A Year in Bank Supervision: 2008 and a Few of Its Lessons

In the annals of bank supervision, 2008 will be remembered as a year in which some old assumptions were shattered and some old truths relearned. Significant risks emerged in financial products and activities long assumed safe. Risks were correlated internationally and across sectors to a degree no one anticipated. Complex financial engineering tools to measure and disperse risk that many had assumed would act as stabilizers in times of stress, appeared instead to be sources of financial opacity that heightened the risk of contagion. And some of the old banking basics—prudent loan underwriting, strong capital and liquidity, and the fair treatment of customers—re-emerged as likely cornerstones of a more stable financial system in the future.

One indicator of the gravity of recent developments is this: in 2008, U.S. financial regulatory agencies extended $6.8 trillion in temporary loans, liability guarantees and asset guarantees in support of financial services. By the end of the first quarter of 2009, the maximum capacity of new government financial support programs in place, or announced, exceeded $13 trillion (see Table 1). The need for emergency government assistance of such magnitude has triggered wide-ranging reassessments of financial sector regulation.

This article provides a selective chronology of events affecting banks in 2008.[1] The crisis has highlighted the importance of a number of areas for current and future supervisory attention, and the article concludes with observations on a few of these issues. While it is too early to draw conclusions about how the events of 2008 may change the way federal banking agencies do business, there appears to be a consensus on at least one central lesson. The role of financial regulation and supervision going forward will be more important, not less, than it has been in the past.

The Prelude to the Events of 2008

The factors precipitating the financial turmoil of 2008 have been the subject of extensive public discussion and debate. The fallout from weak underwriting standards prevailing during a multi-year economic expansion first became evident in subprime mortgages, with Alt-A mortgages soon to follow. Lax underwriting practices fueled a rapid increase in housing prices, which subsequently adjusted sharply downward across many parts of the country.

With these adverse developments in the housing market, values of complex structured financial products backed by subprime and Alt-A mortgages declined precipitously, and wide swaths of rated mortgage-backed securitizations were downgraded. Other structured products, such as pooled Trust Preferred Securities, also were heavily downgraded. Collateral damage was a loss of marketplace confidence in rating methodologies. As weaknesses in the housing finance market intensified and began to surface in other credit sectors, securities that had been purchased based on an external rating suffered severe declines in value and liquidity.

Excessive reliance on financial leverage compounded problems for individual firms and the financial system as a whole. Thin capital cushions may have made some firms unable to sell assets at a loss and diminished the balance sheet capacity of potential buyers. Financial firms

[1] Sources of information for the majority of events and developments described in the chronology are press releases from the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Federal Housing Finance Agency, the U.S. Department of the Treasury, and the U.S. Securities and Exchange Commission.

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Table 1

Government Support for Financial Assets and Liabilities Announced in 2008 and Soon Thereafter ($ in billions)

Important note: Amounts are gross loans, asset and liability guarantees and asset purchases, do not represent net cost to taxpayers, do not reflect contributions of private capital expected to accompany some programs, and are announced maximum program limits so that actual support may fall well short of these levels.

	Year-end 2007	Year-end 2008	Subsequent or Announced Capacity If Different
Treasury Programs			
TARP investments[1]	$0	$300	$700
Funding GSE conservatorships[2]	$0	$200	$400
Guarantee money funds[3]	$0	$3,200	
Federal Reserve Programs			
Term Auction Facility (TAF)[4]	$40	$450	$900
Primary Credit[5]	$6	$94	
Commercial Paper Funding Facility (CPFF)[6]	$0	$334	$1,800
Primary Dealer Credit Facility (PDCF)[5]	$0	$37	
Single Tranche Repurchase Agreements[7]	$0	$80	
Agency direct obligation purchase program[8]	$0	$15	$200
Agency MBS program[8]	$0	$0	$1,250
Asset-backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)[9]	$0	$24	
Maiden Lane LLC (Bear Stearns)[9]	$0	$27	
AIG (direct credit)[10]	$0	$39	$60
Maiden Lane II (AIG)[5]	$0	$20	
Maiden Lane III (AIG)[5]	$0	$27	
Reciprocal currency swaps[11]	$14	$554	
Term securities lending facility (TSLF) and TSLF options program (TOP)[12]	$0	$173	$250
Term Asset-Backed Securities Loan Facility (TALF)[13]	$0	$0	$1,000
Money Market Investor Funding Facility (MMIFF)[14]	$0	$0	$600
Treasury Purchase Program (TPP)[15]	$0	$0	$300
FDIC Programs			
Insured non-interest bearing transactions accounts[16]	$0	$684	
Temporary Liquidity Guarantee Program (TLGP)[17]	$0	$224	$940
Joint Programs			
Citi asset guarantee[18]	$0	$306	
Bank of America asset guarantee[19]	$0	$0	$118
Public-Private Investment Program (PPIP)[20]	$0	$0	$500
Estimated Reductions to Correct for Double Counting			
TARP allocation to Citi and Bank of America asset guarantee[21]			– $13
TARP allocation to TALF[21]			– $80
TARP allocation to PPIP[21]			– $75
Total Gross Support Extended During 2008		**$6,788**	
Maximum capacity of support programs announced through first quarter 2009[22]			**$13,903**

[1] $300 is as of 1-23-2009 as reported in SIGTARP report of February 6 2009; EESA authorized $700.

[2] Year-end reflects Treasury announcement of September 7, 2009, capacity reflects Treasury announcement of February 18, 2009; funding authorized under Housing and Economic Recovery Act.

[3] Informal estimate of amount guaranteed at year-end 2008, provided by Treasury staff.

[4] Year-end balances from Federal Reserve Statistical Release H.R. 1, "Factors Affecting Reserve Balances" (henceforth, H.R. 1); capacity from "Domestic Open Market Operations During 2008" (Report to the Federal Open Market Committee, January 2009), page 24.

[5] Year-end balances from H.R. 1.

[6] Year-end balances from H.R. 1; capacity from "Report Pursuant to Section 129 of the Emergency Economic Stabilization Act of 2008: Commercial Paper Funding Facility," accessed May 26, 2009, from http://www.newyorkfed.org/aboutthefed/annual/annual08/CPFFfinstmt2009.pdf.

[7] Year-end balances from H.R. 1; see also "Domestic Open Market Operations During 2008" (henceforth "DOMO report") report to the Federal Open Market Committee, January 2009, page 11, summary of activity in program announced March 7 by the Federal Reserve.

[8] Year-end balances from H.R. 1, capacity from Federal Reserve announcements of November 25, 2008 and March 18, 2009.

[9] H.R. 1.

[10] Year-end balances from H.R. 1; capacity from periodic report pursuant to EESA, "Update on Outstanding Lending Facilities Authorized by the Board Under Section 13(3) of the Federal Reserve Act," February 25, 2009, page 8, henceforth referred to as "Update;" Federal Reserve AIG support is separate from Treasury support that is included in the TARP line item.

[11] Year-end balances reported in DOMO report, page 25.

[12] Year-end balances from H.R. 1; capacity from Federal Reserve announcement of March 11, 2008, Federal Reserve Bank of New York press release of August 8, 2008, and discussion at page 22 of DOMO report.

[13] From "Update," page 2.

[14] From "Report Pursuant to Section 129 of the Emergency Economic Stabilization Act of 2008: Money Market Investor Funding Facility," accessed May 26, 2009, from http://www.federalreserve.gov/monetarypolicy/files/129mmiff.pdf; Federal Reserve to fund 90 percent of financing or $540 billion.

[15] Program and capacity announced by the Federal Reserve, March 18, 2009.

[16] FDIC Quarterly Banking Profile, Fourth Quarter 2008, (henceforth, "QBP") Table III-C.

[17] Year-end outstanding from QBP, Table IV-C; total estimated cap for all entities opting in the program from QBP, Table II-C.

[18] Announcement by FDIC, Treasury, and Federal Reserve November 23, 2008.

[19] Announcement by FDIC, Treasury, and Federal Reserve of January 16, 2009.

[20] To purchase legacy assets, as described in Treasury, FDIC, and Federal Reserve announcement of March 23, 2009. $500 refers to maximum capacity of Legacy Loans Program; funding for the Legacy Securities Program is believed to be subsumed under the TALF.

[21] SIGTARP quarterly report of April, 2009, page 38.

[22] Year-end 2008 amounts plus the amount by which announced capacity exceeds the year-end 2008 amount, minus the amount of known double counting.

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with significant concentrations of risky or illiquid assets, funded with shorter-term or credit-sensitive liabilities, experienced difficulties in this environment.

A Selective 2008 Chronology

The First Quarter

As 2008 began, policymakers were closely monitoring the economic effects of the credit market turmoil that had started in earnest in August 2007. For example, minutes of January 2008 meetings and conference calls of the Federal Open Market Committee (FOMC) cite economic developments that were more downbeat than expected, including ongoing strains in financial markets and credit conditions. Citing downside risks to the economic outlook, the FOMC reduced the target federal funds rate from 4.25 percent to 3.5 percent.

Special programs to stabilize the financial system already were in full swing in January. The Federal Reserve extended $60 billion that month in auctions conducted through its Term Auction Facility (TAF), a temporary program the Federal Reserve established in December 2007. Through the TAF, the Federal Reserve extends short-term collateralized loans to depository institutions in sound financial condition. Loans to depository institutions under the TAF continued throughout 2008 in auctions conducted two to four times per month, and would reach $450 billion outstanding by year-end.

Another program established by the Federal Reserve in December 2007 also was up-and-running in January. The Federal Reserve authorized a series of reciprocal currency agreements with foreign central banks to support U.S. dollar liquidity in those markets. Balances under this program would swell from $14 billion at the beginning of 2008 to $554 billion by year-end.

A significant benchmark for market illiquidity occurred on February 7 when the auction-rate securities market started to fail. Auction-rate securities had been an important source of low-cost financing for municipalities. But when investor interest started to wane, and the large investment banks that had made a market in these securities stopped acting as buyers of last resort, auctions failed with rapidly increasing frequency. The market for auction-rate securities froze, interest rates paid by municipalities escalated abruptly, investors were unable to dispose of their holdings, and write-downs and numerous class action lawsuits ensued. The legal and financial ramifications of this market shutdown would be felt throughout 2008.[2]

Official concerns about the liquidity of financial institutions intensified as the first quarter progressed. On March 7, the Federal Reserve announced it would lend up to $100 billion to primary dealers in the form of term repurchase agreements. The primary dealers are the large financial institutions with which the Federal Reserve conducts open market operations (see The *Primary Dealers* inset box). On March 11, the Federal Reserve announced a new Term Securities Lending Facility (TSLF) to lend up to $200 billion in Treasury securities to primary dealers, secured for a term of 28 days by other securities. The Federal Reserve announced the $200 billion allocated to the TSLF was a supplement to the initiative announced on March 7. TSLF lending would reach $173 billion by year-end.

[2] See http://en.wikipedia.org/wiki/Auction_rate_security, accessed April 17, 2009.

The Primary Dealers

Primary dealers are the entities with which the Federal Reserve Bank of New York conducts open market operations. As listed on the Web site of the Federal Reserve Bank of New York, they are:

BNP Paribas Securities Corp.
Banc of America Securities LLC
Barclays Capital Inc.
Cantor Fitzgerald & Co.
Citigroup Global Markets Inc.
Credit Suisse Securities (USA) LLC
Daiwa Securities America Inc.
Deutsche Bank Securities Inc.
Dresdner Kleinwort Securities LLC
Goldman, Sachs & Co.
HSBC Securities (USA) Inc.
J. P. Morgan Securities Inc.
Mizuho Securities USA Inc.
Morgan Stanley & Co. Incorporated
RBS Securities Inc.
UBS Securities LLC[3]

During the week of March 11, a run developed on Bear Stearns, culminating in the March 14 announcement it would be acquired by JPMorgan Chase & Co. Under the terms of the agreement, the Federal Reserve Bank of New York provided $30 billion in financing to facilitate the acquisition. JPMorgan Chase would bear the first $1 billion of any losses associated with the Bear Stearns assets being financed, and the Federal Reserve would fund the remaining $29 billion on a non-recourse basis to JPMorgan Chase.[4]

Bear Stearns was the first large investment bank to be acquired by a bank holding company during 2008. Of the other four largest investment banks in the United States, one would fail and the others would be acquired by, or become, bank holding companies (see *2008: The Year of the Bank Holding Company* inset box).

2008: The Year of the Bank Holding Company

March 14: Bear Stearns (pre-acquisition assets $399 billion) acquired by JPMorgan Chase with FRB assistance.

June 5: Federal Reserve announces approval of the notice of Bank of America Corporation to acquire Countrywide Financial Corporation (pre-acquisition assets $199 billion).

September 15: Bank of America announces agreement to acquire Merrill Lynch (pre-acquisition assets $966 billion).

September 21: Federal Reserve approves applications of Goldman Sachs (pre-conversion assets $1,082 billion) and Morgan Stanley (pre-conversion assets $987 billion) to become bank holding companies.

September 24: JPMorgan Chase acquires the banking assets of the failing Washington Mutual (pre-acquisition asset size $309 billion).

November 10: Federal Reserve approves applications by American Express Company (pre-conversion assets $127 billion) and American Express Travel Related Services Company, Inc., to become bank holding companies.

December 24: Federal Reserve approves application of GMAC, LLC (pre-conversion assets $211 billion) to become a bank holding company.

Total assets converting to bank holding company status or acquired by bank holding companies in these transactions: $4.3 trillion

[3] List of the Primary Government Securities Dealers Reporting to the Government Securities Dealers Statistics Unit of the Federal Reserve Bank of New York. Effective February 11, 2009, Merrill Lynch Government Securities Inc. was deleted from the list of primary dealers as a result of the acquisition of Merrill Lynch & Co., Inc. by Bank of America Corporation (see https://www.newyorkfed.org/markets/primarydealers.html).

[4] Federal Reserve Bank of New York, "Statement on Financing Arrangement of JPMorgan Chase's Acquisition of Bear Stearns," March 24, 2008 at www.newyorkfed.org/newsevents/news//markets/2008/rp080324.html.

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In the wake of the run on Bear Stearns, the Federal Reserve on March 16 authorized the Federal Reserve Bank of New York to create a lending facility to improve the ability of primary dealers to provide financing to securitization market participants. The new facility was to be available for business the following day. The Primary Dealer Credit Facility (PDCF) allows participants to borrow from the Federal Reserve against a wider range of collateral than would be acceptable for Federal Reserve Open Market Operations, with the rates on the borrowing being fixed rather than determined through an auction. Credit extended by the PDCF would reach $37 billion outstanding by year-end.

The Second Quarter

Supervisory activity related to failing financial institutions entered a brief lull during the second quarter. Adverse economic developments and building credit and liquidity pressures nevertheless continued unabated, setting the stage for a tumultuous second half of the year. The second quarter saw about 53,000 downgrades of rated tranches of securitizations;[5] insured bank and thrift bank earnings 87 percent below second quarter 2007 levels; a 25 percent reduction in the KBW Index of large cap bank stocks;[6] and a decline in the 20-city S&P/Case-Shiller index of home prices[7] to a mid-year level that was roughly 16 percent below its mid-2007 level and 19 percent below the July 2006 peak.

The Third Quarter

During third quarter 2008, the credit and liquidity pressures that had been building since the summer of 2007 were unleashed. The events of the third quarter fundamentally changed the way policymakers viewed the risks facing the economy and the financial system, and set in motion the legislative rescue efforts that would be put in place in the fourth quarter of 2008 and early 2009.

IndyMac Bank, FSB, was closed by the Office of Thrift Supervision on July 11, and the FDIC was named conservator. At the time it was closed, IndyMac's assets of $32 billion made it the second largest bank failure in FDIC history. The FDIC would operate the Bank through the remainder of 2008 until announcing, at year-end, its sale to an investor group.

IndyMac's losses, and the losses subsequently borne by the FDIC as receiver, were centered in a large portfolio of low- and no-documentation mortgage loans and securities backed by such loans. The failure of this institution thus underscored a broad and critical driver of the financial turmoil.

Hints of potential problems at Fannie Mae and Freddie Mac began to surface soon after the IndyMac failure. On July 13, Treasury Secretary Paulson announced he was working with Congress and other regulators to obtain temporary authority to purchase equity in these entities, if needed. On the same day, the Federal Reserve announced it had authorized the Federal Reserve Bank of New York to lend to Fannie Mae and Freddie Mac. Further evidence of official concern emerged on July 15, when the U.S. Securities and Exchange Commission (SEC) issued an emergency order to prohibit "naked" short selling in the shares of Fannie Mae, Freddie Mac, and commercial and investment bank primary dealers.

During the month of August, the SEC announced settlements with Citigroup, Wachovia, and Merrill Lynch in which those banks agreed to compensate investors who alleged they had purchased auction-rate securities on the basis of misleading information. Other

[5] Bloomberg; this figure includes securities downgraded multiple times or by more than one ratings agency.

[6] See Keefe, Bruyette, & Woods at https://www.kbw.com/about-us/about-our-firm/.

[7] See http://www2.standardandpoors.com.

proposed and final settlements would be announced throughout 2008 by the SEC, the Financial Industry Regulatory Authority, and state attorneys general. Among the firms named in these announcements were UBS, Deutsche Bank, Credit Suisse, Bank of America, JPMorgan Chase, Goldman Sachs, and Morgan Stanley.[8] Details varied, but the proposed settlements often involved agreements by institutions to repurchase auction-rate securities from investors, or compensate them for losses incurred in selling the securities.

On September 7, Fannie Mae and Freddie Mac were placed in conservatorship by the Federal Housing Finance Agency, with the Treasury agreeing to provide $100 billion in financial support to each entity. The federal support evidenced by the conservatorship solidified expectations for the safety of government-sponsored enterprise (GSE) debt and mortgage guarantees, but equity owners and preferred shareholders were effectively wiped out. On the same day, the federal banking agencies announced their intention to work as needed with banks on capital restoration plans, and reminded banks that net unrealized losses on preferred and common stock were to be deducted from regulatory capital.

On September 15, Lehman Brothers Holdings, Inc. filed for Chapter 11 bankruptcy protection. Lehman Brothers had assets of $639 billion. It is difficult to attribute the failure of a firm of this size to a single factor, but important factors contributing to Lehman's problems appear to have included its highly leveraged financial structure, a higher than normal volume of illiquid, complex, or otherwise hard-to-value assets, and reliance on short-term, credit-sensitive funding sources.

Losses to equity and preferred shareholders of the GSEs and prospective losses in bankruptcy of the Lehman creditors sharply increased the degree of risk aversion in the financial markets. Credit spreads in interbank lending markets spiked, and banks found it more difficult to fund their operations, both unsecured and through the market for repurchase agreements.

In an effort to head off problems in certain repo markets, on September 14, the Federal Reserve announced it would exempt from Section 23A of the Federal Reserve Act[9] certain extensions of credit from insured depository institutions to their affiliates, for the purposes of financing securities traded in the tri-party repo market. On the same day, the Federal Reserve announced the collateral it would accept under the PDCF would extend beyond investment-grade securities, and the types of AAA securities it would accept as collateral for the TSLF would be expanded.

Another effect of the Lehman Brothers failure quickly became apparent when on September 16, shares in the Reserve Primary Fund "broke the buck"[10] as a result of its holdings of Lehman Brothers' commercial paper. Investors' demands for redemption of money fund shares system-wide increased dramatically, triggering concerns about the effect a run on these funds would have on their bank sponsors and the broader economy.

Federal agencies very quickly made a series of announcements to mitigate the potential problems associated with mutual fund redemptions. First, on September 17, the SEC clarified that bank support to an affiliated money market fund would not necessarily trigger a requirement to consolidate the assets of the fund on the bank's balance

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[8] See www.sec.gov/news/press/sec-actions.htm and http://en.wikipedia.org/wiki/Auction_rate_security, accessed April 17, 2009.

[9] Section 23A of the Federal Reserve Act is designed to limit a bank's credit exposure to its affiliates.

[10] Money market funds seek a stable $1.00 net asset value (NAV). If a fund's NAV drops below $1.00, this is referred to as "breaking the buck."

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sheet. Shortly thereafter, the Treasury on September 19 announced the creation of a temporary guarantee program for the U.S. money market mutual fund industry. In exchange for a fee, the Treasury would insure the holdings of any publicly offered eligible money market mutual fund. Within days, to address concerns about how this program might draw deposits away from banks, the Treasury clarified the coverage would be available only for amounts held in eligible funds as of September 19, not to newly accepted funds.

Also on September 19, the Federal Reserve announced the establishment of the Asset-backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF). This facility would lend to banks and bank holding companies to finance their purchases of high-quality asset-backed commercial paper from money market mutual funds (amounts outstanding under the AMLF would reach $24 billion by year-end). The Federal Reserve also announced that commercial paper purchased by banks and bank holding companies under this program would enjoy a temporary exemption from leverage capital requirements, risk-based capital requirements, and Sections 23A and 23B of the Federal Reserve Act. On the same day, the Federal Reserve also announced it would purchase short-term debt of Fannie Mae, Freddie Mac, and the Federal Home Loan Banks from primary dealers.

A theme that was much discussed in 2008 was whether the activities of short sellers were exacerbating the financial crisis. The SEC took its most forceful step in this regard on September 19, when it announced a temporary ban on short- selling the securities of 799 financial companies; this ban expired on October 17.

Notwithstanding all these actions, the liquidity crunch continued unabated.

On September 21, the Federal Reserve announced it had authorized the Federal Reserve Bank of New York to extend credit to the U.S.-based and London-based broker dealer subsidiaries of Goldman Sachs, Morgan Stanley, and Merrill Lynch. On the same day, the Federal Reserve approved the applications of Morgan Stanley and Goldman Sachs to become bank holding companies.

The largest bank failure in FDIC history occurred on September 25, when Washington Mutual Bank, Seattle, Washington (WMB) was closed by the Office of Thrift Supervision, and the FDIC was appointed receiver. JPMorgan Chase acquired the banking operations of Washington Mutual, including the $307 billion combined assets of WMB and Washington Mutual, FSB, Park City, Utah. The claims of equity, subordinated and senior debt holders were not acquired. The estimated cost of the transaction to the FDIC was zero.

On September 29, the Federal Reserve authorized the Federal Reserve Bank of New York to lend up to $85 billion to American International Group (AIG). The amount of government assistance to AIG would subsequently be increased, and the potential amount of support stood at about $180 billion as of March 20, 2009.[11] The assistance to AIG is best viewed as a form of support to the economy generally, and to the financial services industry in particular. It has since emerged that a number of large bank counterparties to credit default swaps (CDS) guaranteed by AIG have been made whole as a result of the AIG assistance. The problems at AIG have been attributed to its unsupportable volume of CDS activity. Thus, ironically, the use of CDS, a financial engineering tool that was supposed to disperse risk and lessen the likelihood of a credit crisis, in this instance appeared to add to policymakers' concerns about the potential for financial instability and contagion

[11] This figure comprises a $70 billion maximum allocation from TARP, a $60 billion line of credit from the Federal Reserve, and roughly $50 billion in aggregate in the Federal Reserve's Maiden Lane II and III LLCs. See also "AIG Loan Facility," an archive of press releases and documents related to the financial support of American International Group at www.newyorkfed.org/newsevents/aig_loan.html.

should this important CDS guarantor default.

On the same day that the Federal Reserve assisted AIG, the FDIC, Treasury, and Federal Reserve announced an open bank assistance transaction to facilitate the acquisition of the banking operations of Wachovia Corporation, Charlotte, North Carolina, by Citigroup. Subsequently, an offer emerged from Wells Fargo to acquire Wachovia in a transaction that did not require government assistance. The offer from Wells Fargo ultimately was consummated.

The Fourth Quarter

As the fourth quarter began, it was apparent that legislation was needed to boost market confidence, stimulate the economy, and supplement the resources of the financial regulatory agencies to address the crisis.

The Emergency Economic Stabilization Act of 2008 (EESA) was signed by the President on October 3, "to restore liquidity and stability to the financial system of the United States." Among other things, the EESA provided the Treasury up to $700 billion to establish a Troubled Asset Relief Program (TARP) (see inset box below) and temporarily increased the basic deposit insurance coverage limit to $250,000. (On May 20, 2009, President Obama signed into law the "Helping Families Save Their Homes Act," which extended the $250,000 basic deposit insurance limit to January 1, 2014.)

Troubled Asset Relief Program Capital Purchase Program

The Emergency Economic Stabilization Act of 2008 (EESA) provided for the establishment of the Troubled Asset Relief Program (TARP). The EESA vests in the Treasury explicit authority to administer the TARP and pursuant to such authority the Treasury established its Capital Purchase Program (CPP). Financial institutions were permitted to apply within prescribed deadlines to receive CPP funds under conditions specified in Term Sheets developed by the Treasury.[12]

Of the $700 billion approved for TARP as part of the EESA, the Treasury is reported to have allocated funding of $590 billion as of March 31, 2009, as follows: $218 billion invested in 532 banks through the CPP program; $25 billion for the Automotive Industry Financing Program (Chrysler, Chrysler Financial, General Motors and GMAC); $5 billion for the Auto-Supplier Support Program; $15 billion for the Unlocking Credit for Small Business Program; $70 billion for the Systemically Significant Failing Institutions Program (AIG); $40 billion in the Targeted Investment Program (investments in Citigroup, Bank of America); $12.5 billion for the Asset Guarantee Program (guarantees on selected assets of Citigroup and Bank of America); $80 billion for the Term Asset-Backed Securities Loan Facility (TALF); $50 billion for the Making Home Affordable Program; and $75 billion for the Public-Private Investment Program.[13]

The term sheets, and implementing Treasury regulations, place a number of requirements on institutions accessing CPP funds. Specific limitations are placed on the payment of dividends and the repurchase or redemption of capital stock. There are limits on compensation designed to exclude incentives for senior executives to take excessive risks, requirements to recover bonus or incentive compensation paid to a senior executive based on information later shown to be materially inaccurate, restrictions on the use of golden parachutes, and a prohibition on the deduction of executive compensation in excess of $500,000 for tax purposes. For details about the executive compensation rules, see the Treasury's interim final rules at 31 CFR Part 30 and available at http://www.treas.gov/press/releases/hp1364.htm.

Although the CPP does not impose specific requirements about the use of funds, the federal banking agencies expect institutions receiving CPP funds to ensure the adequacy of their capital base, support prudent lending to creditworthy borrowers, and work with borrowers to avoid preventable foreclosures. These expectations are described in more detail in the November 2008, *Interagency Statement on Meeting the Needs of Creditworthy Borrowers (Interagency Statement).* In addition, the FDIC announced that state non-member banks should implement processes to monitor their use of capital injections, liquidity support, or financing guarantees obtained through recent financial stability programs. The FDIC encouraged institutions to include, in shareholder and public reports, information about how the funds were used to support prudent lending and assist borrowers in avoiding unnecessary foreclosures.[14]

As part of its examination program, the FDIC assesses compliance with the CPP securities purchase agreements and the associated requirements of the EESA and reviews banks' efforts to implement the *Interagency Statement.*

[12] See FIL-109-2008 at https://www.fdic.gov/news/inactive-financial-institution-letters/2008/fil08109a.html.

[13] *SIGTARP: Office of the Inspector General for the Troubled Asset Relief Program, Quarterly Report to Congress,* April 21, 2009, page 38.

[14] "Monitoring the Use of Funding from Federal Financial Stability and Guaranty Programs," FDIC FIL-1-2009, January 12, 2009. See https://www.fdic.gov/news/inactive-financial-institution-letters/2009/fil09001.html.

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Actions to stabilize the financial system did not end with the EESA. Less than a week after the EESA was signed, on October 7, the Federal Reserve announced the creation of the Commercial Paper Funding Facility (CPFF) to provide liquidity to U.S. issuers of commercial paper through a special-purpose vehicle that would purchase three-month unsecured and asset-backed commercial paper directly from eligible issuers. CPFF credit would increase to $334 billion outstanding by year-end.

On October 14, the Treasury, the FDIC, and the Federal Reserve announced further actions to strengthen market stability. Treasury made available $250 billion in capital to U.S. financial institutions pursuant to its authority under the EESA; nine large institutions would subscribe to this facility in a total amount of $125 billion. The FDIC announced the Temporary Liquidity Guarantee Program (TLGP) (see *Temporary Liquidity Guarantee Program* inset box).

Further action to support financial institutions came on October 21, when the Federal Reserve announced the creation of the Money Market Investor Funding Facility (MMIFF). Through this program, the Federal Reserve Bank of New York would provide liquidity to a series of special-purpose vehicles to finance the purchase of eligible assets from U.S. money market mutual funds and potentially, over time, from other investors. MMIFF credit outstanding was zero through year-end.

On November 23, the Treasury, FDIC, and Federal Reserve provided assistance to Citigroup. The Treasury and FDIC provided protection against the possibility of unusually large losses on a pool of approximately $306 billion in assets on Citigroup's balance sheet, with Citigroup issuing preferred shares to the Treasury and FDIC in exchange. The agreement provided that the Federal Reserve stands ready to backstop residual risk in the pool through a non-recourse loan. Treasury invested $20 billion in Citigroup from the TARP in the form of preferred stock.

Temporary Liquidity Guarantee Program

On October 13, 2008, the FDIC established the Temporary Liquidity Guarantee Program (TLGP) to provide a temporary guarantee for certain newly issued senior unsecured debt issued by banks and their eligible affiliates, up to 125 percent of the senior unsecured debt outstanding as of September 30, 2008 (or, for insured depository institutions, the greater of this amount or two percent of consolidated liabilities at such date). The TLGP also fully insures certain non-interest bearing deposit transaction accounts. Participating institutions are assessed fees for guaranteed amounts they have outstanding under both programs.

The TLGP was established pursuant to a systemic risk determination by the Board of Directors of the FDIC, with the agreement of the Board of Governors of the Federal Reserve System, and the Secretary of Treasury in consultation with the President. The FDIC initiated the TLGP to address disruptions in the credit markets, notably the interbank lending market, which reduced the liquidity of financial institutions and their ability to lend.

As of year-end 2008, 7,207 insured depositories had opted into the transaction account guarantee program, and 4,561 insured institutions and 3,630 holding companies and affiliates had opted into the debt guarantee program. Of the 8,191 institutions opting into the debt program, 64 institutions had issued TLGP-guaranteed debt as of year-end 2008, in an aggregate amount of $224 billion. These and other TGLP statistics are available in the FDIC ***Quarterly Banking Profile*** at http://www2.fdic.gov/QBP/qbpSelect.asp?menuItem=QBP.

The definitions of debt and non-interest bearing deposits eligible to be guaranteed or insured under TLGP, and the requirements for participation in the program, are found at Part 370 of the FDIC's Rules and Regulations.[15]

All entities that participate in the FDIC's TLGP are subject to supervisory oversight to prevent rapid asset growth or excessive risk taking. The FDIC, in consultation with an entity's primary regulator, determines eligibility and use of the TLGP and supervises compliance with the TLGP requirements as part of its examination program.

[15] This rule, as well as the Master Agreement that participants in the debt program must sign, Frequently Asked Questions, and other resources can be found at http://www.fdic.gov/regulations/resources/TLGP/index.html.

On November 25, the Federal Reserve announced it would initiate a program to purchase from primary dealers up to $100 billion in direct obligations of GSEs (Fannie Mae, Freddie Mac, and the Federal Home Loan Banks), and up to $500 billion of mortgage-backed securities backed by Fannie Mae, Freddie Mac, and Ginnie Mae. These purchases were expected to occur over several quarters.

On the same day, the Federal Reserve announced the creation of the Term Asset-Backed Securities Loan Facility (TALF) to support the issuance of asset-backed securities (ABS) collateralized by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration. Under this program, the Federal Reserve Bank of New York would lend up to $200 billion on a non-recourse basis to holders of recently originated ABS. The Treasury provided up to $20 billion of credit protection to the Federal Reserve Bank of New York in connection with the TALF.[16]

On December 11, the SEC announced that it was charging Bernard L. Madoff and his investment firm, Bernard L. Madoff Securities LLC, with securities fraud in connection with a multi-billion dollar Ponzi scheme that he had allegedly perpetrated on clients of his firm. Mr. Madoff subsequently pleaded guilty to such charge. Although not directly relevant to the activities of insured banks and bank holding companies, this development was widely reported and further contributed to the erosion in market confidence that has adversely affected the financial services industry, and reinforced the support for regulatory reform.

As 2008 came to a close, indicators of financial and economic performance continued to disappoint. During fourth quarter 2008, FDIC-insured banks and thrifts posted a $37 billion loss, driven by high loan-loss expenses, trading losses, and goodwill write downs. More than 67,000 rated securitization tranches were downgraded during the fourth quarter.[17] The S&P/Case-Shiller Index of home prices in 20 large cities stood about 19 percent below year-end 2007 levels and about 27 percent below the July 2006 peak. Fourth quarter GDP growth (revised) as reported by the National Bureau of Economic Research was negative 6.2 percent. Consistent with these trends, the FDIC reported higher levels of failed and problems banks at year-end (See *Problem and Failing Banks* inset box).

On a positive note, the various federal assistance programs appear to have stabilized the ability of financial institutions to access the credit markets. For example, the spread between the 3-month London Interbank Offered Rate (LIBOR) and a comparable maturity government index (the TED spread) narrowed from a peak of 4.64 percent, reached on October 10 just before the announcement of the

Problem and Failing Banks

During 2008, the FDIC's problem bank list grew from 76 institutions with $22 billion in assets at the beginning of the year to 252 institutions with $159 billion in assets at the end of the year. Twenty-five banks failed during the year with assets of $372 billion.

Community banks. A majority of the community banks that became problem banks or failed during 2008 had similar risk profiles. These banks often had extremely high concentrations, relative to their capital, in residential acquisition, development, and construction lending. Loan underwriting and credit administration functions at these institutions typically were criticized by examiners. Frequently these institutions had exhibited rapid asset growth funded with brokered deposits.

Larger banks. Substantial losses to the FDIC insurance fund in 2008 came from portfolios of low- and no-documentation subprime and Alt-A mortgage loans and securities backed by such loans. In some cases, marketplace concerns about large exposures to these assets resulted in liquidity runs.

[16] As indicated in the table accompanying this article, the Federal Reserve would announce a significant expansion of the TALF early in 2009.

[17] See footnote 5.

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TLGP and Capital Purchase Programs, to 1.35 percent at year end. This spread declined further to 0.99 percent at March 31, 2009.

Areas of Bank Regulatory and Supervisory Focus Beyond 2008

Underwriting

A look back on the buildup to the financial crisis reveals similarities to earlier cycles of boom and bust. During the expansion, financial firms engage in a competitive relaxation of credit standards and risk tolerances to gain and maintain revenue growth. Easy credit allows borrowers to refinance ever-greater obligations in lieu of repayment, driving down default rates. This fuels the perception that credit risk is minimal, stimulating further loosening of credit terms in a self-perpetuating cycle. To some banks operating in such an environment, traditional lending standards can appear an unnecessary impediment to revenue growth.

A decline in loan underwriting standards belongs on any list of the factors responsible for the current crisis. To varying degrees, subprime mortgages, Alt-A mortgages with little or no documentation of income, residential construction loans, loans to leveraged corporate borrowers, commercial real estate loans, and other consumer loans have exhibited weakness in underwriting standards. Underwriting weaknesses have contributed to investor uncertainty about the quality of bank assets and amplified the adverse impact of the economic downturn on bank performance.

Over the years, the banking agencies have issued a number of supervisory guidance documents regarding adverse credit risk trends. These included guidance on managing the risks in leveraged corporate loans, credit cards, home equity loans, commercial real estate loans, non-traditional mortgages, and subprime mortgages. These guidance documents indicate that the agencies were generally aware of, and concerned about, emerging potential credit risks. A future focus of supervision in responding to such emerging risks may well include a careful look at where the line should be drawn between guidance and informal supervisory expectations on the one hand, and more tangible requirements on the other.

Consumer Protection

This crisis also has demonstrated the linkages between safe-and-sound banking, and banking that complies with the letter and spirit of laws designed to protect consumers and investors. Indeed, the triggering event for this crisis was the origination, and often the subsequent securitization, of large volumes of mortgages with little or no documentation of income or consideration of the borrower's ability to repay the loan under the contractual terms from sources other than the collateral. These features were made worse by low initial interest rates that reset to much higher rates, causing explosive payment shock. Along with their profoundly negative safety-and-soundness implications that included a multi-year wave of foreclosures and the collapse in value of many mortgage-backed securities, these lending practices were harmful to consumers and in many cases involved alleged unfair, deceptive, or abusive behavior.

Individual consumers were not alone in expressing concern about harmful financial practices. In a number of cases, institutional buyers of complex securities marketed by banking organizations and large investment banks claimed that they were misled or not told about significant risks associated with these securities. The most prominent example involved the allegations surrounding the failure of the auction-rate securities market.

Concerns about practices in the auction-rate securities market were not new. In 2006, the SEC issued a cease-and-desist action in connection with its investigation of 15 firms that sold auction-rate securities during 2003 and 2004.[18] The investigation found violations of federal laws that prohibit material misstatements or omissions. The shut-down of the auction-rate securities market in February 2008 prompted numerous class action lawsuits and investigations by state attorneys general, alleging violations of securities law and non-compliance with the SEC's 2006 cease-and-desist action. Most of the lawsuits were settled out of court; investment banks have agreed to repurchase about $50 billion in auction-rate securities.[19] The collapse of the auction-rate securities market dramatically illustrates that market conduct is of concern not only to investors, but can affect the safety-and-soundness of institutions and have spillover effects on the broader economy.

Developments such as these will likely heighten future regulatory and supervisory focus on investor and consumer protection. Examples of initiatives underway at the FDIC include enhancement of communication across the safety-and-soundness and compliance examination disciplines, including ratings reconciliation to ensure adverse findings in one discipline have been adequately considered by the other; the expanded use of joint examination teams where significant crosscutting safety-and-soundness and compliance issues appear to exist; and the development of red flags for individual institutions' compliance risk to assist in establishing supervisory priorities. In addition, the FDIC has and will continue to work with other federal and state regulatory agencies to identify and address consumer abuses in a unified and robust manner.

Capital

Another issue receiving attention from financial regulators in the wake of this crisis is capital adequacy regulation. Concerns have been raised about the quality of bank capital (for example, whether banks have sufficient common equity as compared to debt-like or other instruments that qualify as regulatory capital), the adequacy of the risk-based capital rules, and the lack of simple restrictions on financial institutions' leverage in most foreign jurisdictions and for most non-banks.

Regulators have stressed that common equity should be the predominant form of bank capital because of its ability to absorb unexpected losses while the bank continues to operate as a going concern. Regulatory tier 2 capital is of lower quality in this respect and may constitute set-asides for identified losses (e.g., the allowance for loan and lease losses) or claims on the bank that can absorb losses only in a bank failure, but not while the bank operates as a going concern. Some types of tier 1 capital (e.g., deferred tax assets and debt-like instruments such as Trust Preferred Securities and deferred tax assets) are subject to quantitative regulatory limits, reflecting the recognition that they are not coequal with common equity in their ability to absorb unanticipated losses while a bank operates as a going concern.

Policymakers also are focusing on improving the performance of the risk-based capital framework. The crisis revealed severe deficiencies with these rules. An in-depth treatment of these issues is well beyond the scope of this paper, but thus far, banks' largest losses appear to have been in the asset classes accorded the most favorable risk-based capital treatment. Large losses have been experienced in trading books, certain

[18] "15 Broker-Dealer Firms Settle SEC Charges Involving Violative Practices in the Auction Rate Securities Market," SEC press release 2006-83.

[19] See http://en.wikipedia.org/wiki/Auction_rate_security, accessed April 17, 2009.

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highly rated securitizations, and mortgage portfolios that were deemed low risk under current risk-based capital rules (capital requirements for these exposures would have been reduced even further under Basel II). Certain types of structured investment vehicles (SIVs) avoided capital requirements altogether, both under current rules and under Basel II.

Another aspect of the buildup to the crisis was that the financial system became more highly leveraged. Within the regulated commercial and investment banking sector, this trend was most pronounced at some entities that were not subject to clear-cut regulatory restrictions on the use of leverage: large European banks, large U.S. investment banks, and the non-bank segments of some U.S. bank holding companies. Given the magnitude of losses banks have experienced, in many cases centered in exposures deemed low risk by the risk-based capital rules, the merits of leverage-based capital requirements to complement the risk-based rules are becoming better understood.

The Basel Committee on Banking Supervision has announced its intention to develop proposals for comment in all of these areas by the end of 2009, for implementation once the crisis has passed. Going forward, banks and supervisors can expect a heightened focus on capital adequacy.

Concentrated Risk

This crisis also has underscored the dangers of excessive risk concentrations on banks' balance sheets. This risk manifested itself both in direct credit concentrations by sector or by counterparty and, more subtly, by concentration in exposures correlated in unexpected ways to a common risk factor or excessively reliant on the representations of third parties.

Balance sheet concentrations in commercial real estate (CRE) lending, especially acquisition, development and construction lending, were a problem in the 1980s and they are a problem now for some banks and thrifts. While the 1980s CRE problems were driven largely by commercial property overbuilding, problems in this cycle thus far have centered in residential CRE fueled by demand generated by unsustainable lending. Problems have been most acute for institutions that relied on brokered deposits to rapidly grow a poorly underwritten loan portfolio.

Excessive concentrations of exposure to the default, downgrade, or other adverse developments affecting a single counterparty have contributed both to the magnitude and speed of transmission of this crisis. Whether the exposures were to Fannie or Freddie, to Lehman Brothers, to AIG, to the continued AAA-rating of monoline bond insurers, or to other entities, the crisis revealed selected instances where individual banks had large exposures, or where the fear of unknown exposures drove marketplace or policy reactions.

Problems in some investment portfolios revealed another form of concentration that became important for some institutions: concentrated exposures to the accuracy of, and market confidence in, risk metrics employed by Nationally Recognized Statistical Ratings Organizations (NRSROs). Some 221,000 downgrades[20] of rated securitization tranches during 2008 illustrated that investment-grade securities could not always be assumed to be a source of safety and liquidity.

Another concentrated risk that proved problematical for some institutions was excessive reliance on third parties to perform significant bank functions. Banks are accountable for the consequences of their reliance on mortgage brokers; on entities that market credit cards and generate receivables; on investment advisors that market purportedly

[20] See footnote 5.

low-risk but high-yielding securities; and indeed on any third party that purports to offer pre-packaged revenue-generating solutions with minimal effort by the bank. This is not to suggest that third-party activities cannot be conducted in compliance with laws and regulations and in amounts that do not pose concentration risks. However, failure to control such activities can, and has, resulted in violations of law and regulation and safety-and-soundness problems.

In short, concentrated risks can manifest themselves in a number of ways. These risks are addressed in law, regulation, and supervisory guidance.[21] As the dust settles from the current crisis and lessons are absorbed, it seems reasonable to expect there will be a heightened focus on addressing risk concentrations during the next economic expansion, be it through the moral suasion of supervision or through enhancements to regulatory policy.

Liquidity

The events of 2008 also brought to the forefront liquidity risk as a real and significant risk facing financial institutions. A number of the liquidity failures of 2008 were unexpected, in some cases as late as the weeks or even days before they occurred. In response to these developments, bank regulators around the world are devoting more attention to liquidity risk management. For example, the Basel Committee on Banking Supervision published "Liquidity Risk Management and Supervisory Challenges" in February 2008 and "Principles for Sound Liquidity Risk Management and Supervision" in September 2008.[22] Also during 2008, the FDIC published guidance titled "Liquidity Risk Management"(FIL-84-2008, August 26, 2008), as well as an article in the Winter 2008 issue of this journal, "The Changing Liquidity Landscape."[23]

Examples of problems that emerged in this crisis at some banks include inadequate holdings of liquid assets, insufficient analysis of potential future cash flow needs under adverse scenarios, reliance on volatile or concentrated funding sources, or insufficient liquidity contingency planning. Given the demonstrated importance of liquidity risks in this crisis and the work underway to strengthen liquidity risk management practices, it appears safe to assume that a future focus of supervision will include increased attention to assessing liquidity risk.

No discussion of bank liquidity would be complete without mention of the central role government support has played during the crisis. At year-end 2008, about $6.8 trillion in new federal government loans, liability guarantees or asset guarantees to financial services firms was outstanding that had not existed a year earlier (see Table 1 on page 4). By the end of the first quarter of 2009, the total maximum capacity of new programs in place or announced exceeded $13 trillion.

This massive infusion of financial support reflects, in part, the perceived gravity of the problems in the financial system, the potential ramifications of

[21] A partial list of references would include: the legal lending limits at 12.CFR Part 32 that address some but not all counterparty exposures; Federal Reserve Regulation F that addresses inter-bank liabilities; interagency "Guidance on Concentrations in Commercial Real Estate Lending, Sound Risk Management Practices," December 2006; the 1998 interagency "Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities," available at http://www.fdic.gov/regulations/laws/rules/5000-4400.html, which lays out the agencies' expectations for board oversight of risk concentrations, including establishing appropriate limits, and the importance of understanding and measuring the risks to which securities, and particularly complex or highly leveraged securities, may expose an institution; and the FDIC's 2008 Third-Party Risk: Guidance for Managing Third-Party Risk, FIL-44-2008, June 6, 2008, at www.fdic.gov/news/news/financial/2008/fil08044.html.

[22] See https://www.bis.org/publ/bcbs144.htm.

[23] Peter A. Martino and Lloyd E. McIntyre, III, "The Changing Liquidity Landscape," ***Supervisory Insights,*** Winter 2008, Vol. 5, Issue 2. See https://www.fdic.gov/regulations/examinations/supervisory/insights/siwin08/siwinter08-article1.pdf.

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which were manifested in September of 2008. The financial support also reflects the importance of banks and the financial system in supporting economic activity.

The government's support of the financial sector has put an end to the crisis atmosphere of September, reduced interbank lending spreads and bank borrowing costs, and by lowering interest rates generally, has helped support the value of financial assets. The support programs also have given regulators time to work through the issues facing the financial system in a more deliberative manner.

The flip side of the support is the extent to which banks, ratings agencies, and other market participants may become skittish as it is removed. This suggests that policymakers will have an important transition to manage, as they consider whether and when to phase out the various temporary programs. Supervisors, for their part, will need to closely monitor the implications for individual institutions of the various exit strategies that policymakers may consider.

Public Stakeholders

Recent federal support to financial institutions also has created an important new reality for supervisors, and that is the expanded role played by public stakeholders. Because a safe-and-sound banking system that complies with laws and regulations is in the public interest, Congress and the public will always be stakeholders in bank supervision. But with large sums extended to or newly guaranteeing the performance of individual institutions, the interest of public stakeholders in bank supervision is increased. Areas of interest include preventing government funds from being used inappropriately to enrich shareholders and senior management, maximizing the likelihood that the government funds will be recovered, and promoting sufficient transparency to allow for an evaluation of whether the use of funds is consistent with legislative intent.

Conclusion

Lessons about the causes of the financial crisis are still being learned. If there is one overarching lesson, perhaps it is this. Strong regulation and supervision of financial institutions is more important, not less, than some have previously thought. The future challenges facing bank supervisors will be great, but meeting those challenges provides an important opportunity for public service.

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