After the Supernova

Aerial view of New York financial district.

Crisis management lessons from the IMF's assessment of the U.S. financial system

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The shock waves from the collapse of investment banking group Lehman Brothers were still reverberating around the world when, in early 2009, the U.S. authorities invited the International Monetary Fund (IMF) to conduct an assessment of the U.S. financial system.

The United States was in the midst of one of the most devastating and costly financial crises in a century, in terms of job and output losses, public debt, and damaging spillovers to the rest of the world.

The U.S. policy response had been bold and aggressive, helping to forestall a total systemic collapse. The U.S. authorities had provided extraordinary liquidity support to a wide swath of the financial system, and debate had begun on landmark legislative reforms to strengthen regulation and supervision. The timing of the IMF's assessment represented an unusual challenge for both the IMF staff and the U.S. officials who participated, but also an important opportunity to learn from the crisis and help shape the reform agenda.

The IMF and World Bank had launched their joint Financial Sector Assessment Program (FSAP) in the wake of the Asian financial crisis of the late 1990s and, although more than 120 countries had already participated, this was the first time the United States was doing so.

To meet the challenge of assessing the world's most complex financial system, the IMF assembled a large team led by its Monetary and Capital Markets Department. The team held more than 150 meetings between October 2009 and March 2010 involving U.S. congressional staff, essentially all U.S. federal financial regulatory bodies, several state regulators, and many private market participants. In June, the assessment was delivered to the U.S. authorities and was discussed in meetings between IMF Managing Director Dominique Strauss-Kahn, Chairman of the Board of Governors of the Federal Reserve System (Fed) Benjamin Bernanke, and Secretary of the Treasury Timothy Geithner. In July the FSAP's findings were discussed by the IMF's Executive Board, and its final reports were published.

Although the FSAP assessment covered a broad range of issues—stress tests of key financial institutions, a review of the quality of regulatory oversight against international standards, and an evaluation of arrangements for systemic liquidity and crisis management—this retrospective focuses on some of the major crisis events of 2008 and how they informed the team's judgments on U.S. crisis management arrangements.

Casting a wider net

Much of the IMF's policy advice on financial safety nets and resolution mechanisms, colored by hours of discussions with officials recounting their experiences and actions during the crisis, was shaped by one critical and recurring theme: U.S. officials repeatedly found themselves without appropriate legal powers to deal with failing or struggling nonbank financial firms such as Lehman Brothers and Bear Stearns.

The challenge, in short, was to extend crisis management tools for commercial banks to nonbanks, including holding companies of large, complex, financial groups with the potential to destabilize the system as a whole.

Bear Stearns provided the first warning that investment banking groups fully compliant with capital and liquidity regulations could nonetheless abruptly lose access to the short-term "repo" funding that was their lifeblood. Repo is a form of financing in which securities are sold for cash, often at a discount known as a "haircut," under agreements to repurchase at a price differential amounting to interest, often the next day. On Thursday, March 13, 2008, haircuts charged to Bear Stearns on its repo borrowing jumped sharply, effectively rendering the group illiquid.

Until then, the secured nature of repo transactions had been thought to make such funding stable and reliable. With the benefit of hindsight, however, it became clear that even the repo market is vulnerable to sudden losses of confidence.

Events leading to the illiquidity of Bear Stearns raised the first questions about the U.S. central bank's emergency lending tool kit. On Tuesday, March 11, 2008, the Fed had announced a program to increase liquidity in the mortgage markets, its so-called Term Securities Lending Facility. This was the first of many new liquidity facilities authorized under emergency central bank powers that required two-thirds of the Fed's board to concur that circumstances were "unusual and exigent." Coincidentally or not, two days later Bear Stearns came under intense funding pressure.

By Friday, March 14, the investment bank was staring at imminent bankruptcy—with the risk of dangerous consequences for the rest of the system, given its heavy derivative market involvement and key role as a financier of hedge funds.

As a bridge to the weekend, the Federal Reserve Bank of New York (New York Fed) provided a $13 billion loan through the discount window to Bear Stearns's presumptive acquirer, JPMorgan Chase, which extended a back-to-back loan of the same amount to Bear Stearns (JPMorgan Chase owned several large U.S. commercial banks with standing access to the discount window). On Sunday, motivated by concerns for the other large investment banks and for the functioning of the repo market on which they depended, the Fed approved the Primary Dealer Credit Facility (PDCF), to become operational on Monday morning.

Whereas the U.S. systemic liquidity tool kit going into the crisis had always reserved lender-of-last-resort privileges for retail deposit-taking institutions, the PDCF amounted to a discount window for large securities dealers. It thus marked a major widening of the federal financial safety net.

Although JPMorgan Chase had committed to stand behind Bear Stearns's obligations the same Sunday that the PDCF was announced, it was not until Monday, March 24, that final terms for the acquisition were announced. The New York Fed agreed to provide financing support for the transaction, in the form of a $29 billion loan to a special purpose vehicle called "Maiden Lane," which, in turn, would purchase Bear Stearns assets. The structure allowed the central bank to execute an asset purchase as a collateralized loan authorized under its emergency powers, a device that would be used repeatedly in the coming months.

Striking a balance

In the IMF team's discussions with the official and private sectors, the Bear Stearns experience raised important issues and questions about liquidity arrangements. One key question was whether the safety net merited a permanent expansion, for instance by keeping the PDCF active indefinitely, or whether that would unduly increase moral hazard in the system. Another was whether the barrier to activating the Fed's emergency powers was set too high, with the risk that the "unusual and exigent" criterion would further unsettle financial markets. A further question was whether it was appropriate for a central bank to provide loans to individual nonbank financial firms.

On balance, the team agreed that the emergency liquidity facilities could be retired and reactivated as conditions demanded. Striking a balance between rules and discretion, it recommended greater articulation of principles governing future Fed lending to nonbanks, with continued flexibility to improvise as situations demanded, including the ability to provide liquidity support to individual firms in extremis.

With the benefit of hindsight, the near-collapse of Bear Stearns signaled a critical gap in the official tool kit—the absence of a resolution regime for systemic but failing investment banks. A disorderly outcome was averted only because JPMorgan Chase had been willing to acquire Bear Stearns and to guarantee its obligations while terms were being negotiated.

The Bear Stearns experience also provided critical insights into the Fed's crisis management capacity. Legal and operational constraints were navigated adroitly—evidence the innovative special purpose vehicle structure and the effective support that was provided to the repo market through the launch of the PDCF over a weekend. But the complex interventions also posed difficult communication challenges, including about where and how the line is drawn between liquidity and solvency support.

Collateral, collateral

The inadequacy of U.S. crisis management arrangements was laid bare six months later. On Friday, September 12, 2008, weakened by the ongoing economy-wide credit deterioration and continued fire sales of financial assets, Lehman became the second large U.S. investment banking group to abruptly lose access to market funding.

The Fed could not provide emergency lending to Lehman, which was legally required to be zero-loss—a condition the group could not satisfy because it had insufficient unencumbered collateral. Instead, the New York Fed assembled a syndicate of large banks and sought to persuade them to finance a purchase of Lehman. After Bank of America chose to merge with Merrill Lynch, the sole potential acquirer was Barclays of the United Kingdom. Although terms had been agreed by Sunday morning, the deal fell apart when Barclays reported that it could not immediately guarantee Lehman's existing trading obligations. Under U.K. law this would require either a shareholder vote or a waiver from the U.K. regulatory authority, neither of which could be obtained that day.

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With the Fed lacking authority to issue the guarantee, Lehman was left with no choice but to file for bankruptcy on Monday, September 15, 2008. If ever proof were needed that a single financial firm could be profoundly systemic, Lehman was it. The entire global economy tipped into recession.

Lehman demonstrated that the systemic consequences of the failure of financial firms can be multiplied by their cross-border activities and inconsistencies in bankruptcy regimes. In the United States, the New York Fed was able to continue lending to Lehman's broker-dealer subsidiaries, helping them remain open for three business days after the holding company's bankruptcy filing, preserving value and making the windup somewhat less disorderly. In the United Kingdom, by contrast, Lehman's London subsidiary had to be placed into administration, complete with an immediate stay on all transactions, which fueled panic. The resulting margin calls helped to bring down another domino in the global financial system: American International Group (AIG).

Lehman's bankruptcy filing undermined any hope of organizing private sector support for AIG. With AIG having issued some $500 billion of credit insurance to financial intermediaries in the United States and Europe, the Fed decided to provide funding. In the Fed's judgment, AIG, unlike Lehman, *did* have adequate collateral, in the form of a large number of solvent subsidiaries. The initial $85 billion New York Fed loan to AIG, announced on Tuesday, September 16, was secured by essentially all of AIG's assets.

The IMF team viewed these developments as offering important lessons for reshaping U.S. crisis management arrangements. In particular, the team noted, if *some* U.S. authority had had the power to issue a bridging guarantee to Lehman's holding company, the outcome might have been different, including for AIG. Moreover, resolution powers over securities dealers—in contrast to those covering U.S. commercial banks—were clearly not well suited to addressing systemic needs. Both these factors argued strongly for a new resolution mechanism.

The default by Lehman on a large volume of debt securities had also triggered an institutional run on the money fund industry, which was arrested on its third day when the U.S. Treasury offered to guarantee all money market funds. The IMF team generally applauded the guarantee—noting that it was analogous to extending federal deposit insurance to money market mutual funds—but argued that the core problem was a set of regulations that allowed money funds to operate in a manner that was effectively bank-like, something that needed to be redressed in the future.

The sharp deterioration of confidence in money market participants' ability to honor their overnight financing obligations also argued for steps to widen the range of eligible collateral and counterparties used for open market operations, the latter to include key commercial banks. In this way, the central bank would have greater ability to distribute systemic liquidity in times of market stress.

Opening the floodgates

With Bear Stearns and Merrill Lynch bought and Lehman gone, Goldman Sachs and Morgan Stanley came under intense market pressure and averted collapse that September largely thanks to a series of extraordinary actions by the Fed to further increase systemic liquidity.

On Sunday, September 14, 2008, as Lehman hurtled toward bankruptcy, the central bank announced an easing of limits on depository institutions' lending to their nonbank affiliates for assets typically funded in the repo market and expanded the PDCF collateral schedule to encompass all securities used in repo. A week later, the New York Fed was authorized to lend to *all* U.S. broker-dealer subsidiaries of Goldman, Morgan, and Merrill (not just their flagship primary dealers) as well as to their London broker-dealers. These actions allowed the New York Fed to step in and essentially backstop the entire repo market, with the decision to lend across the Atlantic appearing to have reflected an assessment that collateral owned by U.S. subsidiaries might not have met the groups' financing needs.

In a related action on October 7, the Fed announced the creation of the Commercial Paper Funding Facility, which authorized the New York Fed to effectively purchase—again using a special purpose vehicle structure—highly rated asset backed and unsecured (financial or nonfinancial) commercial paper. The program, which would become the most heavily drawn of all the broadly available emergency liquidity facilities, marked another watershed: the first time the central bank had offered to finance nonfinancial firms.

The IMF team noted that by early October 2008 the surviving large U.S. investment banks were able to access central bank liquidity through their (small) depository institution subsidiaries, their (large) U.S. and U.K. broker-dealer subsidiaries, and their holding companies, which could issue short-term debt to the New York Fed directly. It was a critical policy effort, and one that—again—underscored the systemic importance of key firms and markets normally outside the safety net.

Systemic risk exception

The IMF team studied the well-defined resolution powers and procedures that existed for commercial banks, unlike for investment banks. When Wachovia suffered a catastrophic run on its uninsured funding on Friday, September 26, less than two weeks after Lehman had collapsed, mechanisms were in place. Wachovia was not an investment bank; it was the sixth largest U.S. bank holding company, with a vast retail deposit-taking network. Yet it too imploded faster than remedial plans could be formulated.

In another weekend of high drama, the U.S. authorities decided, for the first time, to invoke the "systemic risk exception" to the general requirement that the Federal Deposit Insurance Corporation (FDIC) execute bank resolutions at least cost to the taxpayer. Invoking the exception required concurrence by two-thirds of the Fed's Board, two-thirds of the FDIC's Board, and the Treasury Secretary in consultation with the President of the United States. All this was done in the early hours of Monday, September 29, allowing the FDIC to guarantee a pool of some $300 billion of Wachovia's assets, after which Citi (then the second largest U.S. bank holding company) agreed to stand behind Wachovia's liquidity.

The systemic risk exception was invoked on a total of four occasions. One was on Tuesday, October 14, when the FDIC announced perhaps the most powerful policy measure of the crisis: the Temporary Liquidity Guarantee Program. This had two elements, a guarantee on all non-interest-bearing transaction account balances at FDIC-insured depository institutions and a guarantee on debt rollovers by these institutions as well as their holding companies. This was the only time the U.S. authorities used the exception to authorize a broadly available facility.

The FDIC's guarantee program and related actions helped turn the tide. Wachovia was the last big liquidity event of the crisis. Once the guarantee facility was in place, the cycle moved back to regulatory capital failures, which were typically slower moving and gave the FDIC time to corral potential bidders for failing institutions.

Undoubtedly, the existence of the U.S. systemic risk exception helped save the global financial system from worse disaster. To the IMF team, this experience illustrated the importance of not tying crisis managers too tightly to the mast of a least-cost resolution approach applied to individual firms. When financial stability is in peril, taxpayer cost needs to be weighed against the potential damage of a systemic meltdown.

Providing new powers

The IMF team viewed the U.S. system as having had essentially two crisis management tools going into the crisis: Fed lending and FDIC bank resolution. To be sure, the team noted, the existing U.S. bank resolution regime was far superior to those in countries where banks were subject to general bankruptcy. But it had its limitations, including the absence of powers to intervene at the holding company level. The IMF supported proposals to create new resolution powers reaching the ultimate holding companies of (all) FDIC-insured depository institutions, while retaining the least-cost resolution requirement for nonsystemic situations and the automaticity of "prompt corrective action" intervention triggers.

But if finessing bank resolution processes was difficult, creating a new resolution mechanism for large complex financial groups was the ultimate challenge. Here, as in other areas, U.S. reform legislation was taking shape while the FSAP assessment progressed. The IMF team supported extending the U.S. bank resolution process to nonbank financial firms of importance to the system as a whole to preserve continuity of key financial services in the interest of financial stability. Indeed, this whole process of "special resolution" of systemically important groups would be triggered by legal procedures modeled on the systemic risk exception.

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The team cautioned, however, that effective application of the new authority would require careful planning and preparation. The relevant financial groups would have to be assessed continuously with the goal of understanding inter- and intra-group dependencies and identifying which activities and subsidiaries were systemic and which were not. This would need to be supported by assertive supervisory actions to meaningfully simplify group structures. In a special resolution, systemic activities would be transferred to a temporary, government-backed "bridge structure," and legal entities deemed less important would be left to their own devices outside the bridge—akin to a holding company divesting a subsidiary.

Many of the IMF's recommendations on crisis management—as indeed in other areas not covered above—were included in the sweeping reforms to U.S. financial regulation signed into law on July 21, 2010. The Dodd-Frank Act includes a pathbreaking section on special resolution, requires that rules be set to guide future Fed lending to nonbanks, and much more. While this legislation is an important first step toward creating a more robust tool kit, the devil will be in the details of the large mass of new regulations yet to be written to give force to the law. ■

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