

New Ideas for Federal Budgeting: A Series of Working Papers for the National Budgeting Roundtable

**Budgeting for National Emergencies
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WORKING PAPER #7

Budgeting for National Emergencies

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I. Introduction

A major but often unrecognized role of the federal government is to serve as a sort of insurer of last resort to the American economy. Some of this occurs through established federal credit and insurance programs. OMB's *Analytical Perspectives*, published each year as part of the President's Budget, includes an analysis of the federal credit and insurance programs, including discussions of the federal insurance programs for natural disasters, terrorism events, aviation war risks (terminated in 2014), agricultural crop failures, retirement pensions and bank deposits.¹ The total face value of federal direct loans and loan guarantees grew from \$1.4 trillion in 2006 to \$3.4 trillion in 2015, an increase of over 150 percent. These figures, however, measure only the federal government's rapidly expanding traditional credit programs for housing, student lending, small business and other economic sectors. A comprehensive measure of potential taxpayer liability resulting from the insurance programs is not shown in the budget and would be very difficult to estimate.

The special and highly unusual initiatives undertaken in response to the 2008 financial crisis are also not reflected in current measures of federal credit assistance, nor are they even acknowledged as a potential federal insurance liability going forward. As the 2008 financial crisis demonstrated, however, any specific role – such as insuring bank deposits and preventing bank runs – can rapidly escalate into forms of financial exposure beyond anything contemplated in the formal federal insurance program for that sector of the American economy as it is routinely managed and budgeted. Likewise, it is not difficult to conceive of many additional sources of relatively sudden and extraordinary demand upon federal agencies and resources in response to other large emergencies such as unusual natural and environmental disasters, public health crises or – in an increasingly digital world – electrical power and cyber security failures.

The costs incurred by the federal government as a result of the 2008 financial crisis not only included those for programs previously established to offer financial guarantees. They also included other costs arising from the federal government's implicit role as ultimate insurer of the stability of the financial system and the economy. This insurance role was manifested during and following the financial crisis as a series of extraordinary actions taken to stabilize the Nation's finances and prevent what many economists believe might otherwise have been a national and worldwide financial and economic collapse on the scale of the Great Depression.

At the height of the financial crisis, the total exposure of the United States government arising from its emergency responses to the crisis was estimated at \$3.2 trillion². The net cost of one of the major (Troubled Asset Relief Program or "TARP") interventions for the period 2009-16 was estimated to be as high as \$307.5 billion in 2010, just after the federal government had acted, but that figure has declined steadily over the years and is now estimated at only \$53.2 billion for the same period. Similar comparisons for other major elements of the overall financial rescue program are shown in Table 1.

¹ See, for example, *Budget of the United States, 2017*, Chapter 20, pages 307 – 334.

² Congressional Oversight Panel on the TARP, October 2009 Report, page 165.

Table 1: Measures of Federal Resource Impacts of the Financial Crisis of 2008									
		(Dollars in billions)							
		Treasury/TARP		FDIC		Federal Reserve			
		Initial Estimate	Latest or Final Estimate	Initial Estimate	Latest or Final Estimate	Initial Estimate	Latest or Final Estimate		
Bear Stearns/Maiden Lane I	1/					[28.8]	[-0.8]		
AIG/Maiden Lanes II and III	1/					[43.8]	[-9.5]		
Fannie Mae & Freddie Mac Conservatorships	2/	150.6	-53.9						
Treasury Money Market Fund	3/	[2,600]	-1.2						
Treasury /TARP	4/	307.5	53.2						
FDIC Deposit Insurance Fund Outlays (gross)	5/			370.6	103.4				
FDIC Deposit Insurance Fund losses	6/			[73.2]	[47]				
FDIC TLGP Guarantees	7/			[618]	-10.0				
Notes: Bracketed amounts not included in federal budget									
Initial Estimate represents first formal budget estimate at time of the crisis in 2008-09									
1/ Source: Federal Reserve Bank of New York, Maiden Lane Transactions as of 1/27/16									
2/ Initial Estimate from Budget of the United States, 2010, Analytical Perspectives, Supplemental Tables; actual Treasury gross disbursements totaled \$187.5 billion; Final Estimate is net of all earnings paid in to Treasury as of the end of 2015 although the two enterprises continue to make quarterly transfers to the Treasury									
3/ Initial estimate for size of industry at time of crisis (FCIC Report, pg. 358); final estimate reflects on-budget receipts to Treasury									
4/ OMB estimates; Initial CBO estimate was \$341 billion and current (likely close to final) estimate is \$30 billion									
5/ For the years 2008-2010; see Budget of the United States, Appendix, fiscal years 2010, 2011,2012									
6/ Initial estimate reflects DIF loss estimate in FDIC Annual Report, 2009; latest estimate from FDIC Failure and Assistance Transactions report (online)									
7/ Initial estimate reflects total debt issuances guaranteed; maximum amount or debt guaranteed at any one time peaked at almost \$350 billion in May 2009; latest estimate reflects net premiums received (losses were minimal) (FDIC Annual Report 2009, pages 15-17)									

But, this estimate of the budgetary cost of the financial crisis does not include all spending surges and tax receipt reductions incurred by the federal government – through automatic stabilizers and other economic impacts –as part of the fallout from the crisis as shown in Table 2. Further economic costs to the U.S. economy with budget effects included a sharp and prolonged surge in unemployment, massive reductions in personal savings and pension plans, collapses in home equity values, small business failures, and reductions in corporate profits and even large net corporate losses.³

Table 2: Total Federal Outlays and Credit Support During the Great Recession									
		(Dollars in billions)							
		2006	2007	2008	2009	2010	2011		
Outlays		2655	2729	2982	3518	3457	3603		
Revenues		2407	2368	2524	2495	2163	2303		
Deficit		248	161	459	1413	1294	1300		
Direct loan disbursements		47	42	41	669	219	187		
Loan guarantee commitments		281	270	368	879	507	447	5	

³ It should be noted that if the base against which the budgetary cost of the crisis is measured is not the standard budget baseline but federal spending and revenues corresponding to a catastrophic economic scenario that was prevented by these interventions and that we would have cost the government much more to address, then from that perspective the actions taken produced large budgetary savings.

Apart from their cost, the extraordinary steps taken by the federal government to stabilize the financial system and promote recovery largely, and perhaps necessarily, bypassed the prescribed regular order of budgeting intended to provide a degree of fiscal discipline and a process for orderly tradeoffs among competing priorities. The financial crisis thus poses a set of difficult questions for those interested in strengthening the federal budget process: To what degree and how should the expected costs of emergencies such as the financial crisis or events of similar magnitude – including very low probability but high fiscal consequence events sometimes called ‘black swans’ – be included in the budget? And, how can the disruptive effects of such crises on orderly budget processes be reduced? Analysis of the financial crisis and its aftermath may shed some light on these questions.

This first part of this paper focuses on the financial crisis to describe and analyze how the demand for a government response to the crisis and federal financial resources played out. The second section of the paper assesses both the fiscal impact and the impact on the budget process of the financial stabilization actions undertaken during the crisis. The third part of the paper then turns to the question of how such events could better be handled in the future. It describes and analyzes options for incorporating expected costs of emergencies in the budget and for minimizing the disruption to normal fiscal discipline arising from such crises.

II. The 2008-09 Financial Crisis and the Federal Government’s Response

Although its causes are still subject to intense debate, many knowledgeable observers and analysts believe that the 2008 financial crisis was, at its core, a classic case of excessive debt build up in the economy – both in the United States and globally – and the panic and “bank run” behavior that was triggered when a significant portion of that debt went into default.⁴ The entire global financial system was affected by the financial crisis of 2008-09. At the height of the crisis more than 500,000 people were being laid off each month in the United States as the country went through the worst economic recession since the 1930s.⁵ The IMF estimated that the global economy contracted by 6.25 percent in the fourth quarter of 2008.⁶

⁴ The review of the financial crisis in this paper relies upon a number of published sources. Official reports about the crisis and its causes were issued by the Financial Crisis Inquiry Commission and several legislative branch organizations, including the Congressional Oversight Panel on the TARP, the Government Accountability Office and Permanent Investigations Subcommittee of the US Senate. There are a myriad of other sources of discussion and analysis of the origins of the crisis. Shorter treatments, for example, can be found in Brookings papers by Martin Baily, Douglas Elliot, Matthew Johnson and Robert Litan (e.g., Martin Neil Baily, Robert E. Litan and Matthew S. Johnson, “The Origins of the Financial Crisis”, Brookings Fixing Finance Series – Paper 3, November 2008). More detailed analyses can be found in John Geanakoplos (John Geanakoplos, “Solving the Present Crisis and Managing the Leverage Cycle”, FRBNY Economic Policy Review, August 2010), Mian and Sufi (Atif Mian and Amir Sufi, *House of Debt: How They (and You) Caused the Great Recession, and How We Can Prevent It from Happening Again*, (University of Chicago Press, 2015)), and Wolf (Martin Wolf, *The Shifts and the Shocks*, (Penguin Press, 2014). Anecdotal and individual perspectives on the crisis can be found in the books by major players in the federal response, including Timothy Geithner (*Stress Test* (Crown Publishers, 2014)), Hank Paulson (*On the Brink* (Business Plus/Hachette BookGroup, 2010)), Sheila Bair (*Bull by the Horns* (Free Press, 2012)), Benjamin Bernanke (*The Courage to Act* (W.W. Norton and Company, 2015)) and Steven Rattner (*Overhaul* (Houghton Mifflin Harcourt, 2010)). Finally, from a journalistic perspective, perhaps the two best overall accounts of the crisis in the U.S. are books by Andrew Ross Sorkin (*Too Big to Fail* (Viking, 2009)) and David Wessel (*In Fed we Trust* (Three Rivers Press, 2009)).

⁵ See press release, U.S. Department of Labor, Bureau of Labor Statistic, February 6, 2009. (online at http://www.bls.gov/news.release/archives/empsit_02062009.pdf)

⁶ International Monetary Fund, “World Economic Outlook, 2009”, April 2009, pg. 4.

The epicenter of the crisis was the collapse of the housing and mortgage finance sector of the U.S. economy. This was the second time in less than 20 years that the mortgage finance system in the United States had been in the throes of a crisis. The savings and loan (S&L) industry in the U.S. made increasingly risky loans during the 1980s, and 1,300 of nearly 3,000 S&Ls failed in the 1989-94 period. The Federal Home Loan Bank Board, the federal agency initially in charge of overseeing the industry, did not have sufficient resources in its deposit insurance fund, the Federal Savings and Loan Insurance Corporation, to take prompt action to shut down insolvent institutions. Instead, the agency delayed action and propped up failing savings and loans using creative accounting rules and lax regulatory enforcement. These weak initial responses to the looming crisis ultimately raised the cost of the federal response to the crisis. When the Bush (41) Administration and the Congress finally acknowledged the severity of the crisis and took action, the principal form of the federal government's response was the creation of a formal federal rescue program led by the FDIC and a special new agency proposed by the Bush Administration and created by Congress to acquire and sell off failed real estate, the Resolution Trust Corporation⁷. Subsequent assessments of that crisis and the federal government's response put its cost to taxpayers at a current value (i.e., unadjusted for inflation) of \$132 billion, representing roughly 10 percent of annual federal budget outlays at that time.⁸

STABILIZING THE SYSTEM

The extraordinary steps taken by the federal government to stabilize the financial system and promote recovery largely, and perhaps necessarily, bypassed the prescribed regular order of budgeting

As a result of a sharp contraction in the oil industry in Texas, Oklahoma and Louisiana and the collapse in commercial real estate in Texas, Florida and elsewhere, more than 900 commercial banks with assets of \$156 billion also failed during the years 1988-94 at a cost to the FDIC of nearly \$20 billion.⁹ At the time, there was a concern among senior federal policy officials that the FDIC's bank insurance fund would need a taxpayer rescue as well. In the end, the commercial banking sector returned to profitability due in no small part to monetary policy actions of the Federal Reserve, which produced a sharp drop in short term interest rates. Congress subsequently gave the FDIC new authority to borrow from the Treasury and to increase the premium rates it charges banks for deposit insurance.

The housing finance system in the U.S. continued to evolve following the savings and loan crisis. The role of the secondary mortgage market as a prime source of mortgage financing grew along with the rapid expansion of the global financial system. Housing prices in the United States more than doubled in ten years, from 1996 until 2006.¹⁰ Loan volume likewise grew rapidly, with the amount of mortgage debt outstanding growing from less than \$5 trillion in 1996 to \$13.5 trillion by 2006. Despite the assumption of many investors and home buyers that house prices in the U.S. would continue to rise for a seemingly indefinite period, prices in fact peaked and began to decline in mid-2006. Mortgage defaults and home foreclosures then began to rise rapidly, and signs of stress in the overall housing finance system began to appear in the summer of 2007.

Although the Department of Housing and Urban Development and the newly created Federal Housing Finance Agency played important roles in addressing the subsequent crisis in the U.S. housing market and mortgage finance system in 2007-09, three other agencies were the most critical in leading the federal response: the Federal Reserve, including both the Board of Governors of the Federal Reserve System in Washington and the Federal Reserve Bank of New York, the Treasury Department and the Federal Deposit Insurance Corporation. While the financial transactions of the Treasury and the FDIC

⁷ Among the many books covering this episode one of the best is Lawrence J. White, *The S&L Debacle* (Oxford University Press, 1991).

⁸ See FDIC history of the crisis https://www.fdic.gov/bank/historical/history/167_188.pdf

⁹ See FDIC Failures and Assistance Transactions (online at <https://www5.fdic.gov/hsob/hsobRpt.asp>).

¹⁰ See S&P Case-Shiller Home Price Indices – 2011 Year in Review (online at <http://us.spindices.com/index-family/real-estate/sp-corelogic-case-shiller>)

were largely accounted for in the federal budget, the Federal Reserve was a major exception in two respects: (1) its budget is administratively excluded from the federal budget (in the case of the Board of Governors) or it is not considered a federal agency and therefore not part of the federal government (in the case of the New York Bank); and (2) it conducts monetary policy. The latter role means that the Federal Reserve System has access to resources unavailable to any other federal agency as a result of its unique power to create money – at least as long as the Federal Reserve’s monetary policy role remains independent from congressional and executive oversight.¹¹

Investment banks round one: Bear Stearns, March 2008

As of early 2007 there were five major investment banks in the United States: Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers and Bear Stearns (in order of asset size). As investment banks, these institutions funded themselves in the wholesale market with large corporate bonds, money market funds and overnight borrowing in the “repo” market. Their liabilities were not legally backed by the FDIC or any other U.S. government program.

Like the other investment banks, Bear Stearns was highly interconnected with other financial institutions. Problems at Bear Stearns, became public when two Bear Stearns hedge funds that were heavily invested in mortgages collapsed in June 2007. The firm came under growing financial stress during 2007 and by early 2008 it had become apparent that Bear Stearns was headed for insolvency. Although it was the smallest of the five investment banks, Bear Stearns was a huge, highly leveraged institution with only \$ 11.5 billion of its own capital as of March 13 to protect losses on \$395 billion in assets, i.e., a “leverage ratio” of 36:1. As Bear Stearns prepared to file for bankruptcy in mid-March, the President of the Federal Reserve Bank of New York, the Chairman of the Federal Reserve Board and the Secretary of the Treasury all became worried that – in light of its myriad connections with the entire U.S. financial system - its failure would have severe systemic consequences not just for the banking system but for the U.S. economy. A federal rescue was initiated led primarily by the Federal Reserve (“the Fed”), using its authority under Section 13(3) of the Federal Reserve Act, to take action under “unusual and exigent circumstances”. A single large buyer – JPMorgan Chase – bought most of the firm, but the Fed created a new legal entity to acquire \$30 billion worth of the worst securities and place them in a newly established legal entity (“Maiden Lane”). Maiden Lane (subsequently informally known as “Maiden Lane I” after the Federal Reserve went on to create two more such special purpose entities) was financed primarily with a \$29 billion loan from the Federal Reserve Bank of New York, with JPMorgan extending \$1 billion of credit to the entity as well.¹² Importantly, the JPMorgan loan was subordinated to the Fed’s loan, meaning the first \$1 billion of losses on the portfolio were to be fully absorbed by the (private sector) JPMorgan bank.

Major commercial bank failures handled by FDIC beginning summer 2008

During the summer of 2008, several large banks and savings and loan institutions came under increasing stress as homeowners defaulted on their mortgages and the value of the loans held by these large institutions declined rapidly. Two large S&Ls, Washington Mutual and IndyMac, were in particular difficulty. IndyMac experienced a severe bank run, with depositors withdrawing \$13 billion of the \$19 billion on deposit at that institution in only 11 days in July. IndyMac was then closed by the FDIC at a cost to the bank insurance fund of \$12 billion, with some additional losses absorbed by uninsured depositors.¹³ Subsequently, at the height of the financial crisis in September, Washington Mutual also failed, the largest failure of a depository institution in U.S. history. It was resolved by selling the bank to JPMorgan and imposing losses on uninsured creditors but with no cost to the FDIC.

The magnitude of these failures was enormous by historical standards, and the FDIC leadership had become worried about the fund’s exposure to further large losses, particularly since the bank insurance

¹¹ Congress has occasionally used the Federal Reserve as a source of savings or budget offsets. Most recently, for example, the Fixing America’s Surface Transportation Act (the FAST Act; P.L. 114-94) required the Federal Reserve to remit to Treasury most of the balance of its Surplus Account. This produced \$19 billion in one-time receipts to the Treasury in December 2015.

¹² See Annual Report of the Board of Governors of the Federal Reserve System, 2009, (<http://www.federalreserve.gov/boarddocs/rptcongress/annual09/pdf/ar09.pdf>), pages 496 – 497.

¹³ Bair, page 80.

fund had been assessing only minimal premiums from insured banks in the years leading up to the crisis. The FDIC's bank insurance fund did prove adequate to the tasks during this period, and the FDIC was compelled to impose more than \$40 billion in increased and accelerated premiums on all insured depository institutions in calendar year 2009. Gross outlays of the FDIC surged from \$1 billion in 2005 to \$39 billion in 2009. In its first detailed budget issued in May 2009, the Obama Administration forecast that the FDIC's Deposit Insurance Fund would need to make gross outlays (before offsetting premiums and receipts from sale of failed bank assets) of \$371 billion over the 2008-2010 period to deal with the immediate costs of bank failures. Actual disbursements over that period were \$103 billion. No borrowing from the Treasury or other extraordinary use of federal financial resources was ultimately required to handle the 165 banks that failed during the crisis at a cost to the FDIC's Deposit Insurance Fund of \$47 billion.¹⁴

Conservatorships of Fannie and Freddie, September 2008

Also during early 2008, the two large government sponsored housing enterprises, Fannie Mae and Freddie Mac, came under great stress as a result of aggressive lending practices and inadequate capitalization. Although created to promote U.S. homeownership, the firms sought to maintain rapid profit growth by acquiring a significant amount of securities backed by subprime mortgages in the years immediately prior to the crisis. By 2008, the two enterprises owned or guaranteed over \$5 trillion of mortgage debt, nearly half of the \$11 trillion in single-family mortgage debt outstanding at the time. Their regulator, the Office of Federal Housing Enterprise Oversight, had relatively weak authority, particularly with respect to the capital requirements it could set for Fannie and Freddie and its ability to take a strong hand in their management once they got into serious trouble. In July 2008, Congress responded to this situation by enacting reforms in the regulation of the two GSEs that had been under consideration for several years.¹⁵ A new regulator, the Federal Housing Finance Agency (FHFA), was created with authority to place Fannie and Freddie in conservatorship. More significantly for the federal budget was the fact that the Secretary of the Treasury was given authority to provide them with emergency financing through purchases of their stock. Any exercise of such authority would be a form of mandatory spending since no further congressional action would be required to make the financial disbursements involved in the stock purchases.

Congressional action came just in time, as six weeks after this legislation was enacted the FHFA placed both institutions in conservatorship over the first weekend in September 2008 and the Treasury extended aid through its newly acquired authority to make emergency purchases of stock in the housing GSEs. The federal government acquired 79.9 percent of the stock of the two housing GSEs. Their debt holders were fully protected. These institutions remain in conservatorship today and their earnings are paid quarterly into the Treasury, but their failure required federal outlays of \$187.5 billion – up from the initial estimate of \$150.6 billion -- to prevent their collapse.¹⁶

Although the Treasury Department acquired nearly 80 percent of the equity of Fannie Mae and Freddie Mac, OMB has continued to treat them as non-government entities, and consistent with this treatment the cash disbursed to them and the dividends they pay to Treasury are treated as cash outlays and receipts. The Congressional Budget Office, however, took the position that the federal takeover of the two housing GSEs precipitates a major change in their status in the federal budget as well. Further, CBO said that as federal agencies conducting major credit programs – loan purchases (which are treated as direct loans) and loan guarantees of mortgage-backed securities – their transactions should be scored under Federal Credit Reform Act rules but using a “fair value” or private market equivalent interest rate. Hence, CBO's initial estimate of the budget impact of the takeover of the two entities was to add \$380 billion to the federal deficit over the 2009 – 2019 period.¹⁷

Investment banks round two: Lehman failure, September 2008

¹⁴ See FDIC, Failure and Assistance Transactions (online at <https://www5.fdic.gov/hsob/hsobRpt.asp>).

¹⁵ Housing and Economic Recovery Act (HERA) of 2008 (P.L. 110-289), enacted July 30, 2008.

¹⁶ See FHFA, Quarterly Performance Report of the Housing GSEs, Second Quarter 2015; as shown in Table 1, dividend payments by the two entities to Treasury have more than offset the total initial cost of their bailouts.

¹⁷ Congressional Budget Office, “CBO's Budgetary Treatment of Fannie Mae and Freddie Mac”, January 2010.

A second large investment bank, Lehman Brothers, the fourth largest of the major U.S. investment banks with over \$600 billion in assets, also came under major stress in mid-September 2008. The firm was highly leveraged with substantial exposure to real estate and other rapidly depreciating loans yet with too little capital to sustain rapidly mounting losses. This case, however, proved to be the major exception to the use of federal financial resources to prevent a major financial institution from financial collapse.

The Federal Reserve gave serious consideration to using its Section 13(3) authority to rescue Lehman Brothers in a manner similar to what was done with Bear Stearns. Treasury Secretary Paulson, New York Federal Reserve Bank President Geithner and other officials attempted to find a suitable buyer of the firm and came very close to a deal with British investment bank Barclays. In the end, Lehman was not rescued and Lehman filed for bankruptcy on September 15, 2008. The reasons given by top officials for this outcome included the view that any rescue effort would have failed and that, unlike the case of Bear Stearns, the Federal Reserve lacked the authority to extend Lehman emergency financial assistance. Subsequent accounts of Secretary Paulson, Chairman Bernanke and others, however, strongly suggest that if Barclays had agreed to buy Lehman, federal assistance may have been provided to assure such a transaction could have been executed.¹⁸

The failure to bail out Lehman Brothers is generally cited as a crucial turning point in the crisis and the federal government's response to it. The Lehman bankruptcy triggered a series of follow-on events which involved the key federal agencies taking hasty and highly controversial actions to prevent further bank runs, major financial institution failures, and the freezing up of the entire U.S. banking system.

AIG rescue, September 2008 – the biggest and most complicated rescue of the crisis

On September 16, 2008, the day after the Lehman bankruptcy filing, AIG was rescued by the Federal Reserve after it too came close to bankruptcy. At the time, AIG was the world's largest insurance organization, with over \$1 trillion in assets and 76 million customers in over 130 countries. AIG consisted of a federal thrift (savings and loan) holding company, regulated by the Office of Thrift Supervision, and more than 223 insurance and other business subsidiaries, with half its revenues generated outside the U.S. In the U.S., AIG's main business was conducted by insurance companies regulated in the 50 states.

AIG ran into trouble, however, in large part as a result of two esoteric businesses conducted principally outside the purview of both federal and state banking and insurance regulators and once again triggered by the collapse in value of mortgage related debt instruments. First, through its relatively unknown subsidiary AIG Financial Products (AIGFP), AIG had become a major provider of insurance ("credit default swaps" or CDS) on risky mortgage-backed securities and other complex financial contracts ("consolidated debt obligations") supported by large amounts of subprime mortgages and held by many other large financial institutions. Second, AIG engaged in an aggressive securities lending program, whereby it borrowed heavily against the securities of its life insurance and other subsidiaries. While securities lending arrangements were not unusual in the business, such lending was legally conducted on a short-term basis, meaning that institutions lending to AIG could refuse to renew their loans at any time. AIG nevertheless used the proceeds it obtained to invest in long-term residential mortgage backed securities. In short, in both these businesses AIG was in a precarious position should the value of mortgage-backed and related securities decline suddenly, which is exactly what happened in mid-2008. In the third quarter (July through September) of 2008, AIG recorded losses of \$24.5 billion, of which \$19 billion came from the AIGFP and securities lending programs.

The decision to rescue AIG was sharply debated inside the federal government and remains controversial years later. Market conditions were extremely chaotic in September 2008, with banks refusing to lend to each other in the aftermath of the Lehman bankruptcy and the extraordinary rapid purchase of the third largest investment bank, Merrill Lynch, by Bank of America during the weekend of September 13-14. Multiple large global financial institutions were exposed as counterparties to AIG CDS and securities

¹⁸ See, for example, Paulson, page 209; and Bernanke, page 267.

lending agreements, including European as well as U.S. banks. It was not clear how an AIG bankruptcy could even be executed given that AIG had insurance companies operating in all 50 states and subject to state regulatory requirements. During the previous weekend and at the same time as top officials were attempting to facilitate the sale of Lehman Brothers, efforts overseen by the Federal Reserve Bank of New York and the New York State Insurance Commissioner to get a private sector firm or firms to buy AIG's businesses failed. Estimates of the extent to which AIG's liabilities exceeded its losses had reached \$40 billion and were growing rapidly as other market players imposed collateral calls and terminated short-term lending agreements. In the end, the Federal Reserve elected to extend an emergency (Section 13(3)) \$85 billion loan to AIG on night of September 16th.

The \$85 billion loan was the initial step in what became the most complicated series of rescue transactions of the entire financial crisis. In exchange for the \$85 billion, the U.S. Treasury received AIG stock and warrants that effectively gave the government nearly 80 percent ownership of the firm. In the remaining months of 2008, the Federal Reserve used its Section 13(3) authority to extend two more rounds of assistance to AIG, first through the temporary loan of another \$38 billion and then through the creation of two more special purpose legal entities (Maiden Lane II and Maiden Lane III). As with the Bear Stearns precedent and creation of the first Maiden Lane special purpose entity, the two additional Maiden Lanes were used to house a portfolio of troubled securities backed by loans from the FRBNY. In this case, \$44 billion in FRBNY loans were used to repay the Fed's initial \$38 billion loan. At the same time (October and November 2008), the Treasury Department got involved through the use of its newly created Troubled Asset Relief Program (TARP – see below), committing \$40 billion to the purchase of a portion of AIG's securities. The rescue of AIG was not complete, however, and in March and April of 2009 the Federal Reserve purchased two AIG subsidiaries for \$25 billion and the Treasury committed another \$30 billion of TARP funds to AIG to draw down as needed. In sum, the combined amount of Federal Reserve and Treasury/TARP funds committed to the rescue of AIG in 2008-09 totaled \$181 billion, of which – at its peak – AIG actually utilized \$132 billion.

From a taxpayer resources perspective, both the Treasury/TARP and the FRBNY fully recovered all the funds utilized to rescue AIG, and the Treasury's sales of its holdings of AIG stock and warrants resulted in a net profit to the government of \$3 billion. In short, the government was ultimately able to recover and even make a "profit" on its emergency investments in AIG but AIG's very survival – and the avoidance of a cascading series of financial impacts on many other firms in the U.S. and global economy – was assured only because the U.S. government cobbled together \$132 billion of financial assistance at the peak of the financial crisis.

Money market funds rescue by Treasury

Through the 2007-09 period, the Federal Reserve initiated numerous special lending programs to promote liquidity and allow banks to obtain cash in exchange for pledging bank assets. These efforts, while helpful to some institutions, did not ultimately prevent the seizing up of the banking system in September 2008. Non-bank financial intermediaries also came under severe stress after the Lehman bankruptcy. Money market funds were the prime case. These mutual funds provided a range of customers, from small savers to large industrial companies, with relatively simple interest bearing savings accounts – but without federal deposit insurance. They aggregated their cash deposits to make much larger purchases of Treasury debt and commercial paper issued by corporations. After the Lehman bankruptcy, one of the major firms in the industry, the Reserve Fund, which held \$785 million in Lehman debt, was unable to assure its account holders it would be able to fully repay the principal they had invested. The result was a run on the entire \$2 trillion money market fund industry in the wake of the Lehman bankruptcy.

Although the Federal Reserve subsequently came up with another special lending program to combat the run on this financial sector, the Treasury acted first to craft a special money market fund guarantee program, complete with premium charges scaled to the amounts guaranteed. This action by Treasury is perhaps one of the most extraordinary steps taken by any of the federal agencies in the course of stemming the bank run behavior that threatened the entire financial system at the height of the crisis. It was a completely new program, yet it had no substantive authorizing legislation. Instead, Treasury

backed up its provision of federal government guarantees of the money market funds using the resources of the Exchange Stabilization Fund, a fund created by Congress in 1934 for an entirely different purpose, namely government intervention in currency exchange transactions. In passing the Emergency Economic Stabilization Act of 2008 (EESA), Congress subsequently took two actions concerning the Treasury Money Market Funds Guarantee Program: (1) it effectively ratified Treasury's actions by authorizing the use of funds provided in EESA to pay any claims on the program; and (2) it forbade Treasury from ever using the ESF for that purpose again. The ad hoc, temporary Treasury program successfully stemmed the runs on money market funds; and Treasury ultimately never had to pay any claims. Indeed, it earned \$1.2 billion in fee receipts to the government.¹⁹

Passage of TARP, October 2008

With the bankruptcy of Lehman, the massive rescue of AIG initiated the next day, and the run on the money market industry, the growing financial market turmoil reached an historic peak by the third week of September 2008. Earlier in the year, Secretary Paulson and his staff had discussed inside the Department and with Chairman Bernanke and his key staff what extraordinary measures might be needed should the U.S. housing market bubble burst. By mid-September it had become clear to the Treasury, the Federal Reserve and the White House that it was time for the federal government to act to stop large runs in still other financial sectors such as the overnight lending ("repo") market and restore confidence that major financial institutions could safely transact business with each other. It will always be a subject of speculation as to what might have happened had the federal government not acted, but the undeniable and fully observable fact was that with the financial markets were seizing up and major institutions no longer had confidence they could lend to other large market participants and counterparties, even on a very short-term basis. The resulting chaos in the payment and short term lending system could have cascaded through the entire economy as major businesses found they could not conduct financial transactions using the banking system, borrow critical short term financing or pay their suppliers and employees.

To get on top of the crisis and turn the tide, Paulson and Bernanke held an emergency meeting with congressional leaders on September 18th and proposed that Congress move quickly to provide the Treasury with \$700 billion in authority to buy securities – particularly mortgage-backed bonds and other related debt ("troubled assets") that were the source of rapidly growing losses at many large financial institutions, particularly the largest banks. Treasury initially sent Congress a three-page draft bill giving the Secretary sweeping authority to make such purchases. The legislation was highly controversial, but with the money markets freezing up and the stock market falling rapidly in value, Congress immediately gave this legislation top priority. After reworking the Paulson draft to provide a great deal more oversight and details on the authority of the Secretary, the House of Representatives took up the Emergency Economic Stabilization Act (EESA) on Monday, September 29th. The bill was rejected by a vote of 228-205, sending the stock market into a sharp fall – U.S. equities lost \$1.2 trillion in value on that day alone. Subsequently, the Senate added 130 pages of transportation and energy tax provisions and passed the bill on Wednesday, October 1st, and the House finally passed and the President signed EESA into law two days later.

With enactment of EESA and the implementation of the TARP, the lead role in providing government assistance to failing banks shifted to the Treasury Department and away from the Federal Reserve System (both the Board of Governors and the Federal Reserve Bank of New York). This meant that government spending in the course of rescuing institutions as well as the system would now be at least partially recorded in the budget. Also, from a budget scoring perspective, TARP was significant in that it required in Section 123 that the value of the financial assets purchased and guarantees made under the program be scored using procedures established under the Federal Credit Reform Act of 1990. The FCRA calls for the budget to reflect the net subsidy provided by federal loan and loan guarantee programs using a discounted present value methodology. Further, and contrary to the FCRA, EESA also required that the discount rate used to calculate such discounted present values include an adjustment

¹⁹ The program also purchased \$3.6 billion in securities from one money market fund to assist in the orderly liquidation of that fund in 2009. See *Budget of the United States, 2010, Analytical Perspectives*, page 63.

for market risk instead of reflecting only the government's cost of borrowing. Using this ("fair value") methodology, CBO estimated the budget impact of TARP at the time of EESA's passage at \$341 billion. OMB, which has the final authority over the amounts recorded in the budget, calculated the value of TARP assistance at \$307.5 billion using its version of the fair value methodology required by EESA.

As with other elements of the financial rescue such as the rescues of the banks and AIG, TARP ultimately cost the government far less than initially feared. CBO's most recent estimates show Treasury having disbursed \$441 billion of the \$700 billion originally authorized for the program at a net cost to taxpayers of \$30 billion; OMB's latest net cost estimate is \$53.2 billion.

TARP capital contributions (largest 9 banks plus selected other institutions)

Enactment of EESA calmed the markets to some degree and the country awaited the details about how the Secretary planned to exercise his new authority to purchase various housing and other securities whose value had declined rapidly in the months leading up to the crisis. Secretary Paulson and his staff concluded that such transactions were fraught with difficulties, particularly with respect to determining prices that would both provide relief to the institutions owning them (i.e., not underpaying) and yet not waste the taxpayer resources (i.e., overpaying) that had been committed to the rescue of those institutions. They decided to change course and instead execute a program of direct capital injections into troubled banks.

On the Columbus Day holiday in mid-October, Paulson called the top executives of the 9 largest US banks to a meeting at the Treasury Department where he, Chairman Bernanke and FDIC Chairman Sheila Bair proceeded to offer to purchase large amounts of special issues of each bank's stock, ranging in amounts from \$2 billion to \$25 billion each and totaling \$125 billion. Not all the chief executives were immediately receptive to this proposal and some argued that they did not actually need the money. Treasury and other top officials were concerned, however, that failure to provide a united front could expose the weaker institutions to further runs and thereby impact the entire financial system.

In the end all 9 banks agreed to accept emergency cash infusions in exchange for preferred stock paying dividends of 5 percent and options to purchase additional stock (warrants). The terms of these capital contributions were acknowledged to be generous by their recipients at the time. Further, the fact that some of the 9 probably could have survived further turmoil without Treasury assistance was seen by many critics as indicating excessive subsidies to an industry that had created many of its problems in the first place. In one of its first reports in February 2009, for example, the Congressional Oversight Panel on the TARP estimated that the market value of the securities the government received in exchange for its cash payments to the banks was actually only 78 percent of the amount paid for them.²⁰ But as the key participants have made clear in their memoirs, this was an emergency and the goal was to rescue the entire financial system, not to "means test" or discriminate among individual program beneficiaries, however desirable that might otherwise have been.²¹

In the following weeks, Treasury expanded access to TARP funds by establishing a capital purchase program available to other large banks that applied and met certain criteria. Ultimately, another 600 out of more than 7,000 U.S. banks received TARP capital contributions totaling \$55 billion. Hence, not all banks were bailed out and, as discussed above, many were allowed to fail at the expense of the FDIC deposit insurance fund.

Other TARP banking programs and additional assistance for Citibank and Bank of America

In addition to the initial October round of direct capital injections, Treasury used its newly established TARP authority to create both a special loan guarantee program and another capital program to make additional preferred stock purchases for the two banks at most risk of failure, Citigroup and Bank of America (BoFA). The loan guarantee programs were structured to give all three agencies exposure to

²⁰ Congressional Oversight Panel on the TARP, February 2009 Report.

²¹ Congressional Oversight Panel March 2011 Report, pages 45-46 (Geithner quote).

potential losses from pools of weak loans of each institution. After each bank took a specified initial amount of losses, Treasury was to use its TARP resources to take the first \$5 to \$7.5 billion in losses and the FDIC the next \$10 billion in losses; the Federal Reserve was also exposed to potential further losses on the Citigroup loan pool. Citigroup used this federal loan guarantee program to protect \$306 billion of troubled loans. BofA never finalized a loan guarantee agreement with Treasury. In the following months, Citigroup and BofA received another \$20 billion in TARP capital beyond the initial \$25 billion each had received in the first funding round.

For all TARP bank assistance efforts, however, the government received full return of the proceeds invested and, when interest earnings and the proceeds on the sale of stock and warrants are factored in, generated a nominal “profit” of \$21.7 billion.²²

FDIC extraordinary deposit insurance expansion

EESA expanded deposit insurance per bank account from \$100,000 per account to \$250,000. But in addition, at the height of the crisis in September 2008, Treasury pressed the FDIC to expand the scope of federal deposit insurance to include forms of bank deposits and bank debt normally excluded from federal bank insurance. The FDIC agreed to provide such expanded insurance for a limited duration and with the imposition of an appropriate fee. At its peak it guaranteed \$350 billion in new debt issues of 120 banks. When it finally expired in 2012, this special one-time program of bank liability insurance (the Temporary Loan Guarantee Program, or TLGP) had earned the agency \$10 billion.²³

U.S. domestic auto industry rescues under Treasury/TARP

Separate from the rescue of the banking system and collapse of mortgage lending, the federal government undertook a series of actions to address the looming prospect that two of the three U.S. domestic automobile manufacturers – General Motors and Chrysler -- were facing bankruptcy. As the economy entered a severe recession in late 2007 and throughout 2008, auto sales shrank from an annual rate of 16 million vehicles to less than 10 million. After initially opposing assistance to the industry, the outgoing Bush Administration used TARP resources to create the Auto Industry Financing Program and extend loans of \$13 billion and \$4 billion, respectively, to General Motors and Chrysler. At the same time, the company’s auto loan financing subsidiaries (GMAC and Chrysler Financial) were loaned another \$6.5 billion. The incoming Obama Administration was very concerned about the prospect that liquidations of two major manufacturing firms would create major employment losses and greatly exacerbate the most severe recession since the Great Depression. Hence, the Obama Administration initially sought to develop a restructuring plan for GM and to have Chrysler sold to another global automobile manufacturer; but those efforts failed, and in the spring of 2009 both firms filed for bankruptcy.

A key issue in resolving these bankruptcies was whether the two firms would have access to interim (“debtor in possession”) financing or would, instead, have to be liquidated and their assets sold off piecemeal at auction. Using a portion of the newly created TARP, Treasury established an Auto Industry Financing Program (AIFP), which provided the critical financing to sustain GM and Chrysler through the bankruptcy process in exchange for a majority ownership position in the newly reconstituted GM and the right to assume a substantial ownership position in Chrysler. The federal government provided a total of \$81.5 billion in TARP financing to the auto industry and exited its assistance to the two newly restructured firms a few years later by selling its positions at a net loss of \$11.8 billion.²⁴

²² TARP also was used to support several other smaller programs to restart the financial markets, including the Temporary Asset-Backed Securities Loan Facility (TALF) and the Public-Private Investment Program (PPIP); although launched with some fanfare and subject to some controversy for attempting to restart trading in the very securities that “caused the crisis”, these programs ultimately had very little uptake by private participants and utilized minimal amounts of TARP funding.

²³ FDIC Annual Report 2012; excludes losses.

²⁴ With the proceeds of auto financing company Ally (formerly GMAC) and auto supplier and warranty programs, the net loss incurred by the AIFP portion of TARP is reduced to \$9.2 billion. See *Budget of the United States, 2017, Analytical Perspectives*, page 344.

As the Congressional Oversight Panel and others have noted, Treasury took a much tougher position with the auto companies than it did with the banks. Unlike the banks, the auto companies were required to go through bankruptcy with the shareholders being wiped out and management replaced. On the other hand, despite assuming a substantial ownership share, Treasury sought to maintain a “hands off” position with respect to the management of the newly incorporated firms and their new owner in the case of Chrysler. Another key issue that arose was the “exit strategy” the Treasury leadership should pursue given its dominant position in the newly revitalized firms’ financing and their dependence upon the federal government that resulted from their being resuscitated rather than liquidated. Treasury successfully worked through these issues, but the initial byproduct of the emergency actions the Department undertook was to put the government in charge of two major American industrial firms and their management.

Housing refinancing and foreclosure mitigation programs under HUD, Fannie/Freddie, and Treasury/TARP

Although housing was the epicenter of the financial crisis, the federal government’s emergency efforts to mitigate foreclosures and revive the housing sector of the economy were muted, slow and ultimately not very successful. As home prices fell and foreclosures increased in 2007, private sector and government initiatives were launched to help affected homeowners refinance high interest rate mortgages into new more affordable loans and thereby avoid foreclosure. Some initiatives, such as the HOPE program, were undertaken by the private sector to promote voluntary refinancing of troubled home loans and other measures to stave off foreclosure. Other efforts, including those launched by HUD’s FHA program and by the FDIC, relied heavily upon private lenders and investors to voluntarily agree to accept prepayment of their higher interest loans and were not successful in having a meaningful impact upon the growing U.S. foreclosure crisis. Similarly, FHFA undertook the Home Affordable Refinance Program (HARP) to refinance troubled home loans held or guaranteed by Fannie and Freddie with the aim of reducing monthly mortgage payments. None of these initiatives involved net new federal spending.

HUD also undertook several on-budget initiatives using FHA to mitigate the foreclosure crisis, but its one major new program, Hope for Homeowners, experienced low usage. Its regular mutual mortgage insurance program grew from 2 percent of the mortgage market in 2005 to 22 percent by 2008 as risk averse lenders moved to make much greater usages of FHA to originate mortgages and FHA increased its maximum mortgage loan size from \$362,790 to \$625,000 (\$729,750 during CY 2009). Although its fee schedule had been set to produce net “profits” every year, FHA in fact ran up losses during the 2005-2009 period which totaled \$39.1 billion according to one CBO estimate.²⁵

The Treasury Department set aside \$50 billion of TARP resources to be utilized for several housing refinance and foreclosure mitigation initiatives. The main program, HAMP, was allocated \$30 billion to make payments to mortgage lenders and servicers to induce them to modify high cost and troubled mortgages. It ran into numerous problems and utilized only \$12 billion to aid less than 700,000 households, far short of the Treasury’s initial state goal of assisting 3 to 4 million troubled homeowners. Unlike other components of the overall \$700 billion TARP effort, Treasury’s foreclosure mitigation programs were structured as grants with no expectation that this money would necessarily be repaid.

While the federal government’s efforts -- including the rescue of Fannie and Freddie and the TARP foreclosure mitigation programs -- succeeded in preventing the collapse of the mortgage finance system, the housing sector remained severely depressed for several years following the financial crisis of 2008. The inventory of unsold homes reached 6 million in early 2011, by which time 4 million homeowners had been foreclosed upon. Hence, although the federal government prevented the collapse of the banking system using the multi-pronged initiatives described above, it is fair to say that despite implementing a series of different housing assistance programs the recovery from the initial collapse of the housing sector was extremely protracted and the assistance programs not particularly successful. The rescue of Fannie and Freddie prevented the complete collapse of the housing finance sector in the United States. But

²⁵ Francesca Castelli, Gabriel Ehrlich, Damien Moore and Jeffrey Perry, “Modeling the Budgetary Costs of FHA’s Single Family Mortgage Insurance”, Congressional Budget Office Working Paper 2014-05, September 2014, page 6.

neither that rescue nor the housing initiatives undertaken by the Obama Administration using TARP, FHA and other resources prevented continued high levels of foreclosures or served to assure a rapid recovery in home sales and prices.

The Recovery Act and other macroeconomic initiatives

The Great Recession that was triggered by the financial crisis was the most severe economic contraction in the U.S. economy since the Great Depression. Unemployment rose to 10.1 percent, 8 million people lost their jobs and, as noted, 4 million homeowners were foreclosed upon. Hence, the Obama Administration used TARP not just as part of the combined effort of the Treasury, FDIC and the Federal Reserve to rescue the financial system and the auto industry and to try to combat the mortgage foreclosure crisis. It also sought to stimulate the economy and restart the housing finance and mortgage lending systems.

In addition, the incoming Obama Administration worked with Congress to pass a \$787 billion economic stimulus bill (the “Recovery Act”)²⁶, providing direct spending for a range of federal spending initiatives, including infrastructure and revenue sharing initiatives as well as tax reductions. This was a traditional supplemental appropriations and tax law changes bill, with outlay impacts of \$120.1 billion, \$219.3 billion and \$126.2 billion in fiscal years 2009, 2010 and 2011 respectively. Total federal outlays surged during those years from \$3 trillion in 2009 to \$3.6 trillion in 2010 and again in 2011.

Further, the Federal Reserve initiated a massive program of purchases of government securities in an effort to keep interest rates low for the longer as well as short term. Both the Federal Reserve and the Treasury also purchased the debt issuances of the housing GSEs. Again, such purchases were reflected in the budget according to the status of the two agencies, with only the Treasury purchases recorded as budget outlays.²⁷

While most of these efforts might be classified more in the category of countercyclical or economic stimulus spending, rather than emergency response spending, they were all undertaken in an atmosphere of an emergency response to an extraordinary economic downturn (the “Great Recession”) and the resulting severe financial distress then affecting many American households and businesses.

III. The Financial Crisis and the Federal Budget

Having recounted the chronology of federal interventions during and following the financial crisis, the following sections describe, first, how these affected the amounts paid through the federal budget and, second, how the crisis itself disrupted, bypassed, and altered the established budget process.

Budgetary impacts

As shown in table 2, total federal budget outlays surged and receipts declined over the course of the Great Recession. This was the result of many factors, including TARP outlays, outlays for the Recovery Act, unemployment insurance and other fiscal stabilization programs that are triggered when the U.S. economy goes into recession.

In addition, federal credit programs – direct loans and loan guarantees -- for housing, student loans and many other purposes experienced rapid growth over the course of the Great Recession and the slow, protracted recovery from that contraction.

²⁶ Subsequently revised by CBO to \$831 billion for the period 2009-19.

²⁷ Although neither OMB nor CBO recorded any figures in the budget for the many transactions undertaken by the Federal Reserve System, CBO did publish one analysis of (fair value) subsidy costs of the Federal Reserve’s actions that might have been scored in the budget. It estimated that value at \$21 billion, including the Maiden Lane loans and the Federal Reserve share of Treasury/TARP guarantee transactions. See Congressional Budget Office, “The Budgetary Impact and Subsidy Costs of the Federal Reserve’s Actions during the Financial Crisis”, May 2010. Also, the Federal Reserve’s “deposit of earnings” paid annually to the Treasury are routinely reflected in the federal budget. With the large increase in interest bearing securities it acquired, these earnings have soared in recent years, rising from \$34 billion in 2008 to \$92 billion in 2014.

On the other hand, consistent and straightforward measures of the amount of federal government resources used over the course of the federal government's emergency rescues of the banking, housing finance and auto industries are simply not available for many elements of assistance provided, making calculations of the aggregate value of this assistance impossible. Although there have been many accounts of the multi-pronged federal response to the financial crisis, there is no consensus as to how best to reflect its impact on the federal budget. As the preceding review of the crisis and federal government response should help to make clear, there are several reasons for this.

- Despite being put together in great haste; the rescue measures were extremely complex. They involved purchases of loan and equity instruments, exchanges of equity for warrants, grants, loans, loan guarantees and insurance. Assuring that they be accounted for on a consistent basis and reflected in the federal budget were not high priorities of the policy officials responsible for the rapidly evolving rescue actions.
- The federal agencies involved in the rescue actions were themselves not treated on a consistent basis in the federal budget even before the financial crisis:
 - Treasury is fully on budget and its credit transactions (e.g., the Air Transportation Stabilization Program and the Community Development Financial Institutions Fund) are scored under the rules established by the Credit Reform Act of 1990.²⁸
 - The Federal Deposit Insurance Corporation is on budget, but its major insurance program is treated on a cash basis.
 - The Federal Reserve Board of Governors and the Federal Reserve Bank of New York are off budget, with the only transaction accounted for in the federal budget being the deposit of the earnings of the System, which are recorded as receipts to the Treasury.
- Even when it is agreed that a credit program should be scored under the rules of the FCRA, there continues to be debate about the proper discount rate to use in discounting the cash flows of any credit program. Although it had been discussed for several years prior to the crisis, EESA was the first major instance for which an interest rate reflecting market risk, rather than simply the government's cost of borrowing, was applied in making budget calculations.
- Furthermore, the Federal Reserve, a dominant player in the financial rescues, particularly at the critical early stages, is the nation's central bank. Unlike any other federal agency, the Federal Reserve finances its transactions, including purchases of securities of the GSEs, through the creation of money and not tax receipts or new issuances of Treasury debt.²⁹

Of course some elements of the emergency spending undertaken during the financial crisis were accounted for in the federal budget using traditional budget scoring procedures:

- Transactions of Treasury's Troubled Asset Relief Program, including equity purchases, direct loans and loan guarantees, were recorded in the federal budget as outlays from credit programs using the procedures of the Federal Credit Reform Act but modified to calculate net present values using a discount rate that includes a market risk factor (the "fair value" approach).³⁰

²⁸ The Credit Reform Act of 1990 requires that federal direct loan and loan guarantee programs be recorded in the budget on an accrual accounting basis with a subsidy estimate – reflecting the discounted present value of all relevant cash flow projections – reflected in the initial year of the credit transaction.

²⁹ The Consumer Financial Protection Board was created in the Dodd-Frank Act of 2010. Although it is technically an office within the Federal Reserve Board of Governors, it is fully accounted for in the federal budget.

³⁰ The fact that equity purchases were recorded as credit transactions is itself highly unusual. In the 2010 President's Budget, OMB cited EESA Section 123, which specifies that TARP transactions were to be recorded under FCRA using a discount rate reflecting market risk, as the authority for this treatment. By comparison, OMB noted that TARP outlays in support of HAMP involved the purchase of financial instruments "which have no provision for repayment" and therefore were not being treated as credit transactions.

- The TARP housing foreclosure mitigation programs were fully on budget and were effectively grant programs scored as traditional outlays.
- In the case of the rescue of the housing GSEs, direct spending to acquire stock in two failing financial institutions was reflected as federal outlays in the budget.
- Surges in outlays resulting from FDIC's bank rescues and closures were reflected in the budget as cash transactions using the agency's deposit insurance fund.

Other pieces of the financial crisis response, however, were not clearly reflected in the budget; indeed, in several cases their impact was not recorded at all:

- The Federal Reserve's actions in supporting the purchase of Bear Stearns by JPMorgan Chase, and in particular its loan to a special purpose entity (Maiden Lane I) it created to manage the worst of the Bear Stearns assets, were not recorded in the budget.
- Likewise, the Federal Reserve's actions in extending emergency financing to AIG, and in creating subsequent special purpose entities to manage troubled assets of the AIG (Maiden Lanes II and III) were not reflected in the budget.
- Treasury also acquired stock in AIG as a byproduct of its rescue by the off-budget Federal Reserve, but no budget outlays were recorded for the value of the assets acquired.
- FDIC's extraordinary action to guarantee the liabilities of much of the banking system was not measured and its value as federal credit support was not recorded in the budget; only the net "profits" to the agency's accounts were reflected and these were scored after the fact. By comparison, the surge in activity under HUD's FHA mortgage insurance program, as well as reestimates of losses on earlier books of FHA business affected by the crisis, continued to be treated as loan guarantee activity under the FCRA. Both these budget treatments were consistent with budget scorekeeping practices that predated the financial crisis, but the dramatic increase in scale of the activity served to underscore this anomaly.
- Treasury's money market guarantee program, although effectively a massive loan guarantee program, was also not measured or scored in the budget; likewise, with no guarantee claims, the budget reflected only the receipts or "profits" it produced.

As summarized in Table 1 above, the main elements of the government's transactions undertaken during the financial crisis were estimated – both at the time and as viewed today – to be substantial. But these estimates cannot be taken at face value. For example, despite being referred to as a \$700 billion federal government "bail out" of Wall Street and the banking industry, the most recent budget impact figures for the net subsidy cost of TARP (as noted above) are \$30 billion (CBO) to \$34.5 billion (OMB).³¹ TARP made a \$27 billion profit on its assistance to banks and the financial markets, lost \$15 billion in assistance to AIG³², lost \$12 billion in the course of rescuing the auto industry and is expected to record a \$30 billion outlay for its mortgage assistance programs, which were really grants for financial assistance, not emergency rescue loans or temporary asset purchases. But, the official measures of the budget impact of the government's rescue of the financial system are highly inadequate in terms of the complete picture of taxpayer resources. The official records show the biggest outlay impacts were the implementation of TARP and the rescue of the two housing GSEs; traditional bank failure costs also produced significant

³¹ Congressional Budget Office, "Report on the Troubled Asset Relief Program – March 2016"; \$30 billion is a credit subsidy estimate using "fair value" interest rates; Office of Management and Budget, Analytical Perspectives, 2017, Chapter 21, "Budgetary Effects of the Troubled Asset Relief Program", page 336. \$34.5 billion includes interest on reestimates; programmatic impact is estimated at \$53.2 billion.

³² Treasury made \$18 billion on the sale of (non-TARP) stock received in conjunction with the FRBNY's initial assistance to AIG. Hence, the overall federal rescue of AIG resulted in a \$3 billion net profit.

outlay increases.³³ Other large resource commitments of the Treasury Department, FDIC and, in particular, of the Federal Reserve System are not included in the picture.

Finally, we need to remember that whatever measures we use to estimate the impact of the financial crisis on the federal budget, such measures are relative to a conventional budget baseline, not against the catastrophic scenario that may well have been the alternative to the actions actually undertaken.

The rescue of the American banking and financial system as well as two major auto makers was a major event in recent U.S. economic history. Yet as we have seen, the official records of the federal government tell only a part of the story. Moreover, the latest estimates suggest the federal government made, and continues to make, a profitable return on its investment in banks and the housing GSEs. This should not be seen in retrospect as an indication that no help was needed, given that at the height of the crisis, only the government had the resources to rescue the financial system and prevent Americans from experiencing the harsh consequences of a financial panic, widespread runs on banks and other repositories of savings and investments and a potentially much greater contraction in economic activity.

How the budget was used, abused, and altered by the financial crisis

The federal government's response to the crisis prevented a sequence of adverse events and was successful in stabilizing the system and restoring growth. But as the Congressional Oversight Panel, former secretary Geithner and others have acknowledged, one of the consequences of the hasty and complicated actions that the government took to prevent the crisis from spreading was that the American people did not then and still do not now understand both the need for the actions taken and the actual details of those actions. The lack of a clear picture of the financial resources that the government deployed to combat the crisis is one critical aspect of the larger failing to explain the government's actions in preventing a greater crisis. Treasury's securing of TARP funds through passage of authorizing legislation (EESA) did engage Congress in the rescue efforts, but only after a number of significant transactions had been completed by the Federal Reserve and Treasury. That legislation was passed at a time when market turmoil was at its peak and there was no opportunity for congressional deliberation, particularly at the committee level, about what was being authorized or how it might be used. While the immediate crisis in the financial markets served to bring great pressure upon Congress to act and passage did stem the free fall in the financial markets, the very expedited process may also have resulted in considerable misunderstanding after the fact of the reasons for federal intervention and the need to make available extraordinary amounts of government resources to rescue major private firms.

From a budget process perspective, perhaps the most salient aspect of the financial crisis was the fact that no overall or systematic set of previously prescribed rules and procedures was actually followed. Even when congressional action occurred, the emergency authority Congress provided was utilized in a manner different from congressional expectations.

Except for the Recovery Act, there was no use of the "regular order" process for annual appropriations nor even of the supplemental appropriations process typically invoked in response to natural disasters or national emergencies such as in the aftermath of the September 11, 2001 terrorist attacks. Instead, funds needed to execute the rescue actions were obtained using such sources as the extraordinary monetary powers of the Federal Reserve and a highly creative interpretation of a decades old statute by the Treasury Department. FHA and the FDIC made aggressive use of their existing authorities, but without prior congressional approval of some of these actions, particularly the massive FDIC TLGP initiative.

³³ The deposit of earnings of the Federal Reserve also surged as a result of the financial crisis and the aggressive monetary policy actions the U.S. central bank has taken (known as "quantitative easing"). CBO estimated the fair value subsidy of the Federal Reserve's actions to stabilize financial markets at \$21 billion. See footnote 27, *supra*.

When Congress did act, it provided direct funding authority not subject to appropriations. The terms of the legislation gave Treasury considerable discretion as to if, when and how to rescue major institutions under the authority of the HERA and EESA legislation. Indeed, Congress granted Treasury the authority to rescue Fannie Mae and Freddie Mac with the understanding that it was extraordinary authority unlikely ever to be used. But six weeks later, it was used in an unprecedented rescue of two of the largest financial institutions in the country. Under EESA, Congress provided Treasury with authority to rescue the banking system with the expectation that rescue action would take the form of the purchase of securities whose value had plummeted, but the Department proceeded to utilize that authority mostly to purchase stock in a few very large institutions.

ESTIMATING MEASURES

Such measures are relative to a conventional budget baseline, not against the catastrophic scenario that may well have been the alternative to the actions actually undertaken.

Further, several of the rescue transactions were basically identical in their execution and practical effect yet were treated in different ways with respect to the federal budget. The extension of a major

loan guarantee to Citibank and the commitment to do so for Bank of America was led by Treasury using TARP funds. The value of the TARP portion of the support provided through such large guarantees, which was the major source of exposure for federal taxpayers, was scored in the budget as a credit transaction under FCRA procedures but at a market interest rate. Additional commitments provided by the FDIC and the Federal Reserve resulted in no budget impact at the time of the commitments but for different reasons, i.e., there were no cash outlays made by FDIC under the program and, even if there had been cash disbursed by the Federal Reserve, it would not have been recorded in the budget given the Federal Reserve's off-budget status.

Likewise, the case of AIG is particularly confounding in terms of budget process and consistency in the treatment of financial rescue transactions. The Federal Reserve effectively purchased bad loans of AIG using special purchase vehicles (Maiden Lanes II and III) by asserting broad emergency lending authority, but there was no statutory limitation on such purchases and no recorded impact on the federal budget. When the Treasury used TARP funds to purchase similar securities from AIG, such transactions were recorded in the budget as part of TARP spending (using credit scoring rules) and were limited to the portion of the \$700 billion in total TARP spending authority not otherwise committed.

On a more technical level, the rescues of Fannie Mae and Freddie Mac were scored by CBO under FCRA rules using a private market ("fair value") interest rate while OMB recorded these transactions on a regular cash outlay basis. And as noted above, purchases of the housing GSEs' debt were scored as outlays by Treasury, but not reflected in the budget when undertaken by the Federal Reserve.

The fact that virtually identical transactions were undertaken by both Treasury and the Federal Reserve raises the further difficult issue of how to distinguish between fiscal and monetary policy. The creation of money and the assurance of liquidity in the banking system are the key roles of a central bank but do not entail the real consumption of resources in support of governmental functions. But arguably what the Federal Reserve had been doing beginning with the wind-down of Bear Stearns amounted to the purchase of financial assets by the government, a transaction best classified as a fiscal activity of government. When Secretary Paulson and Chairman Bernanke went to Congress to get appropriated funds to pay for further rescues of financial institutions, they implicitly acknowledged that the line between monetary and fiscal policy had been crossed.

As we have seen, federal officials used a wide range of tools and undertook financing approaches that were highly creative and largely unprecedented. The one routine federal budget tool not employed was the use of the standard budget request and discretionary supplemental appropriation procedure typically followed in response to national emergencies. Instead, under highly stressful conditions, federal officials cobbled together a number of unusual and unorthodox approaches to obtain the financial support

needed, often on a crash, ad hoc basis and with virtually no attention to the desirability of consistent measurement and disclosure of the value of the resources expended.

In the aftermath of the financial crisis, Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act in June 2010. That Act puts strict limits on the ability of the Federal Reserve to exercise emergency lending authority. It also provides the FDIC with the authority to take over and wind down a systemically significant financial institution and to tax the industry to come up with the necessary resources, at least after the fact. Exercise of such authority appears to be subject to the rules otherwise governing FDIC transactions and therefore would be fully recorded on a cash basis in the budget.

IV. Alternatives to Improve Budgeting for and Reducing the Costs of Future Emergencies

The preceding analysis puts us in a position to consider lessons learned about how such crises affect the federal budget process and what reforms might be considered – both to mitigate such effects and possibly to reduce the cost of future emergencies.

In his 2011 book *Thinking Fast and Slow*, Daniel Kahneman discusses “[t]he difficulties of statistical thinking” and the “puzzling limitation” of the human mind: “our excessive confidence in what we believe we know, and our apparent inability to acknowledge the full extent of our ignorance and the uncertainty of the world we live in. We are prone to overestimate how much we understand about the world and to underestimate the role of chance in events.”³⁴ Even if policymakers themselves recognize this human failing, it is understandably difficult to persuade the electorate to engage in preparations, including setting aside funding in advance for occasional large or catastrophic events, particularly if the resources are constrained by funding caps that compel trading off possible emergency spending against other worthy and more immediate claims for budget resources. For the government’s budget process, such emergencies are asymmetrical: our bias is to underestimate the likelihood of emergencies, not to overestimate them.

Yet clearly we understand that disasters will happen. The impact – financial and otherwise -- of some emergencies can be minimized by *ex ante* policy measures. Building codes in Japan, for example, include rigorous earthquake protection measures. Banks can build capital as a contingent reserve against unexpected losses. Likewise, the private sector offers insurance and reinsurance to spread risk across all members of society and assure a surge in resource needs can be met in the event of large natural disaster. But as the financial crisis demonstrated, ultimately the government is the insurer of last resort in response to unanticipated emergencies.

Government policy can also promote many types of salutary actions to reduce or even prevent unanticipated losses. The federal government operates a program of flood insurance, for example, and states have been involved in creating hurricane and earthquake reinsurance programs. Regulatory action can also restrict development in flood plains and areas most vulnerable to hurricanes, earthquakes and wild fires. Financial regulators can limit risk taking by federally insured institutions and stiffen the required amounts of capital such institutions must hold to handle unanticipated declines in the value of their assets. Ironically, financial derivatives and insurance contracts – even though they contributed to the recent financial crisis -- might be used to mitigate the impact of certain disasters on the federal budget. This would deepen the role of the private insurance and financial markets by essentially increasing the right of disaster victims to call on the resources of private investors in the event of a major national emergency.

Moral hazard, behavioral responses to the perception that risk has been shifted to another party, poses another challenge to the provision of emergency response resources, whether by the private insurance industry or the government. Homeowners should not build in flood plains even if flood insurance is generally available. In the context of the financial crisis this issue was often encapsulated with the phrase “too big to fail”, meaning that managers of financial institutions believed they could grow very large and

³⁴ Daniel Kahneman, *Thinking Fast and Slow* (Farrar, Straus and Giroux, 2011), pages 13-14.

take excessive risks knowing that they would ultimately be rescued by the government in the event of a severe financial crisis such as occurred in 2008.

Yet even with the best efforts to prepare for emergencies, encourage private sector risk sharing and insurance, and minimize moral hazard, major emergencies will arise for which there will be a demand for government funding to confront and reduce or eliminate the source of the catastrophic event and pay for the cost of its aftermath. The challenge to government budget analysts and policy makers is to anticipate such impacts as much as possible, ensure a systematic process for budgeting for emergencies that consistently accounts for the resources consumed in response, and create proper incentives to minimize their impact going forward.

The federal government's response to the financial crisis in 2007-2009 is but one example of a federal response to a major national emergency, and it was perhaps an extreme case. More traditional budget rules and procedures have generally applied and continue to be used in cases such as natural disasters. The budget for the Federal Emergency Management Agency (FEMA) in the Department of Homeland Security, by comparison, has traditionally included some amount for anticipated disaster spending in its budget request. In recent years, Congress has provided an average \$7 billion in annual appropriations to the disaster relief fund, an amount that is calculated as the average amount needed for disasters over the prior ten years excluding extraordinary disasters. FEMA has also provided hundreds of millions of dollars in loans (e.g., \$367 million in 2013) to local governments whose revenue bases have been reduced as a result of disaster, even though the budget projects a loan level of only \$50 million. The 93 percent "subsidy rate" recorded in the budget for these loans indicates that most effectively become grants when they are inevitably forgiven by the federal government. SBA also makes loans to individuals and businesses following disaster declarations – currently averaging \$1.1 billion per year.

Major supplemental appropriations legislation that includes added amounts for the budgets of multiple federal agencies has typically followed major natural disasters, as in the case of Super Storm Sandy in 2012 and Hurricane Katrina in 2005. Aid after a disaster is often designated as emergency spending, not subject to such standard budgetary rules as the annual limits placed on overall discretionary spending or the amounts allocated to each appropriations subcommittee.

The financial crisis and the federal response was atypical in the degree to which the "regular order" of the budget process was superseded and, indeed, completely disregarded in some cases. But this particular case serves to underscore the disruptive impact that unanticipated emergencies can have on the budget controls and process. Yet even traditional practices in response to natural disasters and other emergencies have involved evasion of budget rules and procedures established to deal with emergencies.

Although emergencies that require a federal response can originate from many sectors of the U.S. economy and geography they all pose fundamental challenges to a deliberative and disciplined federal budget process. By the same token, recent experience with abuse of the emergency designation procedure illustrates how difficult it can be to accommodate emergency spending within the system of budget restraints aimed at imposing discipline on the process. In August 2011, Congress passed the Budget Control Act of 2011, for example, which included annual caps on discretionary spending through FY 2021. Less than 18 months later, in the Disaster Relief Appropriations Act, 2013, which provided \$50.5 billion for recovery from Super Storm Sandy, the Congress designated \$41.6 billion as emergency spending not subject to the caps.

Experience suggests three broad categories of reforms be considered.

Budget scope and scoring

LAST RESORT

As the financial crisis demonstrated, ultimately the government is the insurer of last resort in response to unanticipated emergencies

As the financial crisis demonstrated, emergencies can bring to the fore long festering issues of budget treatment and accountability. Fannie Mae was “privatized” in 1968, taking it outside the budget, and Freddie Mac was never included in the federal budget. The two GSEs actively resisted every initiative or proposal to include in the federal budget any measures of the financial exposure for U.S. taxpayers that resulted from the implicit federal backing of these two enormous and risky financial institutions.³⁵

The Federal Reserve was the first federal agency to bail out a large financial institution in 2008, and it continued to provide substantial financial support to individual institutions during the entire course of the crisis. Some of its rescue actions operated in parallel with the Treasury Department; yet while Treasury’s actions were scored in the budget as part of the government’s fiscal transactions, the Federal Reserve’s loans and asset purchases were not recorded in the budget and were, in effect, treated as part of an expanded scope of the monetary authority of the U.S. central bank. Defining certain actions of the Federal Reserve as fiscal budget transactions would at least allow for consistent measurement of such federal government actions.

When the Federal Credit Reform Act of 1990 was enacted, policymakers considered but rejected proposals to include insurance programs within the scope of those reforms. Ironically, this reluctance was fed in part by fears that the FDIC might need to take major bank rescue actions, as the savings and loan crisis and the collapse of real estate lending in some parts of the country meant that potential large bank failures and FDIC outlays were yet to come. As we have seen, during the 2008-09 financial crisis FDIC not only exercised its authority to rescue or liquidate several major banks but also undertook a major expansion of the scope of its insurance of banks’ liabilities (i.e., their sources of funding), all with minimal accountability or transparency through the federal budget.

Treasury’s actions to create a major new loan guarantee program “on the fly” in September 2008 were not scored under FCRA rules, and there appears to have been no explanation offered for this lapse in budget treatment.

At a minimum, these actions by federal authorities demonstrate the need to expand the scope of the federal budget to include all fiscal transactions of the government, even when they are undertaken by the Federal Reserve. Government-sponsored enterprises represent another critical abuse of the federal budget as a source of accountability to U.S. citizens and their elected leaders. Budgeting for federal insurance programs using a methodology similar to that used for federal credit programs has been considered over the years but never adopted; perhaps the time is now ripe for reconsideration of the decision not to include insurance programs in the FCRA.

Of course needed improvements in budget scope and scoring practices as highlighted by the financial crisis will be very difficult to achieve. Inclusion in the federal budget is a slippery slope and has multiple implications both for the agencies themselves and for policymakers’ incentives. Such steps would almost certainly expand the perceived amount of federal spending and official size of the budget. They would also raise issues of control over spending, including administrative spending, and the potential applicability of personnel and procurement rules to activities of agencies when they are officially recognized as government activities and accounted for in the federal budget.

In short, the failure to resolve many of the budget scope and scoring issues raised in the financial crisis and elsewhere has not been for lack of trying. Rather the problem often arises from fundamental questions of the legal status and federal taxpayer support for the activity or agency in question.

Budgeting in advance for ‘expected costs’ of future emergencies

Another *ex ante* budget process reform would be to build on the current practice whereby Congress funds an amount for expected costs of natural disasters in annual appropriations for FEMA’s Disaster Relief

³⁵ See for example, Eric Lichtblau, “Gingrich’s Deep Ties to Fannie Mae and Freddie Mac”, *New York Times*, February 3, 2012. (online at <http://www.nytimes.com/2012/02/04/us/politics/gingrichs-deep-ties-to-fannie-mae-and-freddie-mac.html>)

Fund. The procedure was most recently codified in the Budget Control Act (BCA) of 2011, which imposed caps on discretionary spending through FY 2021. These caps are adjusted for qualifying Stafford Act disaster relief spending. The amount of the adjustment (e.g., \$7 billion in the President's 2017 Budget) is calculated as the rolling average of the amounts of such qualifying disaster relief spending, excluding the highest and lowest years, provided in the most recent 10 years.

While the current process has assured some recognition of probable natural disaster emergency spending in the budget totals, it has been less successful in imposing discipline on the amount of annual appropriations for natural disasters. This was demonstrated in 2013 when Super Storm Sandy struck the East Coast in October of that year. As noted, Congress subsequently passed the Disaster Relief Act of 2013 providing \$50.5 billion in supplemental appropriations, of which \$41.6 billion was designated emergency spending and outside the BCA spending caps.

In 2010, both the Report of the National Commission on Fiscal Responsibility and Reform (Simpson-Bowles) and the Peterson-Pew Commission on Budget Reform addressed the issue of budgeting for emergencies. The Simpson-Bowles Report effectively endorsed the current practice (as subsequently adopted in the BCA) of appropriating an amount equal to a 10-year rolling average (excluding high and low years) for disaster relief. It recommended that amounts appropriated in excess of the allowance for disaster relief be subject to offsetting spending reductions or subject to a 60-vote point of order in the Senate.

Like Simpson-Bowles, the Peterson-Pew Commission called for strict adherence to rules defining what constitutes emergency spending. Peterson-Pew, however, suggests a much larger figure be calculated for the expected annual cost of emergencies that would include all prior year emergency spending amounts, not just disaster spending. Rather than requiring emergency spending in excess of this figure be offset by spending reductions, Peterson-Pew recommends that the annual average emergency spending amount be treated as mandatory spending and outlayed to an off-budget reserve account, similar to the financing account used as part of the FCRA procedure.³⁶ Actual emergency spending would then be financed by drawing on this reserve account under strict rules to avoid the temptation to treat this fund as "free money" available for spending for any purpose with no budget restrictions. In years in which emergency spending exceeded the balance in the reserve fund, the fund would be able to draw on permanent indefinite (mandatory) authority, with the requirement that such advances from Treasury be repaid out of excess balances in years in which actual emergency needs are less than the average. Such a procedure would reduce the disruptive impact on the budget process of the need to pass emergency supplemental appropriations in the aftermath of emergencies. Rather, most emergency spending requirements would merely trigger a defined process whereby executive branch agencies draw on funds already appropriated to the reserve fund.

The Peterson-Pew recommendation thereby records a much larger expected emergency spending estimate in the budget on a prospective basis and minimizes the need for painful after-the-fact spending reductions elsewhere in the budget in the immediate aftermath of a major disaster. The recommendation also provides incentives to Congress to take actions that could reduce emergency spending such as hazard mitigation programs or increased capital requirements for financial institutions that are implicitly or explicitly backed by the federal government. Such legislative action could thereby address moral hazard problems with federal disaster relief or bailouts of financial firms while at the same time achieving scoreable savings in the budget process; likewise, budget consequences could be meaningfully measured and imposed on legislative actions that increase the probable cost of natural disaster recovery operations or increase the government's exposure to losses in the financial markets.

A more moderate formulation of the Peterson-Pew recommendation would be to have the Congress appropriate the annual average for all emergency spending but not establish an off-budget reserve account; rather, outlays would be recorded when funds are actually drawn from the (on-budget) reserve. As with the current procedure for the DRF, the discretionary caps would be adjusted to accommodate this

³⁶ See "Budgeting for Emergencies", December 13, 2011, a follow up paper issued jointly by the Peterson Foundation, the Pew Charitable Trusts and the Committee for a Responsible Budget.

spending without requiring offsets. This would at least force greater recognition of taxpayer exposure to emergency spending in the budget. Again there would need to be strict rules on withdrawals from this reserve account to minimize the natural incentive to use this account as a source of funding for other uses desired by the President and Congress.

A further and very modest form of this proposal would be merely to require OMB and CBO to include a 10-year average of all emergency spending and the amounts financed outside the caps in their respective budget estimates publications. This could have the effect of publicly acknowledging the degree to which the formal federal budget understates actual taxpayer exposure. And care would have to be taken not to have this amount interpreted by States and localities, for example, to mean that the federal government has in effect set aside the funding for a natural disaster in their area so that they need not allocate funds themselves or invest in mitigation actions.

Budgeting during and after an emergency

As we have seen, in many cases federal officials avoided any recognition of taxpayer financial exposure from their financial rescue actions during the crisis. If an emergency reserve fund were established, there would still be the issue of what constitutes an emergency. As acknowledged in both the Simpson-Bowles and Peterson-Pew reports, strict adherence to an agreed upon definition of emergency spending would be critical to the success of any reform.

Even in extreme emergency situations such as those that arose in September 2008, federal policymakers can face difficulty in responding to crises in a rapid fashion. Congress at first rejected the proposed TARP legislation while the financial markets were seizing up amid a classic modern day version of a severe bank run. Hence the challenge to any reform is to balance the need for a rapid response and a surge in available resources with the assurance that agencies nevertheless adhere to fundamental budget concepts and rules, particularly with respect to tracking and disclosing the financial details of the transactions being undertaken.

One partial solution may be to enhance oversight within the Executive Branch. Assuring the integrity of federal financing and the enforcement of budget rules could be aided by strengthening the budget execution oversight process using a procedure such as the apportionment authority exercised by OMB. Originally enacted in 1905 to prevent agencies from overspending, this authority was delegated to OMB's

REFORM CHALLENGES

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predecessor, the Bureau of the Budget in 1933. Although curtailed in the 1974 Congressional Budget and Impoundment Control Act, the apportionment process provides a means for executive branch leaders to review agencies' basis for making legal spending obligations and their spending plans prior to their taking contractual or legal effect. This was a source of some contention between OMB and the Federal Home Loan Bank Board during the S&L crisis; and OMB's authority to oversee commitments by all financial regulators such as the FDIC was eliminated in subsequent legislation as a result. The financial crisis once again raised the question of the legal authority for some of the commitments of taxpayer resources made by federal policymakers as that crisis evolved.

Creation and use of a reserve fund as discussed above would help to minimize the need for immediate supplemental appropriations to deal with a major emergency spending requirement, especially if it is done on a mandatory basis with ongoing adjustments to reflect actual amounts being spent over several years. If handled on a discretionary basis subject to spending limitation caps and sequestration, then periodic need for supplemental appropriations to respond to major emergencies would almost certainly continue to be needed even if a fairly large reserve fund is supported in annual appropriations. This, in turn, will mean recurring debates over whether to invoke the emergency exemption from the limitations on discretionary spending in the BCA. Such a debate occurred during consideration of the 2013 supplemental

appropriations bill when Congress seriously debated the possibility of requiring the amounts in the bill be offset by discretionary spending reductions.

An interesting financial regulatory reform passed by Congress in the Dodd-Frank Act is the requirement that after the event the FDIC recover from the industry the cost of “resolving” or liquidating a large systemically significant financial institution (“orderly liquidation authority”) through fees imposed on other large financial institutions. This raises the intriguing prospect of imposing similar industry, geographic or sector specific taxes on those people or firms who benefited from federal government’s emergency spending actions. Of course, many people may object to such action and, as we have seen, FEMA’s support for recovery costs for municipalities, although initially couched as “loans” usually amounts to *de facto* grants to local governments. On the other hand, SBA’s disaster loan program does in fact work reasonably well as a mechanism to assure repayment of federal disaster assistance funds. And, federal officials did require banks receiving taxpayer funds provide Treasury with stock warrants in exchange for receiving federal investments, thereby giving the taxpayer a share of the value of the institutions’ recovery from the depths of the market panic. Hence, although policymakers may often have little appetite for recovering costs from victims of natural disasters, such an option should not be entirely ruled out, at least for other federal emergency responses.

V. Conclusion: The Crisis Next Time

In the wake of the financial crisis Congress passed Dodd-Frank Act to strengthen financial regulation and curtail the ability of the Federal Reserve to rescue individual failing institutions. That Act also provides regulators the authority to wind down a large failing institution before it can ignite a wider crisis and need for emergency spending; and it requires the industry to pay for such intervention, albeit over a period of many years. The crisis and what followed will not soon be forgotten by a large portion of the American public, especially in light of the job losses, declines in income and asset values, and protracted economic recovery that followed. Reforms to the federal budget process that increase accountability and transparency for disaster response and recovery, and emergency spending more broadly, may therefore be timely. At a minimum the financial crisis underscored the need to develop a fuller and more consistent accounting in the budget for all agencies and programs to which federal taxpayers are exposed. It also underscored the need to strengthen the requirements for consistent measurement of government resources being expended in the course of emergencies and for prior senior policy official review and approval of such resource usage. These would be useful first steps on the path to reforming budgeting for emergencies.

Reforms that recognize the federal government’s exposure to likely demands for federal resources can also serve to reduce long-term federal spending by calling public attention to such potential liabilities well in advance of emergency circumstances. This may in turn provide incentives to policymakers to take actions that would mitigate or even eliminate the cost of an actual emergency to society overall (e.g., through fuller development of private insurance markets) and to federal taxpayers in particular. But making potential costs of emergencies involving particular institutions, economic sectors or regions of the country explicit in the budget can likewise raise questions concerning the degree to which the government is acknowledging its ultimate responsibility for such costs. It may also implicate the governmental status of agencies and programs whose supporters find it preferable to evade such clarification. As with the housing GSEs, the political process may be severely strained to resolve such issues on an *ex ante* basis.

No doubt there will continue to be unresolved issues about the degree to which the government may ultimately rescue certain individuals or firms after emergencies arise. But experience in recent decades provides ample evidence that the federal government will make substantial expenditures in response to a wide range of emergencies. Although we may not foresee all the sources of future disasters, policymakers can take reasonable steps today to reserve funds and acknowledge expected or probable costs in the budget as a routine part of the budget process.

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