidity and Funding Liquidity,” *Review of Financial Studies*, vol. 22 (6), pp. 2201–38. Institutional details on the triparty repo market and a description of developments in that market during the crisis are provided in Adam Copeland, Antoine Martin, and Michael Walker (2010), “The Tri-Party Repo Market before the 2010 Reforms” (PDF), Federal Reserve Bank of New York Staff Reports 477 (New York: Federal Reserve Bank of New York, November). The role of the “run on repo” in the crisis is discussed in Gary B. Gorton and Andrew Metrick (2009), “Securitized Banking and the Run on Repo,” NBER Working Paper Series 15223 (Cambridge, Mass.: National Bureau of Economic Research, August).

<sup>6</sup> An empirical analysis of the run on ABCP is provided in Daniel Covitz, Nellie Liang, and Gustavo Suarez (forthcoming), “The Evolution of a Financial Crisis: Collapse of the Asset-Backed Commercial Paper Market,” *Journal of Finance*.

<sup>7</sup> For an analysis of the determinants of runs on money market mutual funds during the crisis, see Patrick McCabe (2010), “The Cross Section of Money Market Fund Risks and Financial Crises,” *Finance and Economics Discussion Series 2010–51* (Washington: Board of Governors of the Federal Reserve System, September).

<sup>8</sup> Prime brokers provide a variety of services for hedge funds and other sophisticated institutional investors. Their services include clearing of trades, financing of long securities positions, and borrowing of securities to facilitate the establishment of short positions.

the Federal Reserve's policy response.<sup>9</sup> Bagehot advised central banks – the only institutions that have the power to increase the aggregate liquidity in the system – to respond to panics by lending freely against sound collateral. Following that advice, from the beginning of the crisis, the Fed, like other major central banks, provided large amounts of short-term liquidity to financial institutions, including primary dealers as well as banks, on a broad range of collateral.<sup>10</sup> Reflecting the contemporary institutional environment, it also provided backstop liquidity support for components of the shadow banking system, including money market mutual funds, the commercial paper market, and the asset-backed securities markets. To be sure, the provision of liquidity alone can by no means solve the problems of credit risk and credit losses, but it can reduce liquidity premiums, help restore the confidence of investors, and thus promote stability. It can also reduce panic-driven credit problems in cases in which such problems result from price declines during liquidity-driven fire sales of assets.

The pricing of the liquidity facilities was an important part of the Federal Reserve's strategy. Rates could not be too high; to have a positive effect, and to minimize the stigma of borrowing, the facilities had to be attractive relative to rates available (or nominally available) in illiquid, dysfunctional markets. At the same time, pricing had to be sufficiently unattractive that borrowers would voluntarily withdraw from these facilities as market conditions normalized. This desired outcome in fact occurred: By early 2010, emergency lending had been drastically reduced, along with the demand for such lending.

The Federal Reserve's responses to the failure or near failure of a number of systemically critical firms reflected the best of bad options, given the absence of a legal framework for winding down such firms in an orderly way in the midst of a crisis – a framework that we now have. However, those actions were, again, consistent with the Bagehot approach of lending against collateral to illiquid but solvent firms. The acquisition of Bear Stearns by JPMorgan Chase was facilitated by a Federal Reserve loan against a designated set of assets, and the provision of liquidity to AIG was collateralized by the assets of the largest insurance company in the United States. In both cases the Federal Reserve determined that the loans were adequately secured, and in both cases the Federal Reserve has either been repaid with interest or holds assets whose assessed values comfortably cover remaining loans.

To say that the crisis was purely a liquidity-based panic would be to overstate the case. Certainly, an important part of the resolution of the crisis involved assuring markets and counterparties of the solvency of key financial institutions, and that assurance was provided in significant part by the injection of capital, including public capital, and the issuance of guarantees – measures not available to the Federal Reserve. In these respects, the Treasury-managed Troubled Asset Relief Program and the FDIC's Temporary Liquidity Guarantee Program played critical roles. As I have noted, the Federal Reserve did help restore confidence in the solvency of the banking system by leading the stress tests of the 19 largest U.S. bank holding companies in the spring of 2009. These stress tests, which were both rigorous and transparent, helped make it possible for the tested banks to raise \$120 billion in private capital in the ensuing months.

The response to the panic also involved an extraordinary amount of international consultation and coordination. Following a key meeting of the Group of Seven finance ministers and central bank governors in Washington on October 10, 2008, the governments of other industrial countries took strong measures to stabilize key financial institutions and markets. Central banks collaborated closely throughout the crisis; in particular, the Federal Reserve

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<sup>9</sup> See Brian F. Madigan (2009), "Bagehot's Dictum in Practice: Formulating and Implementing Policies to Combat the Financial Crisis," speech delivered at "Financial Stability and Macroeconomic Policy," a symposium sponsored by the Federal Reserve Bank of Kansas City, held in Jackson Hole, Wyo., August 20–22.

<sup>10</sup> Primary dealers are broker-dealers that are designated as counterparties by the Federal Reserve Bank of New York for its conduct of open market operations in the implementation of monetary policy.

undertook swap agreements with 14 other central banks to help ensure adequate dollar liquidity in global markets and thus keep credit flowing to U.S. households and businesses.

## **Conclusion**

The financial crisis of 2007–09 was difficult to anticipate for two reasons: First, financial panics, being to a significant extent self-fulfilling crises of confidence, are inherently difficult to foresee. Second, although the crisis bore some resemblance at a conceptual level to the panics known to Bagehot, it occurred in a rather different institutional context and was propagated and amplified by a number of vulnerabilities that had developed outside the traditional banking sector. Once identified, however, the panic could be addressed to a significant extent using classic tools, including backstop liquidity provision by central banks, both here and abroad.

To avoid or at least mitigate future panics, the vulnerabilities that underlay the recent crisis must be fully addressed. As you know, this process is well under way at both the national and international levels. I will have to leave to another time a discussion of the extensive changes in regulatory frameworks, as well as the changes in the Federal Reserve's own organization and practices, that have been or are being put in place. Instead, I will close by noting that the events of the past few years have forcibly reminded us of the damage that severe financial crises can cause. Going forward, for the Federal Reserve as well as other central banks, the promotion of financial stability must be on an equal footing with the management of monetary policy as the most critical policy priorities.