

WHAT TO DO ABOUT CONTAGION?

A CALL BY THE COMMITTEE ON CAPITAL MARKETS REGULATION FOR PUBLIC DEBATE



SEPTEMBER 2014

 COMMITTEE ON CAPITAL MARKETS REGULATION 

WHAT TO DO ABOUT CONTAGION?:

A CALL BY

THE COMMITTEE ON CAPITAL MARKETS REGULATION

FOR PUBLIC DEBATE

September 3, 2014

WHAT TO DO ABOUT CONTAGION

“Dodd Frank falls short in other areas...Congress has also removed some of the most creative and effective tools used to stave off collapse. In order to provide greater Congressional control, Dodd-Frank limits regulator discretion in times of crisis. In one respect, of course, that's all to the good. Congress is responsible to our citizens, so it's encouraging to see the focus on taxpayer protection. The bank rescues were a source of public outrage, so it is understandable that Congress would take steps to ensure that failing institutions not be propped up in their present form. But some of the powers that Congress limited or constrained, such as some Federal Reserve lending authorities or the FDIC guarantee authority, were rarely used, if ever. Emergency measures such as we used to stem the crisis should be employed only when we are facing the economic equivalent of war, and the president and two-thirds of the Fed and the FDIC make a financial emergency declaration to protect the American people. Why give up these tools and disarm when there is no assurance that policy makers will not need such flexibility again?”

— *Former U.S. Secretary of the Treasury Henry M. Paulson*¹

“We went into our crisis with a toolbox that wasn't exactly empty, but also wasn't remotely adequate for our complicated and sprawling modern financial system.” “What should be in the toolbox? The vital tools are: an ability to extend the lender-of-last-resort authority to provide liquidity where it's needed in the financial system; resolution authority...and, along with deposit insurance...broader emergency authority to guarantee other financial liabilities.”

— *Former U.S. Secretary of the Treasury Timothy F. Geithner*²

The heart of the 2008 financial crisis was a contagious panic that swept through global financial markets like wildfire following the bankruptcy of Lehman. Contrary to some analyses, the crisis was primarily due neither to the “interconnectedness” of the balance sheets of large

¹ Henry M. Paulson, Jr., *On the Brink: Inside the Race to Stop the Collapse of the Global Financial System* 1, xxviii (2013).

² Timothy F. Geithner, *Stress Test: Reflections on Financial Crises* 515 (Crown Publishers 2014).

global financial institutions nor to the collapse of key providers of short-term funding to the financial system. It is imperative for the financial stability and economic well being of the United States that our government have the weapons to stop contagious panics—indeed concern with such panics was the reason the Federal Reserve System was created in 1913. Some in Congress have recently called for a deeper discussion of the Federal Reserve’s role in ensuring financial stability with a particular focus on the central bank’s authority as lender of last resort.³ Many have responded to this call, including an April 2014 Brookings Institution’s conference, “Liquidity and the Role of Lender of Last Resort,”⁴ and a May 2014 Hoover Institution conference, “Frameworks for Central Banking in the Next Century.”⁵ The House Financial Services Committee has also recently released a report assessing the Dodd-Frank Act.⁶ This is our contribution to the discussion, outlining the foundation for the issue of contagion and how it should be prevented in the future. The Committee is taking no position on these issues at this time.

I. THE CONCEPT OF SYSTEMIC RISK

Since the 2008 financial crisis, the prevention or minimization of “systemic risk” has emerged as the most important goal of financial regulation.⁷ This report begins with a precise nomenclature of the kinds of systemic risk, “connectedness,” “correlation,” and “contagion”—the “Three C’s of Systemic Risk.”⁸ We define them as follows:

- “Asset interconnectedness” is a form of connectedness describing a relationship between financial institutions whereby the failure of one institution may provoke a chain reaction of failures by other financial institutions with direct credit exposures to each other.

³ See, for e.g., letter from Jeb Hensarling, Chairman, House Committee on Financial Services, to Ben Bernanke, Chairman, Federal Reserve (Jan. 13, 2014); also see letter from Sen. Elizabeth Warren, et al. to Janet Yellen, Chair, Federal Reserve (Aug. 18, 2014).

⁴ See Public Discussion, *Liquidity and the Role of the Lender of Last Resort* (Apr. 30, 2014), available at <http://www.brookings.edu/events/2014/04/30-liquidity-role-lender-of-last-resort>.

⁵ See Public Discussion, *Frameworks for Central Banking in the Next Century* (May 2014), available at <http://www.hoover.org/events/frameworks-central-banking-next-century>.

⁶ Report Prepared by the Republican Staff of the House Committee on Financial Services, *Failing to End “Too Big to Fail”: An Assessment of the Dodd-Frank Act Four Years Later*, July 2014.

⁷ Hal S. Scott, *The Reduction of Systemic Risk in the United States Financial System*, 33 HARV. J.L. & PUB. POL’Y 671, 672-79 (2010) (discussing the centrality of the problem of systemic risk to modern financial systems regulation).

⁸ See Hal S. Scott, *How to Improve Five Important Areas of Financial Regulation*, in RULES FOR GROWTH: PROMOTING INNOVATION AND GROWTH THROUGH LEGAL REFORM 113, 114 (2011).

- “Liability interconnectedness” refers to the connectedness between the providers and recipients of short-term funding, whereby if a key funding institution fails, the failure of its dependent recipient institutions may result.
- “Correlation” describes the failure of multiple institutions resulting from the collapse of asset prices due to an exogenous event (*e.g.*, the fall of housing prices in the period prior to the 2008 financial crisis).⁹ Correlation can also refer to the herding instinct of asset managers that can result in market crashes and instability.
- “Contagion” is the spread of investor or depositor runs from bank to bank, from institution to institution, independent of any direct interconnections between the institutions that are the victims of the run.

The feature that distinguishes contagion from other sources of systemic risk is the possibility for runs to spread indiscriminately across the marketplace, including to otherwise healthy and solvent institutions. Contagion’s ill effects are not limited to the financial sector: unless contained, the failure or “freezing” of otherwise solvent financial institutions (and the short-term debt upon which they depend) leads inevitably to the curtailing of credit within the “real” economy.

These concepts are not cut-and-dried but overlap and interact. Thus, for example, correlation, asset interconnectedness, and liability interconnectedness each may be a precipitator or catalyst of contagion. In some cases, contagion may begin with the isolated failure of a single firm, as some believe was the case with Lehman Brothers. In others, contagion may spread owing to generalized fears with respect to an entire industry (*e.g.*, the European banking system). Contagion may be amplified by liability interconnectedness, for example, when the failure of key providers of short-term funding to the financial system reduces the availability of liquidity.

Nevertheless, contagion—not asset or liability interconnectedness—was the primary driver of the 2008 financial crisis. Leading up to Lehman’s fall, major banks saw deposit runs, including National City, Wachovia, IndyMac, and Washington Mutual.¹⁰ The Lehman Brothers

⁹ Correlation is primarily a macroeconomic issue and falls outside the scope of this paper, although it arises specifically in the context of capital requirements.

¹⁰ Andreas Lehnert, *The History of Bank Runs: Lessons for “Stable Funding,”* Federal Reserve Board Conference on Stable Funding, September 27, 2013, *available at*

insolvency filing in September 2008 proved to be a spark in a dry forest as short-term creditors headed for the exits, fearful that the institutions to which they extended credit might meet the same fate as Lehman.¹¹ Lehman's failure triggered a major run on U.S. money market funds, starting with The Reserve Fund's Primary Fund (the "RPF"), which "broke the buck" on September 16, 2008, owing mainly to massive investor redemptions due to losses from the fund's significant direct exposure to Lehman securities. The run spread quickly across the money market fund industry, including to institutions with no significant exposure to Lehman. Contagion also spread to short-term ABCP markets, as money market funds shifted their holdings to risk-free U.S. government securities. In the interbank lending market, the London Interbank Offered Rate ("LIBOR") rose sharply, and many banks discontinued lending on the interbank market entirely. Repo markets also felt the effects of contagion, as borrowing rates and collateral demands increased dramatically.

The modern financial system is particularly vulnerable to contagion because of its dependence on uninsured short-term borrowing by banks and non-bank financial intermediaries. Until recently, most discussion of contagion was focused on the depository banking system and demand deposits, the locus of contagion in the classic bank runs of the Depression era. At the end of 2013, however, an estimated 66.2% of all short-term financial liabilities, including deposits outstanding, were uninsured.¹² This puts in perspective the sharp difference between the insurance coverage of the deposit and non-deposit segments of the financial system: although about 60% of banks' short-term liabilities are insured by the FDIC,¹³ only 33.8% of *all* short-term liabilities in the entire financial system are insured—less than the percent of deposits that were insured in the early 1940s.¹⁴ Finally, while the percentage of insured bank deposits

http://www.newyorkfed.org/research/conference/2013/stable_funding/Presentation_Lehnert.pdf (National City was sold to PNC, Wachovia was ultimately sold to Wells Fargo, IndyMac was closed, and Washington Mutual was closed while J.P. Morgan bought its operations).

¹¹ *Id.*

¹² The calculation of short-term non-deposit liabilities is an estimate determined by summing the MMMF shares outstanding, open market paper, federal funds and repo liabilities, and securities loaned amounts reported in the Federal Reserve's flow of funds data. *See* RICHARD S. CARNELL, JONATHAN R. MACEY & GEOFFREY P. MILLER, *THE LAW OF BANKING AND FINANCIAL INSTITUTIONS* 11 (4th ed. 2008); HAL S. SCOTT & ANNA GELPERN, *INTERNATIONAL FINANCE* 42-82 (18th ed. 2011).

¹³ This estimate is based on data provided by the FDIC.

¹⁴ FED. DEPOSIT INS. CORP., 2011 ANNUAL REPORT 130-32 (2012), *available at*

averaged roughly 80% from 2010-2012, this was inflated due to a temporary guarantee of non-interest bearing transaction accounts, which expired at the end of 2012.¹⁵ The percentage has now dropped back down to 61.2%.¹⁶

FIGURE 1: DEPOSIT AND NON-DEPOSIT U.S. FINANCIAL SYSTEM LIABILITIES –1950 TO PRESENT¹⁷

Year	1950	1960	1970	1980	1990	2000	2007	2008	2009	2010	2011	2012	2013
MMMF shares	\$ -	\$ -	\$ -	\$ 76	\$ 493	\$ 1,812	\$ 3,033	\$ 3,757	\$ 3,258	\$ 2,755	\$ 2,643	\$ 2,650	\$ 2,678
Open market paper	1	7	40	164	610	1,614	1,789	1,599	1,137	1,057	969	952	952
Federal funds and repos	(1)	(2)	1	103	336	1,001	2,119	3,662	3,251	3,666	3,922	4,173	3,670
Securites loaned, net	-	-	-	1	71	508	1,240	887	857	733	658	580	674
Short-term (est.)	0	4	41	345	1,511	4,935	8,180	9,905	8,504	8,212	8,192	8,354	7,974
GSE liabilities	3	11	45	190	468	1,923	3,081	3,390	2,977	6,589	6,378	6,217	6,315
Agency/GSE backed pools	0	0	5	114	1,020	2,493	4,464	4,961	5,377	1,139	1,305	1,437	1,569
ABS issuer liabilities	-	-	-	-	269	1,504	4,515	4,103	3,291	2,235	1,989	1,769	1,615
Non-deposit liabilities	\$ 3	\$ 16	\$ 91	\$ 649	\$ 3,268	\$10,855	\$20,241	\$22,360	\$20,149	\$18,176	\$17,863	\$17,777	\$17,473
Comparison: Domestic bank deposits													
Insured	\$ 91	\$ 150	\$ 350	\$ 949	\$ 2,785	\$ 3,055	\$ 4,292	\$ 4,751	\$ 5,408	\$ 6,315	\$ 6,975	\$ 7,407	\$ 6,010
Uninsured	76	111	196	376	631	1,157	2,629	2,755	2,298	1,572	1,807	2,068	3,816
Total deposits	\$ 168	\$ 260	\$ 545	\$ 1,324	\$ 3,415	\$ 4,212	\$ 6,922	\$ 7,505	\$ 7,705	\$ 7,888	\$ 8,782	\$ 9,475	\$ 9,825
% insured	54.4%	57.5%	64.1%	71.6%	81.5%	72.5%	62.0%	63.3%	70.2%	80.1%	79.4%	78.2%	61.2%
Memo:Cap (000s)	\$ 10	\$ 10	\$ 10	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250
Estimated uninsured short-term liabilities													
Non-deposit uninsured	\$ 0	\$ 4	\$ 41	\$ 345	\$ 1,511	\$ 4,935	\$ 8,180	\$ 9,905	\$ 8,504	\$ 8,212	\$ 8,192	\$ 8,354	\$ 7,974
Deposit uninsured	76	111	196	376	631	1,157	2,629	2,755	2,298	1,572	1,807	2,068	3,816
Total uninsured	\$ 77	\$ 115	\$ 236	\$ 720	\$ 2,141	\$ 6,092	\$10,810	\$12,660	\$10,801	\$ 9,785	\$10,000	\$10,422	\$11,789
% total short-term	45.6%	43.5%	40.4%	43.2%	43.5%	66.6%	71.6%	72.7%	66.6%	60.8%	58.9%	58.5%	66.2%

II. GOVERNMENT ACTION DURING THE 2008 FINANCIAL CRISIS

The federal government responded to the 2008 financial crisis with an array of loan facilities and guarantees to restore stability to financial markets and the banking and non-bank sectors.

<https://www.fdic.gov/about/strategic/report/2011annualreport/AR11final.pdf>; Eugene White, “*The Legacy of Deposit Insurance: The Growth spread, and Cost of Insuring Financial Intermediaries*,” in *THE DEFINING MOMENT: THE GREAT DEPRESSION AND THE AMERICAN ECONOMY IN THE TWENTIETH CENTURY* (Michael D. Bordo et al. eds., 1998).

¹⁵ See Figure 1; and see Cheyenne Hopkins & Jesse Hamilton, *FDIC Guarantee Program Set to Expire after Senate Block*, Bloomberg, Dec. 13, 2012, available at <http://www.bloomberg.com/news/2012-12-13/fdic-guarantee-program-set-to-expire-after-senate-block.html>.

¹⁶ *Id.*

¹⁷ BD. OF GOVERNORS OF THE FED. RESERVE SYS., *FLOW OF FUNDS ACCOUNTS OF THE UNITED STATES* (June 5, 2014), <http://www.federalreserve.gov/releases/z1/>. The tabulation is based on the convention in Pozsar et al., *Shadow Banking* 11-14 (Fed. Reserve Bank of N.Y. Staff Report No. 458, Feb. 2012) (defining “shadow bank liabilities” as sum of MMMF shares outstanding [line 1, L.120], open market paper [line 1, L.208], federal funds and repo liabilities [line 1, L.207, calculation methodology changed for years 2008 forward in 2014 Release], net securities loaned [line 20, L.130], GSE liabilities [line 25, L.123], agency- and GSE-backed pool securities [line 6, L.124], and ABS issuer liabilities [line 11, L.125]); *Quarterly Banking Profile: First Quarter 2014*, 8 FDIC Quarterly 2 (2014) (2013 data found in table I-C).

The Federal Reserve played a key role by making innovations in the use of the discount window for banks, as through the Term Auction Facility, as well as by extending credit to non-banks through the Federal Reserve's \$150 billion Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility ("AMLF"),¹⁸ \$350 billion Commercial Paper Funding Facility ("CPFF")¹⁹ (including purchases of both unsecured and asset-backed commercial paper from corporates²⁰), and the \$600 billion Money Market Investor Funding Facility ("MMIFF").²¹

The U.S. Treasury stemmed the run in the money market fund industry through the Temporary Guarantee Program ("TGP"), funded by the Exchange Stabilization Fund, which provided approximately \$3.2 trillion in guarantees of the liabilities of money market funds.²² The program was applicable to shares held as of September 19, 2008, the date the program was announced, just three days after the Reserve Primary Fund broke the buck.²³ Despite the success of this program, §131 of the Emergency Stabilization Act prevents the Treasury from enacting a similar guarantee program going forward as Congress has prohibited the Treasury from using the Economic Stabilization Fund to establish any future guaranty program for the industry.²⁴ The Treasury also used the Troubled Asset Relief Program ("TARP"), created by the Congress in October 2008, to inject capital into financial institutions through the Capital Purchase Program ("CPP"). TARP authority has now expired.²⁵

The FDIC stemmed contagious runs by instituting the Temporary Liquidity Guarantee Program ("TLGP") on October 14, 2008, which consisted of two parts: (i) the Transaction

¹⁸ Press Release, Bd. of Governors of the Fed. Reserve Sys. (Sept. 19, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/monetary/20080919a.htm>; Bd. of Governors of the Fed. Reserve Sys., *Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility*, *available at* <http://www.federalreserve.gov/monetarypolicy/abcpMMF.htm>.

¹⁹ Press Release, Bd. of Governors of the Fed. Reserve Sys. (Oct. 7, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/monetary/20081007c.htm>.

²⁰ *Commercial Paper Funding Facility*, FED. RESERVE, http://www.federalreserve.gov/newsevents/reform_cpff.htm (last updated Aug. 2, 2013).

²¹ Press Release, Bd. of Governors of the Fed. Reserve Sys. (Oct. 21, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/monetary/20081021a.htm>; *see also* Federal Reserve Bank of New York, *Money Market Investor Funding Facility: Frequently Asked Questions* (Jun. 25, 2009), *available at* http://www.newyorkfed.org/markets/mmiff_fa.html.

²² *Press Release: Treasury Announces Temporary Guarantee Program for Money Market Funds*, U.S. DEP'T OF THE TREASURY (Sep. 29, 2008), *available at* <http://www.treasury.gov/press-center/press-releases/Pages/hp1161.aspx>.

²³ *Id.*

²⁴ *See* 12 U.S.C. §5236(b) (2006).

²⁵ U.S. DEP'T OF THE TREASURY, *About TARP*, *available at* <http://www.treasury.gov/initiatives/financial-stability/about-tarp/Pages/what-you-havent-heard-about-tarp.aspx>.

Account Guarantee Program (“TAGP”) to provide unlimited guarantees to domestic noninterest-bearing transaction accounts and (ii) the Debt Guarantee Program (“DGP”) to provide limited guarantees of new senior unsecured debt issued by banks and thrifts.²⁶ The FDIC relied upon its authority to take actions to mitigate serious adverse effects on financial stability once a determination of systemic risk was made by the Secretary of the Treasury (after consultation with the President) in accordance with §13(c)(4)(G) of the Federal Deposit Insurance Act.²⁷ While the FDIC’s power to implement the TLGP was contingent upon a systemic risk determination by the Secretary of the Treasury, the FDIC was able to design the program without further approvals. Under §1105 of the Dodd-Frank Act, any FDIC plan to provide emergency guarantees must now get specific approval from both the President and Congress before the FDIC can provide any guarantees.²⁸ Finally, the limit on federal deposit insurance coverage was raised temporarily from \$100,000 to \$250,000 in 2008,²⁹ which was made permanent by the Dodd-Frank Act in 2010.³⁰

These programs together accomplished their objective—to stem contagion and restore financial stability. Apart from TARP, they were all aimed at preventing the failure of solvent institutions or funds that were the victim of indiscriminate contagion. And even TARP was used to provide funds to solvent institutions to avoid singling out insolvent ones. Furthermore, beginning in May 2009, stress tests were also employed to assess a bank’s capital adequacy under varying adverse economic scenarios.³¹ However, while stress tests were part of the tool kit to ensure the stability of the financial system, by the time they were performed the contagious runs had been stemmed.

However, the Federal Reserve also engaged in the bailout of a financial institution facing insolvency (as opposed to a solvent institution facing liquidity concerns) when it provided

²⁶ See Press Release, Fed. Deposit Ins. Corp., FDIC Announces Plan to Free Up Bank Liquidity (Oct. 14, 2008), available at <http://www.fdic.gov/news/news/press/2008/pr08100.html>; see also Fed. Deposit Ins. Corp., *Temporary Liquidity Guarantee Program*, available at <http://www.fdic.gov/regulations/resources/tlgp/index.html> (last visited Jan. 21, 2014).

²⁷ See Temporary Liquidity Guarantee Program, 73 Fed. Reg. 72,244 (released Nov. 26, 2008).

²⁸ Dodd-Frank Act §1105.

²⁹ Press Release, FED. DEPOSIT INS. CORP. (Oct. 7, 2008), <http://www.fdic.gov/news/news/press/2008/pr08093.html>.

³⁰ Press Release, FED. DEPOSIT INS. CORP. (Jul. 21, 2010), <http://www.fdic.gov/news/news/press/2010/pr10161.html>.

³¹ See Joint Press Release, Federal Reserve, Treasury, FDIC and OCC on Capital Assistance Program and Supervisory Assistance Program (May 6, 2009), available at <http://www.federalreserve.gov/newsevents/press/bcreg/20090506a.htm>.

substantial support to the AIG holding company. In stark contrast to its handling of Lehman, the government offered considerable support to AIG, ultimately as much as \$182 billion.³² The support started the day after Lehman's bankruptcy filing, when the Federal Reserve Board of Governors exercised its emergency powers under §13(3)³³ of the Federal Reserve Act³⁴ to authorize the FRBNY to establish a secured credit facility of up to \$85 billion in return for a 79.9% preferred stock stake in AIG.³⁵ Further, on October 8, 2008, the Board of Governors used its emergency §13(3) powers to supply AIG with up to an additional \$37.8 billion of liquidity secured by investment-grade fixed-income securities.³⁶ This was followed on November 10 by the Treasury's purchase of \$40 billion of AIG preferred shares under the Troubled Assets Relief Program ("TARP") as well as the establishment under §13(3) of two additional Fed lending facilities totaling up to \$52.5 billion for two portfolios of mortgage-related securities.³⁷ Section 13(3) also formed the statutory basis for the Federal Reserve's assisted rescue of Bear Stearns in March 2008 in partnership with JPMorgan Chase.³⁸

III. REFORMS OF THE FINANCIAL SYSTEM POST-CRISIS

Numerous reforms of the financial system have been adopted since the crisis through passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act" or "Dodd-Frank") and revisions of the Basel Accord. As a byproduct of the widespread anti-bailout sentiment following the 2008 financial crisis, many of the tools actually used to stem the crisis have been either restricted or prohibited. What makes this particularly troubling is Timothy Geithner's claim that the toolbox during the crisis "wasn't remotely

³² FCIC REPORT, at 350.

³³ 12 U.S.C. §343 (2006) (providing that "[i]n unusual and exigent circumstances, the Board of Governors of the Federal Reserve System . . . may authorize any Federal reserve bank . . . to discount for any participant in any program or facility with broad-based eligibility, notes, drafts, and bills of exchange when such notes, drafts, and bills of exchange are indorsed or otherwise secured to the satisfaction of the Federal Reserve bank").

³⁴ As codified in 12 U.S.C. §221 *et seq.*

³⁵ See Press Release, Bd. of Governors of the Fed. Reserve Sys. (Sep. 16, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/other/20080916a.htm>.

³⁶ See Press Release, Bd. of Governors of the Fed. Reserve Sys. (Oct. 8, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/other/20081008a.htm>.

³⁷ See Press Release, Bd. of Governors of the Fed. Reserve Sys. (Nov. 10, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/other/20081110a.htm>.

³⁸ See Press Release, Bd. of Governors of the Fed. Reserve Sys. (Mar. 16, 2008), *available at* <http://www.federalreserve.gov/newsevents/press/monetary/20080316a.htm>.

adequate for our complicated and sprawling modern financial system”³⁹ and that U.S. authorities were already limited in their capacity to prevent runs at non-bank financial institutions.⁴⁰ So we have restricted a toolbox that Geithner regarded as inadequate rather than strengthening those tools.

Chief among the new restrictions are those placed on the Federal Reserve’s powers as “lender of last resort.” In place of the weapons that helped to successfully stop the crisis, we have instituted new measures that do not require “bailouts”: increased capital requirements, new liquidity requirements, and a new FDIC resolution procedure for systemically important non-bank financial institutions, including bank holding companies. As addressed below in section III.B, these measures, even if desirable, are unlikely to be sufficient to prevent a future contagion. Yet, any policy proposals to address contagion through government support must be weighed against the increase of moral hazard that may accompany those solutions. However, with strong tools to combat contagion in place, insolvent firms can be allowed to fail without systemic risk concerns, thus reducing any moral hazard. As Secretary Geithner points out, “[w]hile [guarantees are] often attacked on moral hazard grounds...they can actually reduce moral hazard, because you can let the weak fall when you have the power to protect everyone else.”⁴¹

A. Lender of Last Resort

One of the principal ways to protect short-term creditors, and thus eliminate their incentives to run, is through public support, in the form of the use of the lender of last resort authority, severely curtailed by the Dodd-Frank Act.

One of the principal benefits of a strong lender of last resort is that its *ex ante* credibility prevents a panic in the first place, thus obviating the need to provide any actual funds. A strong central bank is the only institution that can provide the requisite credibility to prevent panics from occurring through its lender of last resort commitments. Much as Mario Draghi, President

³⁹ Timothy F. Geithner, *Stress Test: Reflections on Financial Crises* 515 (Crown Publishers 2014).

⁴⁰ *Id.* at 390.

⁴¹ *Id.* at 521.

of the European Central Bank, committed to do “whatever it takes to preserve the euro,”⁴² a central bank as lender of last resort can commit to do whatever it takes to provide necessary liquidity to the financial system, subject to the general constraint that it will only loan against good collateral to solvent institutions.⁴³ If this authority does not exist before a crisis, and is deployed as a crisis unfolds—by lending into a run—it is much harder to stem a panic and to discriminate between solvent and insolvent institutions.⁴⁴ While some critics characterize lender-of-last-resort lending as a “bailout,”⁴⁵ it is very important to keep in mind that proper use of lender-of-last-resort authority is a long-standing tenet of central banking and has been crucial for ensuring the stability of the financial system. However, abuses of lender-of-last-resort authority, such as lending to *insolvent* institutions, should be avoided.

Pre-history of Lender of Last Resort Authority

In 1797, Sir Francis Baring classified the Bank of England as the “the dernier resort,” constituting the probable first mention of the concept of “lender of last resort.”⁴⁶ In 1802 Henry Thornton built off Baring’s work and outlined the constructs of a lender of last resort: (1) the lender of last resort is the final source of liquidity in the market; (2) the lender of last resort is a significant holder of gold reserves; and (3) the lender of last resort maintains dual responsibility to both its shareholders and the general public.⁴⁷

In 1873, Walter Bagehot provided specificity to Thornton’s theory in *Lombard Street: A Description of the Money Market*.⁴⁸ Bagehot wrote *Lombard Street* following the failure of Overend, Gurney, and Company, a discount bank.⁴⁹ With this crisis as a framework, Bagehot offered his famous dictum for an effective lender of last resort: the central bank should “lend

⁴² Mario Draghi, President of the European Central Bank, Speech at the Global Investment Conference in London, available at <http://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html> (Jul. 26, 2012).

⁴³ WALTER BAGEHOT, *LOMBARD STREET: A DESCRIPTION OF THE MONEY MARKET* (E. Johnstone; Hartley Withers, eds., 1873).

⁴⁴ See Timothy F. Geithner, *Stress Test: Reflections on Financial Crises* 203 (Crown Publishers 2014).

⁴⁵ See e.g., Letter from Sen. Elizabeth Warren, et al. to Janet Yellen, Chair, Federal Reserve (Aug. 18, 2014).

⁴⁶ Sir Francis Baring, *Observations on the Establishment of the Bank of England and on the Paper Circulation of the Country* 1, 22 (1797).

⁴⁷ Thomas Humphrey, *Lender of Last Resort: The Concept in History*, Federal Reserve Bank of Richmond Econ. Review 8, 8-12 (Mar./Apr. 1989).

⁴⁸ Walter Bagehot, *Lombard Street: A Description of the Money Market* 1 (1873).

⁴⁹ See *Id.* at 64.

early and freely...to solvent firms, against good collateral, and at ‘high rates.’”⁵⁰ Bagehot argued that this policy would allay public concerns and preemptively avoid credit access issues.⁵¹ Bagehot subsequently examined why the Bank of England should and could act as an effective lender of last resort. He asserted that the Bank of England’s liquid holdings, gold reserves, and public duties positioned the Bank of England as the prototypical lender of last resort.⁵² In the 1800s and early 1900s, Bagehot and his lender of last resort policies were effectively applied not only in England, but also in Canada, France, and Germany.⁵³

History of Lender of Last Resort Authority in the United States

A series of banking panics led to the adoption of Bagehot’s lender of last resort policies in the United States.⁵⁴ The major panics occurred in 1873, 1893, and 1907-1908.⁵⁵ In each crisis, clearing houses in large cities such as New York and Chicago primarily acted as private lenders of last resort by providing emergency reserve currency.⁵⁶ The effectiveness of such actions was varied, given the complexity of coordinating behaviors in shifting markets.⁵⁷ By 1913, leading bankers and government officials increasingly agreed that a single centralized lender of last resort was needed.⁵⁸ Congress hence enacted the Federal Reserve Act in 1913, which provided the Federal Reserve with certain lender of last resort responsibilities to banks.⁵⁹ It was unclear whether this authority extended to non-banks.⁶⁰ Only after the Great Depression did Congress amend the Federal Reserve Act to include §13(3), which allowed the Federal Reserve to lend to non-banks under “unusual and exigent circumstances.”⁶¹

⁵⁰ Paul Tucker, *The Repertoire of Official Sector Interventions in the Financial System: Last Resort Lending, Market-Making, and Capital*, Speech at the Bank of Japan 2009 International Conference (May 28, 2009) at 5.

⁵¹ Walter Bagehot, *Lombard Street: A Description of the Money Market* 1 (1873) at 25.

⁵² See Thomas Humphrey, *Lender of Last Resort: The Concept in History*, Federal Reserve Bank of Richmond Econ. Review 8, 12-16 (Mar./Apr. 1989).

⁵³ Michael Bordo, *The Lender of Last Resort: Alternative Views and Historical Experience*, Federal Reserve Bank of Richmond Econ. Review 18, 24 (Jan./Feb. 1990).

⁵⁴ *Id.* at 23.

⁵⁵ *Id.* at 23.

⁵⁶ *Id.* at 23.

⁵⁷ *Id.* at 23.

⁵⁸ See Mark Carlson & David Wheelock, *The Lender of Last Resort: Lessons from the Fed’s First 100 Years* 1, 3 (Federal Reserve Bank of St. Louis Working Paper No. 2012-056B, Feb. 2013).

⁵⁹ *Id.* at 3.

⁶⁰ *Id.* at 11-12.

⁶¹ *Id.* at 11-12.

Federal Reserve Independence

After its creation, the Federal Reserve strained to maintain independence from the Treasury Department. Economist Allan Meltzer finds that the Federal Reserve's earliest days were spent in subservience to the Treasury, providing unquestioned support to the Treasury's World War I financing effort.⁶² For example, during World War I Federal Reserve officials explained that they allowed inflation risks to rise and rejected rate increases because such increases were "inadvisable from the point of view of Treasury's plans."⁶³ The early Federal Reserve was also careful not to oppose the Treasury in light of the Overman Act, which allowed the President to transfer Federal Reserve responsibilities to another agency (e.g., the Treasury) during the wartime period.⁶⁴ Overall, throughout this early period some in Congress blamed the Federal Reserve's missteps on the agency's lack of independence from political pressures.⁶⁵ Meltzer concludes that the early Federal Reserve "was too weak politically to slow or stop the postwar inflation and too uncertain about the political consequences of its actions to act decisively when the Treasury allowed it to act."⁶⁶

Post-World War I, the Federal Reserve attempted to assert its independence. Certain congressional members supported this endeavor and passed the Banking Act of 1935, a law that further centralized monetary decision-making power in the Federal Reserve.⁶⁷ However, continued "[s]ubservience to the Treasury during the [post-World War I] recovery . . . limited the effect of the legislation for a time."⁶⁸ Moreover, the Federal Reserve returned to a deferential wartime role in the wake of World War II; during this period then Federal Reserve Chairman Marriner Stoddard Eccles characterized his role as "a routine administrative job . . . [t]he Federal Reserve merely executed Treasury decisions."⁶⁹ Following World War II, the Federal Reserve regained independence through the 1951 Accord, an agreement that freed the Federal Reserve

⁶² Allan Meltzer, *A History of The Federal Reserve* 1, 85 (Univ. of Chicago Press 2003).

⁶³ *Id.* at 95.

⁶⁴ *See Id.* at 92, 128-129.

⁶⁵ *Id.* at 128-129.

⁶⁶ *Id.* at 132.

⁶⁷ *Id.* at 576.

⁶⁸ *Id.*

⁶⁹ Marriner Stoddard Eccles, *Beckoning Frontiers: Public and Personal Recollections* 1, 382 (Alfred A. Knopf 1951).

from the Treasury-induced ceiling on interest rates.⁷⁰ Meltzer notes that, after the 1951 Accord, the Federal Reserve “[f]or the first time since 1934 . . . could look forward to conducting monetary actions without approval of the Treasury.”⁷¹ Not only did this independence affect the Fed’s ability to conduct monetary policy, but it also affected its authority as lender of last resort, since “the Fed used monetary policy to implement its credit policy.”⁷² Federal Reserve independence was thus achieved only after the early Federal Reserve struggled to accede to Treasury instruction. This subservience hindered the Federal Reserve’s ability to avoid political concerns and combat shifting market environments.

Dodd-Frank Act’s Revisions to Federal Reserve’s Lender of Last Resort Authority for Non-Banks

The Federal Reserve’s authority as lender of last resort has been significantly curtailed by the Dodd-Frank Act, which restricted the scope of the central bank’s §13(3) emergency lending authority that it used to supply liquidity to non-bank financial institutions and stem contagion in the money market mutual fund industry, principally by requiring the approval of the Secretary of Treasury for such lending and by strengthening collateral requirements for any emergency lending it does provide to non-banks during a crisis. Per Dodd-Frank, all emergency lending to non-banks is subject to “the prior approval of the Secretary of the Treasury”⁷³ and is governed by policies agreed to by the Treasury ensuring that §13(3) loans are adequately collateralized⁷⁴ and are never extended to insolvent borrowers.⁷⁵ Prior to the enactment of Dodd-Frank the Federal Reserve was authorized to act as the lender of last resort to individual *non*-banks including “[i]ndividuals, [p]artnerships, and [c]orporations” in “unusual and exigent circumstances” by §13(3) of the Federal Reserve Act.⁷⁶ This was the authority it used to lend to AIG. Section 13(3)

⁷⁰ Allan Meltzer, *A History of The Federal Reserve* 1, 711-712 (Univ. of Chicago Press 2003).

⁷¹ *Id.* at 712.

⁷² Robert L. Hetzel, *A Review of “The Origins, History, and Future of the Federal Reserve,”* International Review of Economics and Finance 33, 391 (2014).

⁷³ Dodd-Frank Act §1101(a)(6) (“(B) . . . (iv) The Board may not establish any program or facility under this paragraph without the prior approval of the Secretary of the Treasury”).

⁷⁴ Dodd-Frank Act §1101(a)(6); before Dodd-Frank, the main predicates of emergency §13(3) lending were a five-of-seven vote by the Federal Reserve Board members coupled with the inability of the recipient institution “to secure adequate credit accommodations from other banking institutions” (Federal Reserve Act §13(3)(A)). Funds were required to be “secured to the satisfaction of the Federal Reserve,” leaving the appraisal of the adequacy of collateral posted by recipients to the Board’s discretion (Federal Reserve Act §13(3)(A)).

⁷⁵ Dodd-Frank Act §1101(a)(6).

⁷⁶ Federal Reserve Act §13(3)(A).

programs must now be conducted through programs with broad-based eligibility.⁷⁷ In addition, Dodd-Frank §608 has revised the ability of the Federal Reserve to provide indirect access to the discount window to non-bank affiliates of banks. Prior to Dodd-Frank, banks could channel discount window liquidity to non-bank affiliates (including broker-dealers) through repo transactions or other securities financing transactions. However, Dodd-Frank's revision to §23A of the Federal Reserve Act has now placed strict guidelines and quantitative limits (only up to 10% of the bank's capital for any single affiliate) on the ability of banks to conduct such transactions.⁷⁸ Finally, Dodd-Frank requires the Federal Reserve Board to report to the Senate Committee on Banking, Housing, and Urban Affairs and the House Committee on Financial Services the justification for the exercise of any §13(3) authority; the identity of the recipient; the date, amount and form of the assistance; and the material terms of the assistance (including value of the collateral), within seven days of the authorization of the assistance and with monthly updates thereafter.

The legislative history of the constraints on the Federal Reserve's lender of last resort power is instructive. The restriction on the Federal Reserve's independence, by requiring approval from the Secretary of the Treasury for any lending program under §13(3), draws from the political and public backlash against what were felt to be the Federal Reserve's unconstrained power to dispense public money to reckless financial institutions.⁷⁹ The first proposal for what amounts to a Treasury veto on the Fed's lender of last resort authority to non-banks came from the Treasury's June 17, 2009 Final Report on Financial Regulatory Reform, which proposed to revise the Fed's "emergency lending authority to improve accountability."⁸⁰ Subsequently, the Obama Administration, on July 22, 2009, introduced draft legislation containing the requirement that the Fed's emergency lending authority have the "prior written approval of the Secretary of

⁷⁷ Dodd-Frank Act §1101(a)(2), (6) (requiring lending facilities to be structured with "broad-based eligibility" with "the purpose of providing liquidity to the financial *system*, and not to aid a failing financial *company*" and stating that a "program or facility that is structured to remove assets from the balance sheet of a *single and specific company* . . . shall not be considered a program or facility with broad-based eligibility") (emphasis added).

⁷⁸ 12 U.S.C. §371(c).

⁷⁹ Thomas Cooley et al., "The Power of Central Banks and the Future of the Federal Reserve System," in "Regulating Wall Street: The Dodd-Frank Act and the new Architecture of Global Finance" (Viral V. Acharya et al., eds.), 52 (2011).

⁸⁰ U.S. DEP'T OF THE TREASURY, *Financial Regulatory Reform: A New Foundation* 1 (Jun. 17, 2009), available at http://www.treasury.gov/initiatives/wsr/Documents/FinalReport_web.pdf

the Treasury.”⁸¹ The House Republican bill introduced on July 23, 2009, also contained a requirement for Treasury Secretary approval, as well as a provision to allow for Congressional disapproval of §13(3) authority.⁸² A November 3, 2009, bill by Democratic Representative Barney Frank also contains a requirement of Treasury approval.⁸³ By December 11, 2009, the bill that ultimately became the Dodd-Frank Act, House bill (H.R. 4173), not only contained a requirement of Treasury Secretary approval of lending programs, but also added several further limitations that were not adopted into the Dodd-Frank Act: certification by the President that an emergency exists, FSOC determination that a liquidity event exists, and Congressional power to disapprove of any §13(3) program.⁸⁴

Treasury secretary involvement gives the Fed’s §13(3) authority the appearance of heightened public accountability. However, case-by-case involvement of the Secretary of the Treasury may politicize the lender of last resort authority and make the Fed subservient to the Treasury, reversing the course of history. Most importantly, it weakens the ability of the Federal Reserve to deal with contagion in the ever more important non-banking system. Obtaining the approval of the Secretary of the Treasury during the crisis was not a problem—Secretary Paulson was Chairman Bernanke’s cheerleader. But such approval is far from uncertain in the future since many believe that Federal Reserve actions during the crisis were an undesirable bailout. And even if the Secretary of the Treasury approval in the end would be forthcoming, the markets will not be sure of this and runs could occur earlier and with more intensity.⁸⁵ “It is not difficult to imagine an instance where the inability to act in a timely way on the part of the lender of last resort would pose a risk to national security, as well as to the financial system and the economy.”⁸⁶ Further, disclosing counterparty information within seven days to Congress may dissuade borrowers from seeking Fed assistance, to avoid the accompanying stigma of seeking

⁸¹ “Financial Services Oversight Council Act of 2009” (July 22, 2009), *available at* http://www.llsdc.org/assets/DoddFrankdocs/dodd-frank-act_admn-reg-reform-bill.pdf

⁸² “Consumer Protection and Regulatory Enhancement Act” (July 23, 2009), *available at* <http://www.gpo.gov/fdsys/pkg/BILLS-111hr3310ih/pdf/BILLS-111hr3310ih.pdf>

⁸³ H.R. 3996, 111th Cong. (2009).

⁸⁴ H.R. 4173, 111th Cong. (2009).

⁸⁵ Thomas Cooley et al., “The Power of Central Banks and the Future of the Federal Reserve System,” in “Regulating Wall Street: The Dodd-Frank Act and the new Architecture of Global Finance” (Viral V. Acharya et al., eds.), 60 (2011).

⁸⁶ *Id.*

aid.⁸⁷ This was a principal issue with the use of the discount window for banks before the Fed designed the Term Auction Facility in the early stages of the crisis.

The Administration and Treasury may have first introduced the requirement for Treasury approval as a way to recognize the public outcry against bailouts. The specter of a Treasury veto on lender of last resort lending may have been put forward as an alternative to even more restrictive limits called for by H.R. 4173, including mandating the involvement of both the President and FSOC in emergency lending decisions and allowing Congress to disapprove any §13(3) program. It may also have been a way to increase the Treasury's oversight and power (perhaps the Treasury was reasserting itself in the old turf battle with the Fed).

Comparison of Federal Reserve Lender of Last Resort Authority with Peer Central Banks

When it comes to autonomy, of the four peer central banks—the European Central Bank, the Federal Reserve, the Bank of England, and the Bank of Japan—the ECB has the strongest independence over government bodies since its authority is established by a Treaty not a legislative statute,⁸⁸ and it has in fact asserted quite autonomous lender of last resort authority. Despite the restrictions on direct provisions of credit under Articles 123-125 of The Treaty on the Functioning of the European Union, the ECB has used loopholes in the treaty language to provide nearly €1 trillion in short- and long-term liquidity for struggling Eurozone banks and other financial institutions.⁸⁹ Furthermore, while ECB lending requires adequate collateral, this determination is made by the national central banks rather than another government entity as is now required in the U.S. with the introduction of Treasury approval for Fed emergency lending.

⁸⁷ See Michael D. Bordo, *Rules for a Lender of Last Resort: An Historical Perspective*, 26, Paper prepared for the Conference “Central Banking in the Next Century: A Policy Conference” (May 29-30, 2014); for a discussion of the stigma associated with discount window borrowing, see Armantier et al., Discount Window Stigma during the 2007-2008 Financial Crisis, FRBNY Staff Report No. 483 (Sep. 2013): http://www.newyorkfed.org/research/staff_reports/sr483.pdf.

⁸⁸ See Hanspeter K. Scheller, *The European Central Bank, History, Role and Functions*, European Central Bank 28 (2004) available at <https://www.ecb.europa.eu/pub/pdf/other/ecbhistoryrolefunctions2004en.pdf>; European Central Bank, ECB, ESCB and the Eurosystem, available at <http://www.ecb.europa.eu/ecb/orga/escb/html/index.en.html> (last visited April 12, 2014).

⁸⁹ HAL S. SCOTT & ANNA GELPERN, INTERNATIONAL FINANCE 462-67 (19th ed. 2012), citing loopholes in which “the ECB can purchase public debt in the secondary market” and that “member states are free to assess for themselves ‘prudential considerations.’”

The BOJ also operates with more autonomy than the Fed.⁹⁰ Under Article 37 of the BOJ Act, the BOJ has authority, at its sole discretion, to extend temporary uncollateralized loans to solvent financial institutions. However, the BOJ's lender of last resort procedure can only be initiated upon the request of the government: the Prime Minister and the Minister of Finance must instruct the BOJ "to conduct the business necessary to maintain the stability of the financial system."⁹¹ Nonetheless, after such request, the Policy Board of the BOJ has broad discretion to determine whether to conduct special business operations, such as whether it will extend "loans under special conditions" (including uncollateralized loans). While the BOJ's lender of last resort power must be initiated at the request of the government, this process occurs in the context of Japan's parliamentary democracy. In the U.S. political system, Treasury approval of the Federal Reserve's lending program may be withheld for fear of Congressional retaliation, while in a parliamentary democracy such as Japan, the government controls the parliament and thus the risk of a policy difference between the government and parliament is greatly reduced. Furthermore, the BOJ can lend to non-bank financial institutions. Since there is no explicit statutory prohibition, a special loan could be extended to non-bank financial institutions under the same condition as banks (for example, through a financial institution with a BOJ account). More importantly, unlike the Fed, the BOJ is not required to obtain approval from the government on matters of implementation. Once it obtains general approval to lend, it has broad discretion to decide concerns such as terms and conditions on a case-by-case basis.

After the crisis, the BOE announced a complete overhaul of its lender-of-last-resort practices, including the possibility of opening up the discount window to non-bank financial institutions and offering liquidity for longer periods of time, while accepting a wider range of collateral.⁹² Even though the BOE is required to obtain Chancellor approval for emergency lending for "any proposal....[t]hat goes beyond the Bank's published frameworks," in a process that is facially similar to the Dodd-Frank Act approach, again this is fundamentally easier in a

⁹⁰ Akina Miyamoto, Consideration of Central Bank's Authorities of Lender of Last Resort: Comparative Study of Legal Frameworks in the U.S., Japan, and the Eurozone (Apr. 2014)(unpublished L.L.M. Long Paper, Harvard Law School)(on file with author).

⁹¹ Nihon Ginko hō [Bank of Japan Act], Act No. 89 of 1997, art.38, translated in Japanese Law Translation, <http://www.japaneselawtranslation.go.jp/law/detail/?vm=04&id=92&re=02> (Japan).

⁹² Chris Giles, *Carney Tears up the Rule Book on Bank Help*, Fin. Times, Oct. 24, 2013.

parliamentary democracy where the government controls the legislature and can mute legislative attack.⁹³

Overall, one could argue the Federal Reserve ranks fourth among its peers when one assesses its independence and powers as a lender of last resort.

Advance Liquidity Commitments

The Federal Reserve's lender of last resort powers could potentially be strengthened by establishing an advance liquidity commitment program, thus leaving no doubt of central bank intervention in the event of a future crisis. Such a program has historical precedent.

In 1999, concerns over Y2K computer glitches led many financial institutions to limit exposure to these potential risks by planning to reduce trading volume. Foreseeing the liquidity problems that would be created by a reduction of trading activity the Federal Reserve created the Standby Financing Facility, which "would provide securities dealers with a form of backup funding and ease market anxieties about year-end credit conditions."⁹⁴ This liquidity facility allowed primary dealers in government securities to buy options on temporary repos, which gave the contract holder the right to arrange a one-day repo with the Fed for \$50 million at a price of 150 basis points over the federal funds target rate (a price determined through an auction).⁹⁵ Secondary trading of the liquidity options was not permitted.⁹⁶ The Fed's auction of the options was successful as demand surpassed expectations.

Even though a disruptive trading event never materialized as a result of Y2K, and no dealer exercised its option, an argument can be made that the introduction of the Standby Financing Facility averted market disruptions.⁹⁷ Not only did market repo rates decline substantially after the Fed announced the details of the facility and the strong results of the auction, but according to members of the New York Fed's Markets Group, "many dealers indicated that the options

⁹³ HM Treasury, Bank of England, and Prudential Regulation Authority, Memorandum of Understanding on Financial Crisis Management, Section 6, *available at*: <http://www.bankofengland.co.uk/about/Documents/mous/moufincrisis.pdf>.

⁹⁴ Evangeline S. Drossos & Spence Hilton, *The Federal Reserve's Contingency Financing Plan for the Century Date Change*, Federal Reserve Bank of NY, Current Issues in Economics and Finance, Dec. 2000.

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

program helped ease their anxieties about prospective market conditions around year-end.”⁹⁸ This result again underscores a central point about lender of last resort—strong powers may never have to be used because they will deter runs in the first place.

Independent Treasury and Federal Reserve Action

The Federal Reserve’s lender-of-last-resort powers potentially could be strengthened through concerted effort by the Federal Reserve and the Treasury without any Congressional action even under the revised §13(3). If there were a Federal Reserve Chair and a Treasury Secretary who both strongly supported a strong lender of last resort, the Federal Reserve would be able to deploy several tools, including 1) creating a broad-based lending program,⁹⁹ 2) establishing pre-commitments to lend to financial institutions,¹⁰⁰ and 3) employing a liberal collateral policy.¹⁰¹ In theory, such a Treasury Secretary could also announce a general policy supportive of the Federal Reserve’s ability to use §13(3). As a result, even under the current state of §13(3), coordinated action by the Federal Reserve and Treasury could strengthen their tools to fight contagion.

B. Insurance and Guarantees

Origin and Purpose of Deposit Insurance

Insurance for customer deposits administered by the FDIC has formed an integral element of depository banking regulation in the United States since 1934. Deposit insurance is credited with stabilizing the depository banking system after it collapsed in the early 1930s. Nor has its application been confined to the United States: explicit deposit insurance is a recurring worldwide feature of modern banking regulation utilized in more than 88 countries (excluding

⁹⁸ *Id.* at 6.

⁹⁹ Section 13(3) gives the Fed authority to lend through a program or facility with “broad-based eligibility” upon a vote of the Federal Reserve Board and prior approval of the Secretary of the Treasury (Federal Reserve Act §13(3)(A)).

¹⁰⁰ Section 13(3) mandates that the Federal Reserve Board and Secretary of the Treasury design policies and procedures governing emergency lending programs, which can include a pre-commitment to lend under certain circumstances (Federal Reserve Act §13(3)(B)(i)).

¹⁰¹ Section 13(3) directs the Federal Reserve Board and Secretary of the Treasury to determine a collateral policy, which can be liberal so long as a “lendable value” is assigned to the collateral (Federal Reserve Act §13(3)(B)(i)).

countries that employ an “implicit” guarantee of bank deposits, such as China, that is not formalized through the provision of a discrete insurance fund).

The federal deposit insurance system arose as a consequence of the Great Depression, with federal officials recognizing the efficacy of using deposit insurance to assure depositors and preemptively forestall bank runs.¹⁰² The leading supporter for federal deposit insurance was Representative Henry Steagall.¹⁰³ Throughout the Depression, Representative Steagall indicated that deposit insurance would dissuade depositors from running on a potentially distressed bank, thereby resulting in durable “stability” for the United States’ banking system.¹⁰⁴ Opponents, including Senator Carter Glass, countered that the failures of prior state deposit insurance regimes showed the probable ineffectiveness of this approach.¹⁰⁵ Strong public support for the proposal ultimately persuaded those opponents to accept the establishment of federal deposit insurance.¹⁰⁶ In June 1933 the Banking Act of 1933 was accordingly enacted and §8 of the Banking Act stipulated the creation of the Federal Deposit Insurance Corporation.¹⁰⁷

Expansion of Uninsured Liabilities

For deposit-taking banks, the role of liability insurer is filled by the FDIC, but only in the context of depository borrowing under a limit (currently \$250,000¹⁰⁸) and never for non-bank financial institutions. Although deposit insurance is rightly regarded as a critical stabilizing attribute of financial regulation, innovation in financial technology over the past three decades and increasing non-bank intermediation in the modern financial system have now rendered the coverage it provides highly incomplete. As illustrated above in Figure 1, insured liabilities only constitute roughly 34% of all short-term liabilities in the financial system.¹⁰⁹

¹⁰² Federal Deposit Insurance Corporation, *A History of the FDIC 1933-1983* 1, 40 (1984).

¹⁰³ *Id.* at 40.

¹⁰⁴ *Id.* at 40.

¹⁰⁵ *Id.* at 41.

¹⁰⁶ *Id.* at 41.

¹⁰⁷ *Id.* at 43.

¹⁰⁸ In October 2008, the limit on federal deposit insurance coverage was raised temporarily from \$100,000 to \$250,000, *see* Press Release, Fed. Deposit Ins. Corp. (Oct. 7, 2008), <http://www.fdic.gov/news/news/press/2008/pr08093.html>.

¹⁰⁹ *See* Figure 1: Deposit and Non-Deposit U.S. Financial System Liabilities – 1950 to Present, *supra*.

This was proven most dramatically during the financial crisis. At the beginning of the crisis, short-term creditors of financial institutions assumed the existence of an implicit government guarantee of all short-term liabilities and appeared to be largely justified in doing so. The government's assisted rescue of Bear Stearns in March 2008 in partnership with JPMorgan Chase and its subsequent takeover of the Government Sponsored Enterprises (GSEs) Freddie Mac and Fannie Mae in July of the same year are likely to have reinforced belief among market participants (including short-term creditors) in the existence of an unlimited implied public guarantee of large U.S. financial institutions, beyond banks. But then, by allowing Lehman Brothers to fail in September 2008, the government was seen as canceling or at least weakening the guarantee. According to this interpretation, the anti-bailout signal transmitted by the failure of Lehman, not the failure itself, triggered the spread of contagion effects in markets for short-term institutional borrowing by withdrawing protection that market participants had assumed they would receive.

The FDIC responded to the crisis by instituting the Temporary Liquidity Guarantee Program ("TLGP"), consisting of (i) the Transaction Account Guarantee Program ("TAGP") to provide unlimited guarantees to domestic noninterest-bearing transaction accounts and (ii) the Debt Guarantee Program ("DGP") to provide limited guarantees of new senior unsecured debt issued by banks and thrifts.¹¹⁰ The FDIC relied upon its authority to take actions to mitigate serious adverse effects on financial stability once a determination of systemic risk was made by the Secretary of the Treasury (after consultation with the President) in accordance with §13(c)(4)(G) of the Federal Deposit Insurance Act.¹¹¹ While the FDIC's power to implement the TLGP was contingent upon a systemic risk determination by the Secretary of the Treasury, the FDIC could legally design the program without further approvals. Under §1105 of the Dodd-Frank Act, any FDIC plan to provide emergency guarantees must now get specific approval from both the President and Congress before the FDIC can provide any guarantees.¹¹² Finally, the

¹¹⁰ See Press Release, Fed. Deposit Ins. Corp., FDIC Announces Plan to Free Up Bank Liquidity (Oct. 14, 2008), <http://www.fdic.gov/news/news/press/2008/pr08100.html>; see also Fed. Deposit Ins. Corp., *Temporary Liquidity Guarantee Program*, <http://www.fdic.gov/regulations/resources/tlgp/index.html> (last visited Jan. 21, 2014).

¹¹¹ See Temporary Liquidity Guarantee Program, 73 Fed. Reg. 72,244 (released Nov. 26, 2008).

¹¹² Dodd-Frank Act §1105.

limit on federal deposit insurance coverage was raised temporarily from \$100,000 to \$250,000 in 2008,¹¹³ which was made permanent by the Dodd-Frank Act in 2010.¹¹⁴

Based on this lesson from the financial crisis, an important part of a solution to contagion may be a more complete public guarantee of short-term non-deposit financial liabilities, whether held by banks or non-bank financial institutions, of the type adopted in the crisis.

Guarantees of Money Market Mutual Funds

The Federal Reserve and the U.S. Treasury instituted a number of programs during the financial crisis to stem the contagion in the money market mutual fund (“MMMF”) industry. The Federal Reserve extended indirect access to the discount window to MMMFs through a \$150 billion Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (“AMLF”),¹¹⁵ creating the \$350 billion Commercial Paper Funding Facility (“CPFF”) ¹¹⁶ and the \$600 billion Money Market Investor Funding Facility (“MMIFF”).¹¹⁷ The U.S. Treasury provided an effective \$3.2 trillion temporary guarantee of the liabilities of the MMMFs through its Exchange Stabilization Fund.¹¹⁸

Despite the success of these programs, Dodd-Frank substantially curtailed the ability of the government to use similar tactics in the future to address contagion in the MMMF industry. Future programs to inject Federal Reserve liquidity into the MMMFs will require prior approval by the Secretary of the Treasury and must be provided through facilities with broad-based

¹¹³ Press Release, FED. DEPOSIT INS. CORP. (Oct. 7, 2008), <http://www.fdic.gov/news/news/press/2008/pr08093.html>.

¹¹⁴ Press Release, FED. DEPOSIT INS. CORP. (Jul. 21, 2010), <http://www.fdic.gov/news/news/press/2010/pr10161.html>.

¹¹⁵ Press Release, Bd. of Governors of the Fed. Reserve Sys. (Sep. 19, 2008), <http://www.federalreserve.gov/newsevents/press/monetary/20080919a.htm>; Bd. of Governors of the Fed. Reserve Sys., *Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility*, <http://www.federalreserve.gov/monetarypolicy/abcpMMF.htm>.

¹¹⁶ Press Release, Bd. of Governors of the Fed. Reserve Sys. (Oct. 7, 2008), <http://www.federalreserve.gov/newsevents/press/monetary/20081007c.htm>.

¹¹⁷ Press Release, Bd. of Governors of the Fed. Reserve Sys. (Oct. 21, 2008), <http://www.federalreserve.gov/newsevents/press/monetary/20081021a.htm>.

¹¹⁸ Press Release: Treasury Announces Temporary Guarantee Program for Money Market Funds, U.S. DEP’T OF THE TREASURY (Sep. 29, 2008), <http://www.treasury.gov/press-center/press-releases/Pages/hp1161.aspx>.

eligibility only.¹¹⁹ Furthermore, Congress has explicitly prohibited the Treasury from using funds from the Economic Stabilization Fund to conduct a similar temporary guarantee program in the future.¹²⁰

The SEC has instituted MMMF reform since the financial crisis. In February 2010, the SEC amended Rule 2a-7 to significantly increase the liquidity of money market funds. The SEC reduced the maximum permitted weighted average portfolio maturity of money market funds from 90 days to 60 days. Additionally, money market funds have to invest at least 10% of their portfolios in “daily liquid assets” (cash, U.S. government securities, and other securities that provide the holder the right to demand payment within one day) and 30% of their portfolio in weekly liquid assets (same as above, U.S. government securities maturing in 60 days or less, and other securities maturing within five business days). The final rule also prohibits money market funds from investing more than 5% of the fund’s assets in illiquid securities.

The SEC has also recently adopted further MMMF reforms. In July 2014, the SEC adopted new rules requiring a floating net asset value (“NAV”) for institutional prime MMMFs.¹²¹ Under a floating NAV, institutional prime MMMFs will no longer be permitted to fix the NAV at a stable \$1.00 by using special pricing and valuation conventions. Instead, they will be required to allow the NAV to fluctuate based on the fair market value of the assets. The SEC’s new rules also permit non-government MMMFs to address runs through liquidity fees and redemption gates.¹²² Under these rules, if a fund’s level of weekly liquid assets (e.g. cash and Treasuries) falls below the given threshold, the fund’s board has the option to impose a liquidity fee of up to two percent on all redemptions.¹²³ The board can also decide to impose a redemption gate, temporarily suspending redemptions entirely for up to ten business days.¹²⁴

¹¹⁹ Dodd-Frank Act §1101(a)(2), (6) (requiring lending facilities to be structured with “broad-based eligibility” with “the purpose of providing liquidity to the financial *system*, and not to aid a failing financial *company*” and stating that a “program or facility that is structured to remove assets from the balance sheet of a *single and specific company* . . . shall not be considered a program or facility with broad-based eligibility”) (emphasis added).

¹²⁰ See 12 U.S.C. §5236(b) (2006).

¹²¹ See Press Release, U.S. Securities and Exchange Commission, *SEC Adopts Money Market Fund Reform Rules* (July 23, 2014), available at http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370542347679#.U9J7c_IdVZg.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.*

It is not clear that a floating NAV offers a solution to contagion—even if it provides more transparency of pricing to investors. It is true that under a fixed NAV, there is an incentive to withdraw early at par rather than to remain invested and suffer any actual losses. So if an investor can today withdraw for 100 when the true value is 98 he will do so. The floating NAV will mean the investor can only withdraw today for 98 but that will not stem withdrawals based on fears that the NAV will experience further declines, e.g., to 96. A floating NAV rule might address fairness among investors, insuring that early and later withdrawers get a market price but it will not stem contagion.

It is also questionable whether the liquidity fee and redemption gates would serve to check contagion, as the threat of such measures could conceivably accelerate redemptions as investors scramble to redeem their shares before the gates are lowered or a liquidation fee is assessed. In unstable market environments, investors may choose to redeem *en masse* in order to avoid the impending redemption restrictions. Commissioner Stein shared this concern about redemption gates in voting against the final rules, while advocating for the floating NAV.¹²⁵ Federal Reserve economists have recently expressed similar concerns.¹²⁶ While the SEC acknowledged this concern, it also expressed its belief that many features of the final rule mitigate such a risk.¹²⁷ These features include (i) the short maximum term for redemption gates and the small size of the liquidity fee, (ii) the discretion of the fund's board in imposing liquidity fees and redemption gates, and (iii) the ability of the fund to impose fees and gates once its weekly liquid assets drop below the 30% threshold, which would still allow the fund substantial remaining liquidity to mitigate the effects of any pre-emptive runs that may occur.¹²⁸ Commissioner Piowar, also voting against the final rules, believes the fees and gates approach, and not the floating NAV, is the most effective method in stemming contagion in MMMFs.¹²⁹

¹²⁵ See SEC Commissioner Kara M. Stein, Statement of Commissioner Kara M. Stein, July 23, 2014.

¹²⁶ See Marco Cipriani, Antoine Martin, Patrick McCabe & Bruno Parigi, *Gates, Fees, and Preemptive Runs*, Liberty Street Economics, Federal Reserve Bank of NY, Aug. 18, 2014.

¹²⁷ See Securities and Exchange Commission, Money Market Fund Reform, Release No. 33-9616.

¹²⁸ *Id.*

¹²⁹ See SEC Commissioner Michael S. Piowar, Statement at Open Meeting Regarding Money Market Fund Reform, July 23, 2014.

C. Policy Changes to Address Bank Stability: Capital, Liquidity and Resolution Authority

In the aftermath of the crisis, the U.S. and the G-20 have focused primarily on three policy responses to deal with contagion, in place of the tools which have been taken away or pared back: (i) capital requirements, (ii) liquidity requirements, and (iii) insolvent financial institution resolution procedures. These strategies prioritize imposition of losses on private actors but neglect to address the unavoidable dependency of financial institutions on short-term borrowing and cannot by themselves prevent contagion. Furthermore, heightened capital requirements have only been imposed on banks and a limited number of non-bank systemically important financial institutions—but runs can be sparked by the failure of smaller institutions, see Lehman, and quickly spread to the financial system at large. Capital and liquidity requirements, in addition to other provisions in Dodd-Frank, have made banks more resistant to failure. In addition, new resolution tools make it more likely that large banks can be resolved. The issue here is whether these policies are sufficient to deal with contagion.

Capital Requirements

The reform proposals for heightened capital requirements, of the Basel Committee on Banking Supervision (the “Basel Committee”), the Financial Stability Board, and the U.S. Federal Reserve System, can make financial institutions stronger but they cannot (at reasonable levels being contemplated) protect financial institutions from runs that will produce fire sales of assets, and quickly deplete the additional capital levels required.

Capital requirements clearly play a significant role as insurance against “correlation risk,” that is, the risk of a common external shock with simultaneous, adverse consequences on many financial institutions. Unexpected losses and the consequent deleveraging can result in a fire sale of bad assets, causing knock-on effects for otherwise healthy banks holding similar assets, as they are forced to mark them to market. In the case of a macroeconomic shock, such deleveraging could further impair the health of an already weakened economy. Lender of last resort authority cannot prevent the insolvency of multiple banks caused by actual losses; it is rather designed to stop contagious runs caused by lack of liquidity. Thus, large losses may require public injections of capital, and potential taxpayer losses, so capital requirements may be

seen as a bulwark against such “bailouts.” Capital requirements may also address the possibility of asset interconnectedness, providing a cushion against the failure of Bank A, whose failure in turn might cause the failure of a Bank B heavily exposed to Bank A. But this issue has also been addressed for a major source of interconnectedness—derivatives, through new requirements for central clearing and counterparty exposure limits.

Whatever their potential merits in addressing correlation risk or asset interconnectedness, capital requirements are very unlikely to sufficiently address the systemic risks posed by contagion. Capital requirements seek to achieve the ambitious goals of (i) deterring runs by assuring creditors that their borrowers are strong and (ii) enabling institutions to withstand a run if it does occur. However, during a crisis, running may be the only rational option for short-term creditors whose investments are exposed to potential losses. No plausible amount of capital can absorb the losses from fire sales. Furthermore, short-term creditors often will not even be attuned to a firm’s solvency when making a decision to run in a crisis, instead resolving not to wait to find out whether a financial institution has enough capital. Lastly, heightened capital requirements will have limited impact on the risk of runs for insurers, especially given the nature of the products offered by insurance companies, and property and casualty insurance companies in particular.¹³⁰ In addition, many insurance companies may be also subject to capital standards by the Federal Reserve as systemically important financial institutions or because they are structured as savings and loan holding companies (“SLHCs”).¹³¹

The leading reform proposal for international capital regulation to emerge from the financial crisis was developed by the Basel Committee. This reform, termed “Basel III,” amends the prior Basel architecture in a variety of ways. Basel III directly increases mandatory minimum capital ratios, placing an emphasis on common equity and introducing a discretionary countercyclical capital buffer. The Basel reforms also indirectly raise capital requirements by

¹³⁰ For recent Congressional debates regarding the suitability of bank capital requirements for insurance companies, see *Sen. Brown Chairs Hearing Examining Capital Requirements For Insurance Companies* (Mar. 11, 2014), available at <http://www.brown.senate.gov/newsroom/press/release/sen-brown-chairs-hearing-examining-capital-requirements-for-insurance-companies>.

¹³¹ See Cheyenne Hopkins, *Bill Would Free Insurance Firms From Bank Capital Rules*, Bloomberg.com (Mar. 11, 2014), available at <http://www.bloomberg.com/news/2014-03-11/insurance-firms-look-to-escape-from-u-s-bank-capital-rules.html>; American Bankers Association, *6.17 Capital Requirements for BHCs and SLHCs and Insured Depository Institutions*, available at http://www.aba.com/Issues/RegReform/Pages/RR6_17.aspx (last accessed August 17, 2014).

restricting the range of instruments that qualify as Tier 1 capital and by adjusting the risk weights placed on some assets. Further, Basel is in the process of revising its risk-weighting process to provide for less dependence on bank credit models. Finally, Basel III (and Dodd-Frank) requires banks to undergo comprehensive stress-testing programs that aim to ensure that balance sheets are strong enough to endure severely adverse economic conditions.

The Basel III framework has been criticized for not requiring enough capital. In the U.S., the Federal Reserve has already increased the capital requirement for U.S. banks beyond the Basel requirement.¹³² Further, under §171 of the Dodd-Frank Act (the “Collins Amendment”), regulators must establish minimum leverage and risk-based capital requirements for (i) insured depository institutions, (ii) bank and thrift holding companies, and (iii) systemically important nonbank financial companies.¹³³ The minimum leverage requirements and capital requirements for nonbank financial companies must not be less than the leverage requirements or the risk-based capital requirements that apply to insured depository institutions under the Federal Deposit Insurance Act and must also not be less than the requirements in effect for insured depository institutions when Dodd-Frank was enacted in 2010 (which were the Basel I requirements).¹³⁴

However, leading up to the financial crisis the largest U.S. banks maintained average capital ratios 50% higher than regulatory minimums and held more common equity than what the Basel III proposal would now require. Each of the top 15 banks had tangible common equity to risk-weighted assets ratios of over 4.5% as the end of 2007.¹³⁵ All but one had a ratio of Tier 1 common equity to risk-weighted assets higher than the new Basel III requirement of 4.5% with many having higher than the 7% requirement that includes the 2.5% buffer.¹³⁶ Despite being effectively compliant under the Basel II framework before the financial crisis, these institutions still did not hold enough capital to survive the crisis without public support. In fact, the 2009 IMF Global Financial Stability Report found that risk-weighted capital adequacy ratios were unable to identify which institutions would require government assistance, even finding that

¹³² See Press Release: Bd. of Governors of the Fed. Reserve Sys. (Apr. 8, 2014), *available at* <http://www.federalreserve.gov/newsevents/press/bcreg/20140408a.htm>.

¹³³ Dodd-Frank Act §171.

¹³⁴ *Id.*

¹³⁵ Sourced from Bloomberg and company annual filings (10Ks) (Dec. 31, 2007).

¹³⁶ Tier I Common Equity is calculated by adding Accumulated Other Comprehensive Income to Tangible Common Equity. Each capital ratio is calculated based on Basel I risk weights.

capital ratios were actually higher on average for commercial banks needing intervention.¹³⁷ Furthermore, bank default risk as measured by CDS spreads did not correlate meaningfully with regulatory capital ratios during the crisis, feeding “doubts . . . in relation to the efficacy of the capital index Tier I Ratio as a safeguard against the risk of future default.”¹³⁸

Further criticism of the Basel III approach to capital adequacy argues that its increasing complexity may in fact be suboptimal. In particular, Andrew G. Haldane, Chief Economist at the Bank of England and Executive Director, Monetary Analysis and Statistics, at the Bank of England, has stated that in a financial environment filled with uncertainty, Basel III’s complex risk-weighting system for capital adequacy may be less optimal than a simpler one.¹³⁹ He finds that in the period leading up to the recent financial crisis, simple leverage ratios had greater power in predicting the failure of large global banks than the more complex risk-weighted measures of the Basel approach.¹⁴⁰ Nonetheless one must seriously question whether risk-neutral capital requirements are better than risk-based capital requirements, however imperfect the risk estimates may be. By definition, a risk-neutral capital requirement, such as a leverage ratio, requires precisely the same amount of capital for all asset classes, irrespective of their various risk profiles. Effectively, a leverage ratio is a risk-weighted assets approach under which all asset classes are assigned a risk weight of 100%. As a result, the regulatory cost of capital is the same for both high- and low-risk assets, giving bank management an incentive to increase return on equity by investing in high-risk assets with higher returns. Such incentives are inconsistent with prudent risk management and sound banking practice.

The heaviest consideration weighing against reliance on capital requirements to control contagion, however, is that while capital *cushions* short-term creditors against having to absorb losses, perhaps deterring the impulse to run, it does not *foreclose* the risk of suffering impairment altogether. As long as a financial institution is reliant on short-term funds, to support long-term investment, short-term creditors who supply those funds are exposed to potential losses incurred through fire sales. In a crisis, the rational option will be to run. When that happens, capital requirements can certainly lower public costs by ensuring that deeper reserves of private funding

¹³⁷ INT’L MONETARY FUND, *GLOBAL FINANCIAL STABILITY REPORT* (Apr. 2009).

¹³⁸ Laura Chiamonte & Barbara Casu, *Are CDS Spreads a Good Proxy of Bank Risk?: Evidence from the Financial Crisis* 30 (2011).

¹³⁹ See Andrew G. Haldane, Exec. Dir., Fin. Stability, Bank of England, Remarks at Federal Reserve Bank of Kansas City’s 36th Economic Policy Symposium: The Dog and the Frisbee (Aug. 31, 2012).

¹⁴⁰ See *Id.*

and capital are available to the distressed institution. What they cannot do is prevent the run in the first place, or stop it from becoming generalized to the financial system.

Liquidity Requirements

Given the close connection between the 2008 financial crisis and the paralysis of short-term funding markets, liquidity requirements represent a more targeted response to contagion than do capital requirements. Nevertheless, liquidity requirements are also unlikely to be sufficient to counteract incipient runs.

Liquidity is the second major focus for regulatory reform in the wake of the financial crisis. The Basel Committee adopted a new liquidity standard, known as the “liquidity coverage ratio” (“LCR”), which requires banks to hold unencumbered high quality assets sufficient to meet all outstanding 30-day-or-fewer liabilities.¹⁴¹ Maintaining a 100% LCR in principle should enable an institution to use the sale of its own assets to satisfy all potential net outflows during a full calendar month without impairing its capital by selling longer-term assets at discounted prices, giving managers and regulators breathing room to devise a comprehensive response to a crisis or to wind down an institution, when necessary.¹⁴² The U.S. implementation of the Basel III LCR was proposed by regulators in November 2013.¹⁴³ The proposed LCR would be the first such quantitative liquidity standard imposed on U.S. banking organizations.¹⁴⁴ It would require covered organizations to hold minimum amounts of “high quality liquid assets” that could be sold or pledged as collateral to accommodate a sudden surge of withdrawals by depositors and other short-term debt holders in stressed liquidity scenarios.¹⁴⁵ This would complement the qualitative liquidity requirements proposed by the Federal Reserve pursuant to §165 of the Dodd-Frank Act.¹⁴⁶

¹⁴¹ BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL FRAMEWORK FOR LIQUIDITY RISK MEASUREMENT, STANDARDS AND MONITORING: CONSULTATIVE DOCUMENT (Dec. 2009) at 5-19 [hereinafter BASEL COMMITTEE, INTERNATIONAL FRAMEWORK].

¹⁴² *Id.*

¹⁴³ Liquidity Coverage Ratio: Liquidity Risk Measurement, Standards, and Monitoring, 78 Fed. Reg. 71,818 (proposed Nov. 29, 2013).

¹⁴⁴ *Id.* at 71,820.

¹⁴⁵ *Id.*

¹⁴⁶ See Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies, 77 Fed. Reg. 594 (proposed Jan. 5, 2012).

However, the effectiveness of the LCR at meeting demand for liquidity during a crisis depends on making an accurate regulatory judgment *ex ante* about the required quantity and quality of assets. This judgment involves significant guesswork about the severity of future crises and assumes that assets thought to be of high quality today will remain so during a period of market dislocation. Likewise, to be effective, the LCR must accurately estimate the 30-day net cash outflow that would arise from a “combined idiosyncratic and market-wide shock.”¹⁴⁷ Regulators have promulgated minimum 30-day run-off rates for various liability classes. While any prediction of risk is bound to include certain assumptions, regulators have provided little empirical evidence to support these predictions.¹⁴⁸

Minimum “private” liquidity requirements (as distinct from “public” liquidity supplied by the Federal Reserve) are intended to assure the uninterrupted holding of a pool of high-quality liquid assets that can be sold (or pledged as collateral) to accommodate a sudden surge of withdrawals by depositors and other short-term debt holders. In principle, maintaining sufficient high-quality assets should help financial institutions to withstand periodic instability created by the dependency on short-term funds. However, there are four problems with reliance on private liquidity requirements:

First, like capital requirements, proposals for liquidity requirements (with the exception of redemption restrictions and liquidity requirements for money market funds) apply mainly to bank holding companies and traditional banks. In modern financial panics, as in 2008, contagion has spread beyond the traditional banking sector.

Second, the amount of high-quality assets that banks can hold to meet private liquidity requirements is limited by nature. Basel’s proposal, for instance, would require banks to retain sufficient liquid assets to match net cash outflows over 30 days.¹⁴⁹ However, it is quite possible that persistent disruption to short-term borrowing markets leading to sustained investor outflows stretching over a longer period could eventually overrun even the strongest portfolio of liquid

¹⁴⁷ See BASEL COMM. ON BANKING SUPERVISION, GUIDANCE FOR SUPERVISORS ON MARKET-BASED INDICATORS OF LIQUIDITY, 6 (Jan. 2014).

¹⁴⁸ *Id.* Indeed, in its consultative document on liquidity risk measurement, the Basel Committee has outlined run-off rates for various funding sources (e.g., minimum 7.5% for stable deposits, minimum 15% for less stable deposits, 100% for funding from repo of illiquid assets), but does not explain the methodology used to derive these rates.

¹⁴⁹ BASEL COMMITTEE, INTERNATIONAL FRAMEWORK, *supra* note 141.

assets, making it difficult to liquidate even “liquid” assets and forcing financial institutions into liquidating long-term assets to meet incremental redemptions anyway. Short-term creditors of a financial institution subject to such liquidity requirements would thus still have an incentive to exit sooner, while that portfolio was still intact, rather than later, after waves of outflow have exhausted it.

Third, holding assets suited to meeting the purposes of liquidity requirements entails costs to financial institutions and to the economy, since every dollar of capital allocated to low-yielding, liquid, short-term securities is unavailable to finance longer-term lending to borrowers. This theoretically lowers the amount of new credit that financial institutions can create and raises the overall cost of capital to the real economy.

Fourth, securing emergency liquidity to the financial system through private reserves may be less efficient than traditional use of central bank lender-of-last-resort authority to provide unlimited liquidity to solvent institutions in emergencies. Indeed, private liquidity requirements may even undermine the efficacy of the lender of last resort system if, by selling privately held high-quality liquid assets to meet liquidity needs (before going to the lender of last resort), banks or other financial institutions deplete the store of collateral available for pledging to the government in exchange for central bank loans.

For these reasons, private liquidity requirements are both under-inclusive and over-inclusive: under-inclusive in that they provide limited coverage, do not apply to non-bank financial institutions, and will not always forestall runs by short-term creditors; and over-inclusive because they may unnecessarily raise the cost of real economic activities that depend on the intermediation of financial institutions but do not create systemic risk.

Some argue that “liquidity buffer requirements are also needed to reduce the dependence of these firms on central bank lender-of-last-resort . . . support,”¹⁵⁰ for reasons of (i) moral hazard, (ii) the risk of loss to the central bank in lending to potentially insolvent institutions, and (iii) the stigmatic effects of receiving central bank liquidity during a crisis. But moral hazard is

¹⁵⁰ William C. Dudley, President and Chief Executive Officer, Fed. Reserve Bank of New York, Remarks at the Tenth Asia-Pacific High Level Meeting on Banking Supervision, Auckland, New Zealand: Global Financial Stability-the Road Ahead (Feb. 26, 2014).

not at stake in lending to the victims of a contagious run, as opposed to institutions that have become insolvent due to their own mismanagement. There should be no stigma attached to borrowing from the Fed in a contagion crisis. In addition, the central bank, whose lending is well collateralized, stands very little risk of losing money on such lending, as was indeed the case following the 2008 crisis. At most, it could result in reduced remittances to the Treasury (in the crisis, such remittances were actually increased due to the expansion of the Fed's balance sheet). Finally, concerns that lender of *last* resort powers might conceivably become the *first* resort of ailing financial institutions fail to recognize that Federal Reserve lending in this context is (and always should be) conducted at a penalty rate of interest.

Resolution Procedures

Resolution procedures are a method of restructuring financial institutions while ensuring continuation of essential businesses. These procedures are a critical component of any solution to the so-called “too-big-to-fail” (TBTF) problem, but they are not a complete answer to contagion, since uninsured short-term creditors cannot be sure they will be protected from losses in resolution, and thus will likely run even with effective resolution procedures—at the very least until such procedures have been tested and applied to multiple large institutions without any losses to short-term creditors.

The primary goal of resolution procedures, as developed by the FDIC through the Single Point of Entry (“SPOE”) approach, in connection with use of the new Orderly Liquidation Authority (“OLA”), contained in Title II of the Dodd-Frank Act, has been to provide a restructuring of financial institutions in a way that ensures no losses for the operating subsidiaries of bank holding companies, thus protecting short-term creditors—almost all short-term credit is in the operating subsidiaries rather than the holding company. In addition, its procedures try to preserve franchise value and avoid any injection of public funds. A successful demonstration of SPOE resolution could be an important signal that the government is prepared to let large financial institutions fail.

But good resolution procedures cannot by themselves prevent contagion. And given the new restrictions on fighting contagion, policy makers may fear putting significant institutions

into resolution at all, thus undermining the effectiveness of resolution to deal with the TBTF problem. But good resolution procedures, combined with effective anti-contagion policies, can allow policy-makers to let large institutions fail, as long as critical functions are performed, thus ending the too-big-to-fail problem. Put another way, effective anti-contagion policies are a critical part of ending “too-big-to-fail.”

Even if OLA resolution were to provide an extra layer of protection to short-term creditors, it would only serve to limit the risk of contagion if short-term creditors were confident that OLA resolution would apply. If the determination of whether an institution is to be dealt with under OLA is not made until a financial institution is on the brink of insolvency, as is presently the case, it may be too late to prevent short-term creditors from running. Uncertain short-term creditors will likely run well in advance of an OLA coverage determination being made.

The success of an OLA procedure that employs a SPOE strategy also hinges on an adequate left side of the parent level balance sheet that includes assets that can be used to recapitalize operating subsidiaries. While much attention has been given on the right side of the parent balance sheet to ensure sufficient loss-absorbing capacity for the consolidated entity, it is the left side of the balance sheet that recapitalizes the subsidiaries. Finally, a number of cross-border issues must be addressed before OLA can be employed successfully. U.S regulators will need to give credible assurances to foreign authorities that material subsidiaries operating outside the U.S. will be given fair treatment regarding capital injections, and *vice versa*.¹⁵¹

The most important point about resolution, under the Bankruptcy Act, the FDIA or OLA, is that short-term creditors will be at risk, and thus contagion will not be abated. Uninsured creditors have no priority under the Bankruptcy Act or FDIA, and recapitalization of the operating subsidiaries under OLA is far from certain. Institutions may never get to OLA, so their creditors will run fearing disposition under bankruptcy, and even if OLA were to apply there is no guarantee that a method could be found to adequately recapitalize the operating subsidiaries. This is not to say resolution procedures are not important—they can preserve franchise value,

¹⁵¹ See Financial Stability Board, *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Developing Effective Resolution Strategies* 1 (Jul. 16, 2013).

minimize private and public losses, and permit large institutions to fail. And by minimizing the impact on short-term creditors they can avoid triggering or exacerbating contagion. We note that the FDIC's new resolution process has reduced the credit rating "uplift" given by some credit rating agencies of the largest bank holding companies because of their assumption that government support will no longer be forthcoming.¹⁵² However, even if "too-big-to-fail" is "solved" because large financial institutions are allowed to fail, contagion is still a concern upon their failure if the Federal Reserve does not have the necessary tools to fight contagion. Some may worry that the threat of such contagion may prompt policy makers to be reluctant to allow such failure. Effective resolution cannot by itself avoid contagion.

D. Proposals to Limit Short-Term Funding

Overreliance on short-term funding was a critical component of the 2008 contagion and remains linked to systemic risk concerns. Therefore, proposals to impose limits on short-term funding have been discussed. Federal Reserve Governor Daniel Tarullo has pointed out the "considerable conceptual appeal" in proposals to cap short-term funding.¹⁵³ First, Tarullo envisions an aggregate industry cap, so a threshold consideration is the appropriate percentage of GDP that would constitute the cap.¹⁵⁴ Second, an analysis of the potential social cost from lost economies of scale and scope is necessary in the event that financial institutions are forced to shrink to meet the cap.¹⁵⁵ Third, regulators must also consider the effects on the stability of the financial system if short-term funding were to switch to the less regulated shadow banking system.¹⁵⁶

The proposal's focus on the wholesale short-term funding of financial institutions is justified empirically by a number of recent academic studies, which show that banks reliant on such funding are more likely to suffer distress.¹⁵⁷ The IMF has found that commercial and

¹⁵² U.S. Government Accountability Office, Report to Congressional Requesters, Large Bank Holding Companies: Expectations of Government Support, GAO-14-621, 24 (Jul. 2014).

¹⁵³ Daniel Tarullo, *Industry Structure and Systemic Risk Regulation*, remarks at the Brookings Institution Conference on Structuring the Financial Industry to Enhance Economic Growth and Stability (Dec. 4, 2012).

¹⁵⁴ *Id.* at 10.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ See e.g., Asli Demirgüç-Kunt & Harry Huizinga, *Bank Activity and Funding Strategies: The Impact on Risk and Returns*, 98 J. FIN. ECON. 626 (Dec. 2010) (finding short-term non-deposit funding increases certain measures of bank fragility); Lev Ratnovski & Rocco Huang, *Why Are Canadian Banks More Resilient?*, (IMF Working Paper

investment banks that required government assistance during the 2008 financial crisis held significantly higher ratios of short-term debt to total debt than did banks that did not require assistance.¹⁵⁸ Short-term wholesale funding has also been found to be the best predictor of a bank's contribution to systemic risk.¹⁵⁹ Finally, short-term funding is also linked to systemic risk concerns arising from asset correlation between financial institutions. In a financial system in which banks have highly correlated assets, concerns of insolvency at one bank will spread to other banks with similar portfolios, potentially causing short-term creditors to run.¹⁶⁰ The same systemic risk concerns do not arise in a capital structure with more long-term debt.¹⁶¹

Some have suggested that firms' reliance on short-term funding can be reduced by the government "crowding out" their issuance of short-term debt.¹⁶² Others assert that the government could reduce the size of short-term funding markets by tilting its issuance toward short maturities—under this theory, short-term funding would go to the Fed rather than the banks. A similar effect could be achieved by expansion of Fed repos—diverting repo funding from the banking sector.¹⁶³ This solution is premised on the idea that "government may have a comparative advantage relative to the private sector in bearing refinancing risk, and hence should aim to partially crowd out the private sector's issuance of short-term debt."¹⁶⁴ This approach of "crowding out" the private sector incentive would affect not only banks but also the shadow-banking sector, reducing the likelihood of liquidity-driven fire sales. However, this approach runs the risk of exacerbating liquidity crises during times of distress in the financial system. According to former FDIC Chair Sheila Bair, any market disruption in the short-term credit

No. 09/152, July 2009) (finding that the ratio of depository funding to total assets was an "important predictor of bank resilience during the turmoil.")

¹⁵⁸ IMF GLOBAL FINANCIAL STABILITY REPORT (Apr. 2009), *supra* note 137.

¹⁵⁹ See López-Espinosa, Germán, Antonio Morena, Antonio Rubia & Laura Valderrama, *Short-Term Wholesale Funding and Systemic Risk: A Global CoVaR Approach*, 36 J. BANKING & FIN. (2012).

¹⁶⁰ Franklin Allen, Ana Babus & Elena Carletti, *Asset Commonality, Debt Maturity, and Systemic Risk*, 104 J. Fin. Econ. 519-534 (2012).

¹⁶¹ *Id.*

¹⁶² Zoltan Pozsar, *Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System* 1 (IMF Working Paper No. 11/190, 2011).

¹⁶³ See Jeremy Stein: The Exclusive Exit Interview, Washington Post, July 9, 2014, *available at* <http://www.washingtonpost.com/blogs/wonkblog/wp/2014/07/09/jeremy-stein-the-exclusive-exit-interview/>

¹⁶⁴ See Robin Greenwood, Samuel Hanson & Jeremy Stein, *A Comparative-Advantage Approach to Government Debt Maturity* (Harv. Univ. Discussion Paper, 2012).

markets could divert a substantial amount of funds to the Fed and “the Fed would become the borrower of first resort,” thus depriving private firms of necessary short-term financing.¹⁶⁵

IV. Questions for Public Debate

While much progress has been made since the 2008 financial crisis, new legislative and regulatory measures may be necessary to combat the continuing threat of financial contagion. Below, the Committee outlines what it considers the most important questions, focusing on lender of last resort authority and deposit insurance and guarantees.

Questions on Lender of Last Resort Authority

The Federal Reserve’s authority as lender of last resort has been curtailed by the Dodd-Frank Act, which restricted the scope of the central bank’s authority to lend to non-banks while simultaneously strengthening collateral requirements for any emergency lending it does provide to non-banks during a crisis. There is general consensus that the Federal Reserve must continue to perform its traditional role as lender of last resort; but differences exist over how it should best do so.

- 1) *Should the Secretary of the Treasury have the authority to approve or disapprove lending to non-banks, as currently required by the Dodd-Frank Act?* The Dodd-Frank Act revisions to §13(3) require that the “policies and procedures governing emergency lending” be promulgated “in consultation with the Secretary of the Treasury.”¹⁶⁶ Moreover, no program or facility under §13(3) may be established “without the prior approval of the Secretary of the Treasury.”¹⁶⁷ Do these provisions potentially inject political uncertainty into the emergency liquidity provision process? Would the possibility that a Treasury Secretary might refrain from granting approval for emergency lending—or even the mere contingency that such lending would not be approved—potentially scare investors and spark a contagious run? In 2008, Secretary Hank Paulson did readily give his support of Federal Reserve lending under §13(3), and would no doubt have given his formal approval if required. And

¹⁶⁵ Sheila Bair, *The Federal Reserve’s Risky Reverse Repurchase Scheme*, The Wall St. Journal, July 24, 2014.

¹⁶⁶ Federal Reserve Act §13(3), 12 U.S.C. §343 (2012).

¹⁶⁷ *Id.*

some believe that faced with the extreme consequences of not lending, the Secretary of Treasury will have to give approval. Former Fed Chairman Ben Bernanke, for example, pointed out that “the approval of the Treasury Secretary... is basically okay, for Democratic reasons and because, generally speaking, the Treasury Secretary and the Fed chairman see pretty much eye to eye at trying to prevent the financial system from collapsing.”¹⁶⁸ But in the new post-crisis political environment, it is far from certain that Treasury approval will be given on a timely basis, or perhaps more importantly the market will think it is uncertain, and thus start to run before such a decision is even made.

- 2) *Should the Federal Reserve be prohibited from lending to a single institution as opposed to a broad-based program of lending?* The Dodd-Frank Act revisions to §13(3) limit the Federal Reserve’s emergency lending authorities to loans to “participant[s] in any program or facility with broad-based eligibility.”¹⁶⁹ Clearly, Federal Reserve emergency lending should not be targeted at saving one particular financial institution, especially an insolvent institution that is troubled due to mismanagement. This point is stressed in the House Financial Service Committee report¹⁷⁰ and should be a certainty under any contagion solutions: insolvent firms should fail. However, the issue becomes more complicated as to whether the Federal Reserve should be able to provide liquidity to a particular solvent non-bank financial institution to forestall potential liquidity concerns at multiple other institutions. For example, if the Federal Reserve were to determine that a run on an individual solvent non-bank financial institution would threaten to provoke contagious runs throughout the financial system, should the Federal Reserve be permitted to lend to that individual institution under §13(3)? While a financial crisis involves runs on a number of financial institutions, there will likely be a single institution that experiences a run first. Such an example during the crisis was noted by Geithner, pointing out that “[t]he end of Bear Stearns could easily mark the start of a run on Lehman, with Merrill Lynch next in

¹⁶⁸ Ben S. Bernanke, Closing Keynote Address, The Brookings Institution, Liquidity and the Lender of Last Resort, 178 (Apr. 30, 2014), http://www.brookings.edu/~media/events/2014/04/30%20liquidity%20lender%20of%20last%20resort/20140430_liquidity_transcript.pdf.

¹⁶⁹ Federal Reserve Act §13(3), 12 U.S.C. §343 (2012).

¹⁷⁰ See Report Prepared by the Republican Staff of the House Committee on Financial Services, *Failing to End “Too Big to Fail”: An Assessment of the Dodd-Frank Act Four Years Later*, July 2014.

line.”¹⁷¹ Furthermore, allowing the *possibility* of lending to a single institution may make it unnecessary to actually lend to a single institution, as the prospect of Fed lending will prevent any runs. If emergency lending is provided too late, the concern of lending into a run arises, potentially making the assistance more costly and less effective. However, there is also a concern with giving the Federal Reserve too much flexibility, a flexibility many say it went too far in using in the case of AIG. A possible compromise could be to address these problems through Federal Reserve regulation, with the agreement of the Treasury, by creating in advance a facility that would be broad-based but could be used for a single institution if necessary to stem system-wide contagion.

- 3) *What type of collateral policies should the Federal Reserve adopt (type, haircuts, level of discretion)? Do these collateral policies adequately address moral hazard?* Collateral policy is at the heart of an effective lender of last resort regime. Under Dodd-Frank, the policies and procedures governing all emergency lending to non-banks must be designed to ensure adequate collateralization and be approved by the Treasury.¹⁷² If regulators were to take an overly conservative view of the types of collateral acceptable in exchange for emergency lending under §13(3), it could undermine the effectiveness of the lender of last resort. In this regard, the question remains whether the ambit of the Federal Reserve’s discretion should be broadly construed. A broad interpretation might include cases in which the Federal Reserve deems it unnecessary or inexpedient to require collateral from borrowers at all, as in the 2008 financial crisis, during which the Federal Reserve purchased unsecured commercial paper, effectively extending a non-collateralized loan to corporations. In addition to determining the types of acceptable collateral, an optimal collateral policy would ensure that appropriate haircuts are applied to discount all forms of collateral, so as to protect taxpayers against loss. On the other hand, the requirement of more stringent collateral requirements may be necessary to prevent the Fed from bailing out an insolvent institution and to reduce moral hazard.

¹⁷¹ Geithner, *Stress Test*, *supra* note 39 at 152.

¹⁷² *Id.*

- 4) *Should the Federal Reserve be permitted under §13(3) to purchase assets from non-bank financial institutions?* The Federal Reserve has the power to lend to non-bank financial institutions under a §13(3) emergency lending program, albeit with approval of the Secretary of the Treasury. However, the question remains whether the Federal Reserve does or should have the authority to purchase assets from non-bank financial institutions. An important consideration in answering this question is that purchasing assets, such as commercial paper, from non-bank financial institutions could allay fears of fire sales. In turn, this could remove one of the strongest sparks of contagious runs and limit the need of the Federal Reserve to deploy further §13(3) lending.
- 5) *Should the Federal Reserve be able to extend loans directly to money market funds or other funds undergoing a run, or should such loans be made indirectly via banks, as during the 2008 crisis?* During the 2008 financial crisis, the Federal Reserve extended indirect access to Federal Reserve liquidity to money market funds through a \$150 billion Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility,¹⁷³ the \$350 billion Commercial Paper Funding Facility¹⁷⁴ and the \$600 billion Money Market Investor Funding Facility.¹⁷⁵ Policymakers should consider whether a more direct lending channel to money market funds would be a stronger tool against contagion. However, key hurdles would need to be cleared. Since provisions of the Investment Company Act limit the amount of leverage that a money market fund may incur, the use of lender of last resort powers to lend to such funds is restricted. If a direct lending channel were desired, the Securities and Exchange Commission would have to exempt central bank loans from such leverage limitations.
- 6) *Do the recent SEC money market fund reforms do enough to stem contagion?* While the SEC has recently attempted to address vulnerabilities in the MMMF industry through the introduction of a floating NAV for institutional prime MMMFs and through liquidity fees and redemption gates, the question remains whether these measures are sufficient to stem contagion. Since there is little argument that a floating NAV will stem contagion, the impetus will be on liquidity fees and redemption gates to do so. However, despite the SEC's

¹⁷³ Federal Reserve Press Release, *supra* note 18.

¹⁷⁴ Federal Reserve Press Release, *supra* note 19.

¹⁷⁵ Federal Reserve Press Release, *supra* note 21.

attempted safeguards against exacerbating contagion (e.g., board discretion), it may be necessary in the future to employ further tools to combat runs on MMMFs. If this is the case, lender of last resort facilities may be the only answer.

- 7) *Should banks be permitted to pass discount window loans onto their affiliates and, if so, under what conditions?* Prior to the Dodd-Frank Act, non-bank affiliates of banks had greater freedom to borrow from their bank affiliates through repurchase agreements or other securities financing transactions. It was thus possible for a bank to borrow from the discount window and pass the liquidity to non-bank affiliates. Banks are generally permitted to engage in “covered transactions” with their affiliates pursuant to strict guidelines and quantitative limits. The Dodd-Frank Act’s revisions to the Federal Reserve’s §23A authorities expanded the definition of “covered transactions” to include repurchase agreements and other lending secured by securities. As a result, lending from banks to non-bank affiliates has been severely hampered. Since the channeling of discount window loans from banks to their non-bank affiliates may be an effective tool against contagion that does not invoke §13(3) emergency lending, policymakers should consider whether such restrictions are really in our best interests.
- 8) *Should the Federal Reserve and the Treasury Secretary be permitted to determine whether a borrower is “solvent” on an entirely ad hoc basis, or should there be a financial metric to determine whether a firm is insolvent?* While in theory §13(3)’s prohibition of lending to insolvent borrowers is sound, the distinction between merely illiquid and truly insolvent borrowers in the midst of financial crises is practically difficult to determine, in particular because “liquidity problems rarely if ever hit an isolated intermediary unless there is good reason for lenders to attach at least some probability to insolvency.”¹⁷⁶ During “generalized financial distress,” negative externalities, such as informational asymmetries regarding counterparty exposure and falling capital positions, cloud the distinction between institutions that would be solvent under normal conditions and those that would not.¹⁷⁷ The broader the crises, the greater the likelihood that at least some institutions will be deemed

¹⁷⁶ Maurice Obstfeld, “Lenders of Last Resort in a Globalized World,” 6, Keynote address prepared for the 2009 International Conference, Institute for Monetary and Economic Studies, Bank of Japan, Tokyo (May 27-28, 2009).

¹⁷⁷ *Id.*

insolvent. However, pre-conditions on Federal Reserve lending, such as minimum capital or maximum leverage ratios, may work to reduce moral hazard, particularly given that dealers with more leverage and lower equity returns were more likely to participate in the Federal Reserve's Term Securities Lending Facility auctions, borrowed more, and bid more aggressively.¹⁷⁸

- 9) *Should the Federal Reserve be permitted to lend to insolvent institutions that have been recapitalized pursuant to OLA or bankruptcy resolution?* The Dodd-Frank Act revisions to §13(3) prohibit the Federal Reserve from providing emergency lending to institutions that are insolvent.¹⁷⁹ While lender of last resort facilities should generally be limited to solvent borrowers, there is a question whether the Federal Reserve should be permitted to lend to bank holding companies, and their operating subsidiaries, that have been recapitalized in OLA or bankruptcy resolution. If the use of §13(3) lending could extend to such institutions, then the Treasury-funded Orderly Liquidation Fund may not be as necessary. In any event, clarity should be provided as to how these two facilities work together.
- 10) *If the Treasury Secretary and Federal Reserve Chair are proponents of strong lender-of-last-resort powers, can they act through regulation to strengthen their powers as opposed to having to seek legislative action?* Given the limitations that the Dodd-Frank Act placed on lender-of-last-resort authority, there is a question whether the tools necessary to fight contagion can be strengthened through regulation rather than a legislative fix. If there were a Federal Reserve Chair and a Treasury Secretary who both strongly supported a strong lender of last resort, the Federal Reserve may be able to deploy several tools without further Congressional action, including 1) creating a broad-based lending program, 2) establishing pre-commitments to lend to financial institutions, and 3) employing a liberal collateral policy. In theory, such a Treasury Secretary could also announce a general policy supportive

¹⁷⁸ See Viral V. Acharya and David Backus, Private Lessons for Public Banking: The Case for Conditionality in LOLR Facilities, in Viral V. Acharya and Matthew Richardson, editors, *Restoring Financial Stability: How to Repair a Failed System*. New York: John Wiley & Sons, 2009.; Viral V Acharya, Michael J. Fleming, Warren B. Hrung, Asani Sarkar, Dealer Financial Conditions and the Term Securities Lending Facility: Was Bagehot Right After All? (December 29, 2011); Viral V Acharya, Michael J. Fleming, Warren B. Hrung, Asani Sarkar, Dealer Financial Conditions and Lender-of-Last-Resort Facilities (May 2014); see also letter from Jeb Hensarling, Chairman, House Committee on Financial Services, to Ben Bernanke, Chairman, Federal Reserve (Jan. 13, 2014).

¹⁷⁹ Federal Reserve Act §13(3), 12 U.S.C. § 343 (2012).

of the Federal Reserve's ability to use §13(3). As a result, even under the current state of §13(3), coordinated action by the Federal Reserve and Treasury could strengthen their tools to fight contagion, thus providing a regulatory solution as opposed to a legislative one. Some in Congress would oppose such action, however, and are pushing the Fed and Treasury to narrow rather than expand lender of last resort powers.¹⁸⁰

Questions on Deposit Insurance and Guarantees

Although deposit insurance is rightly regarded as a bulwark of the financial system, innovation in financial technology over the past three decades, resulting in higher percentages of uninsured short-term bank funding and the presence of significant short-term liabilities outside the banking system, has significantly limited the ability of deposit insurance to stem contagion.

- 11) *Should the FDIC have standing authority to increase deposit insurance limits and to guarantee debt, as it did during the 2008 financial crisis?* The FDIC's action to guarantee senior unsecured obligations of banks was central to the ultimate resolution of the 2008 financial crisis. During the financial crisis, the FDIC relied upon its authority to take actions to mitigate serious adverse effects on financial stability once a determination of systemic risk was made by the Secretary of the Treasury (after consultation with the President) in accordance with §13(c)(4)(G) of the Federal Deposit Insurance Act.¹⁸¹ While the FDIC's power to implement the TLGP was contingent upon a systemic risk determination by the Secretary of the Treasury, the FDIC was able to design the program without further approvals. Under §1105 of the Dodd-Frank Act, any FDIC plan to provide emergency guarantees must now get specific approval from both the President and Congress before the FDIC can provide any guarantees.¹⁸² This feature of Dodd-Frank was of particular concern to Secretary of Treasury Geithner, but he advised the President not to veto Dodd-Frank on those grounds.¹⁸³ The question remains whether these Dodd-Frank changes should be undone. If the added involvement of Congress undermines the ability of the FDIC to

¹⁸⁰ See letter from Sen. Elizabeth Warren, et al. to Janet Yellen, Chair, Federal Reserve (Aug. 18, 2014).

¹⁸¹ See Temporary Liquidity Guarantee Program, 73 Fed. Reg. 72,244 (released Nov. 26, 2008).

¹⁸² Dodd-Frank Act §1105.

¹⁸³ See Geithner, *Stress Test*, *supra* note 39 at 422.

effectively stem contagion in a timely manner, then policymakers should consider the question of removing the Congressional requirements in §1105, and granting the FDIC the general authority to design emergency guarantee programs without additional approval. Perhaps, the role of Congress could be preserved by allowing the FDIC to act unless its action was quickly nullified by Congress.

- 12) *Should the Treasury (or the FDIC) have the power to guarantee money market investments, as it did during the 2008 financial crisis?* During the crisis, the Treasury stemmed the contagion in the money market fund industry by providing an effective \$3.2 trillion temporary guarantee of the liabilities of the money market funds through its Exchange Stabilization Fund.¹⁸⁴ If public guarantees are an effective tool in combatting contagion, then Congress should consider the question of whether future guarantees in the money market fund industry should be permitted.
- 13) *What are the implications of the expansion of public insurance for short-term funding?* A more complete system of insurance for short-term financial liabilities would assure short-term creditors automatic protection through assessments on issuers, potentially removing the element of uncertainty tied to discretionary emergency lending or politically contingent bailouts. Since the costs of supplying a public guarantee could be internalized through the use of insurance premiums or through some other form of assessment, either before or after they are triggered, the question of whether to expand insurance for short-term liabilities should be explored.
- 14) *Should financial institutions' reliance on wholesale short-term funding be limited? And if so, should it be limited directly through regulation or indirectly through government "crowding out"?* Given the substantial reliance of financial institutions on short-term funding along with the susceptibility of short-term credit to contagious runs, an effective tool to combat contagion may be mandating limits on the reliance on such funding. This may include an aggregate cap on short-term financing in the entire financial system and may also include caps on individual firms. If short-term funding caps are employed, two

¹⁸⁴ Press Release: U.S. DEP'T OF THE TREASURY (Sep. 29, 2008), *supra* note 22.

potential approaches can be taken to implement the caps. One approach is for regulators to explicitly mandate the permissible levels of short-term funding as a percentage of total funding that firms can use. A second approach involves an indirect method for capping short-term funding by using the Fed's balance sheet to "crowd out" private issuance of short-term credit, thus effectively limiting the extent to which financial institutions can rely on such short-term funding. Regardless of the approach, a threshold issue is calibration of the cap; that is, how much short-term financing should be considered safe from a systemic risk perspective? This calibration involves a cost-benefit analysis, weighing the overall benefits to stability of the financial system against the increased funding costs to financial institutions, which may lead to higher lending costs to consumers and/or a shift of lending activity to unregulated financial institutions (i.e. "shadow banks").

134 Mount Auburn Street, Cambridge, MA 02138
www.capmksreg.org