By what standards should we assess the efficacy of the Fed’s extraordinary liquidity facilities in fulfilling the lender-of-last resort function? First, we can consider the “helicopter standard” measuring the speed with which reserves were injected into (and withdrawn from) the banking system. Second, we can assess each program in terms of its net impact on enhancing confidence and reducing uncertainty about the borrowing institutions, in particular, and credit markets, in general. Third, we can consider whether and how these programs might be a useful permanent addition to the Fed’s tool kit. The first two standards measure the Fed’s effectiveness as fire brigade in putting out the particular fires that we experienced while the third requires consideration of how the fire brigade, building codes, building inspectors and insurance companies should all operate in the future. My comments address these three broad subjects. I do not address the question of the aggregate impact of these programs on the optimal size of the Fed’s balance sheet or level of reserves.

In summary, the Fed has cleverly solved some long-standing limitations on its lender-of-last resort (LLR) operations to deliver more effectively both routine and emergency (or temporary) liquidity support to individual institutions during the crisis of the last two years. But assessing the unique contributions to net-confidence of each

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* The views expressed here are my own and do not necessary reflect the views of BlackRock, Inc., or any of its affiliates. I would like to thank my BlackRock colleagues Adam Bowman and Gerald Pucci for their many thoughtful comments and suggestions.
program launched from September 2008 onward is not a fruitful exercise. It is also too soon to tell whether those programs that directly attempt to stabilize asset prices (and, thereby, indirectly support intermediary balance sheets) have been, on balance, contributors to enhancing confidence and reducing uncertainty; I am skeptical that we can sort out the direct affects of these price-keeping operations from the vast expansion of reserves and believe that we should not try to assess the net-benefit of these programs until the Fed has exited from them. Finally, the wrong way to design LLR facilities for the future would be to start with the list of the extraordinary programs the Fed launched in response to the crisis and then consider which ones to keep and which to retire. Consideration should first be given to the preferred relationship between the central bank’s balance sheet and the credit creation process and then to design LLR facilities consistent with the contours of the banking system that we are likely to have.

Historical context. Prior to the onset of the crisis, relatively few institutions had access to the Fed’s lending facilities - relative to other countries and relative to the wide range and number of institutions with actively-managed, liquid, dollar-denominated balance sheets. With respect to securities firms this is a legacy of Glass-Steagall. For foreign banks it is a function of the dollar’s role as a reserve currency. The recent, rapid evolution of SIVs, conduits and the other additions to the shadow banking system is the consequence of a failure of bank supervision to police the boundary between the banks and their shadows. In addition, over the last quarter century, the stigma of discount window borrowing reduced the use of Fed facilities while the Federal Home Loan Banks became a preferred source for funding for many institutions that have access to the Fed. As a consequence of all of these influences, the Fed’s techniques for liquidity creation became bifurcated between massive open market operations (both repo and outright) and tiny discount window operations.
How good were the fire fighters? The Term Auction Facility (TAF, 12/12/07) and the central bank liquidity swaps (12/12/07) clearly fall within the category of improved techniques for delivering LLR support to individual institutions. The TAF addressed the stigma issue and got the Fed in the business of providing term funding directly to banks, while the swap facilities elegantly delegated the “liquidity or solvency” question regarding foreign banks to other central bankers. In each case, these facilities have expanded and contracted fluidly in response to demand. In my view, the Fed gets very high marks for these under both the helicopter and net-confidence standards.

The Primary Dealer Credit Facility (PDCF, 3/16/08) also falls within my definition of an “improved technique” for delivering traditional LLR support. It was up and running fairly quickly and its net contribution to overall confidence was positive. However, the use of the Fed’s extraordinary powers under Section 13(3), the initial lack of clarity and transparency around the terms and conditions, and the line-drawing problem of letting in some but not all securities firms, were modest detractions from confidence even if the overall impact was positive. It was exceptionally important that the PDCF was already established in advance of the collapse of Lehman in September 2008 as it provided a classic emergency LLR response to the ensuing panic, growing from zero balances outstanding on September 10th to over $147 billion three weeks later and then contracting back to $50 billion by mid-November.

The Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF, 9/19/08) and the Money Market Investor Funding Facility (MMIFF, 10/21/08) certainly helped to stabilize confidence in money market mutual funds. The Fed did an extraordinary job in getting these up and running quickly. These facilities were a cross-over type: providing the functional equivalent of LLR functions to money market funds but doing so on a non-recourse basis and, thus, moving into the business of stabilizing asset
prices directly. The speed with which the AMLF was established and provided support, growing from nothing to $145 billion within three weeks, was itself an extraordinary contribution to preventing runs on, and restoring confidence in, money market funds.

One can think of the Commercial Paper Funding Facility (CPFF, 10/7/08) as a program that went well beyond anything in the LLR framework because it by-passed the money market funds and offered direct support to commercial paper issuers of all types. However, as some issuers were themselves in the vendor finance business and financial services, we can also think of this as providing the functional equivalent of LLR services to finance companies in the commercial world with “actively-managed balance sheets”.

The AMLF, the MMIFF, and the CPFF all contributed to stabilizing confidence in money market funds and the commercial paper market and the speed with which they operated directly contributed to this. However, the best answer to the question of what was their net-contribution to overall confidence is: we do not know and we may never know. To do so would require distinguishing their net impact from that of (a) the Treasury Department’s temporary guarantee for money market portfolios (9/19/08), (b) the significant increase in the TAF and swap lines (9/29/08), and (c) the announcement of the FDIC’s Temporary Liquidity Guarantee Program (10/14/08). The Fed’s announcement of expanding the swap lines to $630 billion and the TAF to $600 billion, finally providing a threatened supply of dollars in excess of apparent demand, may well have well have been the key turning point that helped to stabilize confidence in the fall of 2008.

The Term Asset-Backed Securities Loan Facility (TALF, 11/25/08) does not score well on the helicopter standard, as it has taken a very long to get it up and running. It is clearly intended as a means of stabilizing asset prices directly and, thereby, contributing indirectly to stabilizing balance sheets and better macro-economic outcomes. The
numerous announcements about TALF have generally had the desired, directional impact on prices of included assets. In that sense it has contributed to confidence in the short run. However, like the Agency Mortgage-Backed Securities Purchase Program announced the same day (11/25/08), these price-keeping operations and their overall impact on confidence and uncertainty will need to be reassessed when they are concluded.

What about the future? The agenda for the conference asks whether the extraordinary programs would have been more effective had the Fed been a supervisor of the institutions to which it lent. This suggests an important threshold question: Do we think Section 13(3) is a good idea or a bad idea? Should the Fed only lend to institutions it can supervise? (Or should the Fed be able to supervise any institution to which it lends?)

As a general principle, I agree with the Fed’s founders that there should be a release valve of some kind like Section 13(3). But Congress and the Fed are going to have to recreate the boundary between what’s an “unusual and exigent” circumstance and what’s not. The important components of this boundary are not just about Section 13(3) itself.

To design lender-of-last-resort arrangements for the future, the Fed will need to draw three sets of lines and create new presumptions about when and how each of these lines can be crossed in extremis. First, who gets access to liquidity from the central bank - both routine funding and temporary LLR assistance - and under what (exigent) circumstances may others gain access? Second, when will central bank lending be effectively on a recourse basis against the franchise value of the borrower and when will it be on a non-recourse basis against tight collateralization requirement? Third, under what circumstances should we expect the Fed to engage in unsterilized (or sterilized) asset-
price support operations and how can this activity be limited (in some way) without constraining the Fed’s ability to conduct open market operations?

Begin with the desired relationship between the central bank’s balance sheet and the credit creation process. Can we (or should we) go back to the world of large open market operations in Treasury securities and small discount window borrowings? Or will TAF-like operations need to be an important support for private credit creation in the future? We will certainly have a sufficiency of Treasury securities for Treasury-centric operations. However, maybe private credit creation will need direct support from the Fed for some time and term-lending facilities by the Fed against a broad pool of private-sector collateral is one way to do this. For routine liquidity creation we can choose a broad or narrow set of counterparties and a broad or narrow pool of eligible collateral. In order to support what little private credit creation we are likely to muster, I would urge the Fed to continue the TAF in some form and, thus, to continue to operate directly with a large number of counterparties and with a broad pool of collateral.

Don’t be afraid of broadening access to emergency LLR. I would start with the idea that you want to give most “actively-managed, liquid balance sheets” access to the lender-of-last resort for emergency assistance even if these institutions do not have access to the central bank’s routine provision of liquidity.

The financial system became unbalanced because the shadow banking system became too large in relation to the whole; too many of the actively-managed balance sheets in aggregate did not have LLR access. But this need not be a matter of all or none. In redesigning the system, while not all liquid balance sheets need access, it would be best if the preponderance of liquid balance sheets had access to temporary LLR facilities.
Similarly, not all credit intermediaries need to be supervised as banks or have access to routine liquidity from the central bank. Over the last decade, too many institutions engaged in maturity transformation were not effectively supervised as credit creators. But this is not something that can be fixed through central bank liquidity facilities.

_The discipline is not “who” but “against what”._ The experience of the last two years teaches us that the binding constraint is not who the Fed can lend to but, rather, the requirement that Fed have adequate collateral. As long as some Section 13(3)-like release valve is going to exist, the Fed will have latitude to expand the circle to whom it lends. The fact that the Fed has now so expansively used this power will, at the margin, increase the probability of its perceived availability in the future, making it more likely that firms will be able to claim they are “unable to secure adequate credit” from other banking institutions.

However, the apparent lesson of the Lehman Brothers episode is that the binding constraint on the Fed’s behavior is the requirement that its lending be secured. Moreover, the tighter the collateralization requirement the more discipline there is on the LLR and, indirectly, on the borrowers. (Although AIG-style facilities against entire businesses, provided they have apparent positive value, do not provide a “tight” model of collateralization.) Through the non-recourse presumption that has underpinned many of the Fed’s programs in general, and through the use of its various special-purpose vehicles in particular, the Fed has learned a great deal about controlling its exposures. This made it easier to provide liquidity to a broader set of institutions. But the effectiveness of this approach weakens the argument that the central bank should have a restricted list of institutions to whom it will lend and also weakens the case for requiring that that borrowers be supervised by the Fed or even supervised in any particular way.
The case for a “supervised by” requirement is weak. Of course the central bank should care deeply about the credit quality of banks’ balance sheets because so much “money” comes from banks. This is the strongest case for the central bank’s role in bank supervision. But the mere fact that the central bank is a lender is not a compelling reason for the central bank’s role in supervision. If there were an “in principle” argument here then the Federal Home Loan Banks would presumably be the optimal primary supervisory for the institutions to whom they lend, which is not the case - although this might be because routine liquidity provision has become the mission for the FHLBs, which should be a consideration in whether to adopt large-scale TAF-like operations in the future.

The threat that the central bank will not lend unless it can supervise is not an effective moral hazard counterweight. The Fed tried to implement this approach ten years ago in the negotiations with Congress over Gramm-Leach-Bliley and, subsequently, in expecting that the big securities firms would sign up for “Fed light” supervision in order to get access to the discount window under Gramm-Leach-Bliley. The Fed lost this bluff. During the tumult of 2008, a few major investment banks were turned into banks and are now supervised by the Fed. But the threat made ten years ago that the Fed would not lend to an institution unless it had supervisory authority over the borrower did not work in advance of the crisis and rings pretty hollow at present.

Do not settle the Glass-Steagall fight at the Discount Window. I would place securities firms inside the category of firms that should have access to temporary LLR facilities. Thus, I would not try to use LLR access to solve the problem of separating the trading book from the banking book or of unraveling “too interconnected to fail” from “too many deposits to fail”.
In my view, the most effective means of addressing these problems is explicitly to subordinate counterparty trading exposures to all other creditors.† This will create the incentives for all counterparties to demand sufficient bilateral margin (collateral) to ensure that the capital which supports the trading book is separated from the capital that supports intermediation of credit across time. This, in turn, will provide strong incentives to move trading activity to effectively-margined multilateral clearinghouses and exchanges.

It is too soon to declare the price-keeping operations a success. It is too soon to tell whether the Fed’s programs like the TALF and the mortgage purchases, aimed directly at stabilizing asset prices and compressing spreads, are an effective net-contributor to stabilizing confidence and the economy. The engineered, low mortgage rates are apparently helping to stabilize the housing market. The absence of a credible exit from these types of operations is an obvious shortcoming (and some members of the political class will be only too happy to encourage the Fed to continue to act as a supercharged government-sponsored enterprise). But while they may help to stabilize house prices and mortgage asset values in the short-run, we are likely only deferring the pain and volatility to a later date. There appears to be a significant risk of awkward and unintended consequences for financial balance sheets when these price-keeping operations are ended.

Lender-of-last resort facilities are not an alternative to effective supervision. It seems to me that we are being a little too polite in describing what just happened as a failure of systemic risk supervision and this form of politeness is a handicap to understanding. Referring to the need for better systemic risk supervision allows us to pretend that what we have witnessed is a mistake of scope rather than one of competence.

† I would also clarify that under the bankruptcy code, while the automatic stay does not apply to the netting of due-to and due-from claims on qualified financial contracts, the uncollateralized net-amount should not be accelerated ahead of the stay and should remain simply another claim against the administrator - at the back of the line.
We have just experienced a colossal failure of bank supervision. Risk-based capital is a failure in that it does not produce the incentive effects in practice that are suggested by theory. Bankers and traders intuitively understand this; academics, central bankers and supervisors appear to still be in denial. The quest for a self-policing mechanism to control risk in the banking system, which has been pursued in the corridors of Basel over the last quarter century, is misguided because the practical tools to identify and enforce risk categories with sufficient accuracy are not there and, in my opinion, are not likely to be created.

Supervisors need to attack directly the problems of credit quality and long-tailed risk. Lenders have been and will always be tempted to capture the apparently-wider net-interest margins on loans to risky borrowers without properly accounting for the higher probability of default. Supervisors need to address credit quality head on and ask lenders why they are lending to people who cannot pay them back. Writers of long-tailed risk in insurance and option markets will be tempted to collect too little premium income and hold too few reserves to generate the apparently-wider margins in the short run. Supervisors need to take a view of whether premiums and reserves are adequate to cover long-tailed risk and if this cannot be determined with sufficient confidence they need to prohibit the writing of such business.

In redressing the recent failures of bank supervision the Fed has done an extraordinarily good and creative job of creating lender-of-last resort fire fighting tools to stabilize the banking system. In doing so the Fed has ably overcome the narrow set of LLR tools and relations it had when it entered the crisis. But in designing LLR tools for the future the Fed should step back and consider anew how best to manage the relationship between its balance sheet and the banking system.