



# Government Interventions in Response to Financial Turmoil

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## Summary

In August 2007, asset-backed securities, particularly those backed by subprime mortgages, suddenly became illiquid and fell sharply in value as an unprecedented housing boom turned to a housing bust. Financial firms eventually wrote down these losses, depleting their capital. Uncertainty about future losses on illiquid and complex assets led to some firms having reduced access to private liquidity, with the loss in liquidity being fatal in some cases. In September 2008, the financial crisis reached panic proportions, with some large financial firms failing or having the government step in to prevent their failure.

Initially, the government approach was largely an *ad hoc* one, attempting to address the problems at individual institutions on a case-by-case basis. The panic in September 2008 convinced policy makers that a more system-wide approach was needed, and Congress created the Troubled Asset Relief Program (TARP) in October 2008. In addition to TARP, the Federal Reserve (Fed) and Federal Deposit Insurance Corporation (FDIC) implemented broad lending and guarantee programs. Because the crisis had so many causes and symptoms, the response tackled a number of disparate problems, and can be broadly categorized into programs that (1) increased financial institutions' liquidity; (2) provided capital directly to financial institutions for them to recover from asset write-offs; (3) purchased illiquid assets from financial institutions in order to restore confidence in their balance sheets; (4) intervened in specific financial markets that had ceased to function smoothly; and (5) used public funds to prevent the failure of troubled institutions that were deemed "too big to fail" because of their systemic importance.

The primary goal of the various interventions was to end the financial panic and restore normalcy to financial markets. By this measure, the programs were arguably a success—financial markets are largely functioning again, although access to credit is still limited for many borrowers over a year later. The goal of intervening at zero cost to the taxpayers was never realistic, at least initially, or meaningful, since non-intervention would likely have led to a much more costly loss of economic output that indirectly would have worsened the government's finances. Nevertheless, an important part of evaluating the government's performance is whether financial normalcy was restored at a minimum cost to the taxpayers.

Initial government outlays are a poor indicator of taxpayer exposure since outlays were used to acquire or guarantee income-earning debt or equity that can eventually be repaid or sold. For broadly available facilities accessed by financially sound institutions, the risk of default became relatively minor once financial normalcy was restored. At this point, many of the programs that were introduced have either expired or are already shrinking. For these programs, one can estimate with relative confidence approximately how much the programs will ultimately cost (or generate income for) the taxpayers. For a few programs that are still growing in size, and for assistance to firms that are still relying on government support to function, estimates of ultimate gains or losses are more uncertain. The Congressional Budget Office and Office of Management and Budget estimate that most of the government's expected losses are concentrated in a few "too big to fail" firms, such as American International Group (AIG), Fannie Mae, Freddie Mac, and the domestic automakers. Other programs show small expected losses or gains.

This report reviews new programs introduced and other actions taken by the Treasury, Federal Reserve, and Federal Deposit Insurance Corporation. It does not cover longstanding programs such as the Fed's discount window and FDIC receivership of failed banks.

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## Introduction

In August 2007, asset-backed securities, particularly those backed by subprime mortgages, suddenly became illiquid and fell sharply in value as an unprecedented housing boom turned to a housing bust. Losses in mortgage markets eventually spilled into other markets. Financial firms eventually wrote down many of these losses, depleting their capital. Uncertainty about future losses on illiquid and complex assets led to some firms having reduced access to private liquidity, with the loss in liquidity being in some cases fatal. Since 2007, the federal government has taken a number of extraordinary steps to address widespread disruption to the functioning of financial markets.

In September 2008, the crisis reached panic proportions. Fannie Mae and Freddie Mac, government-sponsored enterprises (GSEs) who supported a large proportion of the mortgage market, were taken into government conservatorship. Lehman Brothers, a major investment bank, declared bankruptcy. The government acquired most of the equity in American International Group (AIG), one of the world's largest insurers, in exchange for an emergency loan from the Federal Reserve (Fed). These firms were seen by many, either at the time or in hindsight, as “too big to fail” firms whose failure would lead to contagion that would cause financial problems for counterparties or would disrupt the smooth functioning of markets in which the firms operated. One example of such contagion was the failure of a large money market fund holding Lehman Brothers debt that caused a run on many such funds, including several whose assets were sound.

Initially, the government approach was largely an *ad hoc* one, attempting to address the problems at individual institutions on a case-by-case basis. The panic in September 2008 convinced policy makers that a more systemic approach was needed, and Congress enacted the Emergency Economic Stabilization Act (EESA)<sup>1</sup> to create the Troubled Asset Relief Program (TARP) in October 2008. In addition to TARP, the Federal Reserve and Federal Deposit Insurance Corporation (FDIC) implemented broad lending and guaranty programs. Because the crisis had so many causes and symptoms, the response tackled a number of disparate problems, and can be broadly categorized into programs that

- increased institutions' liquidity (access to cash and easily tradable assets), such as direct lending facilities by the Federal Reserve or the FDIC's Temporary Liquidity Guarantee Program;
- provided financial institutions with equity to rebuild their capital following asset write-downs, such as the Capital Purchase Program;
- purchased illiquid assets from financial institutions in order to restore confidence in their balance sheets in the eyes of investors, creditors, and counterparties, such as the Public-Private Partnership Investment Program;
- intervened in specific financial markets that had ceased to function smoothly, such as the Commercial Paper Funding Facility and the Term Asset-Backed Securities Lending Facility;

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<sup>1</sup> P.L. 110-343, 12 USC 5311 *et seq.*

- used public funds to prevent the failure of troubled institutions that were deemed “too big to fail” (TBTF) because of their systemic importance, such as AIG, Fannie Mae, and Freddie Mac.

One possible schematic for categorizing the programs discussed in this report into these categories is presented in **Table 1**.

**Table 1. Programs Introduced During the Financial Crisis**  
(by purpose)

Program	Institution Liquidity	Capital Injection	Illiquid Asset Purchase/Guarantee	Market Liquidity	TBTF Assistance
<b>Treasury</b>					
CPP <sup>a</sup>		X			X
US Automakers <sup>a</sup>	X	X			X
MMMF Guarantee				X	
<b>Federal Reserve</b>					
TAF	X				
TSLF	X				
PDCF	X				
TALF <sup>a</sup>			X	X	
CPFF/AMLF	X			X	
Liquidity Swaps	X				
<b>FDIC</b>					
TLGP	X				
<b>Joint Programs</b>					
PPIP <sup>a</sup>			X		
AIG <sup>a</sup>	X	X			X
GSEs	X	X		X	X
Citigroup <sup>a</sup>		X	X		X
Bank of America <sup>a</sup>		X	X		X

**Source:** CRS.

**Note:** See text below for details of these programs.

a. Program using TARP funds.

While many arguments could be made for one particular form of intervention or another, one could also take the position that the form of government support was not particularly important as long as it was done quickly and forcefully because what the financial system lacked in October 2008 was confidence, and any of several options might have restored confidence if it were credible. Some critics dispute that view, arguing that the panic eventually would have ended

without government intervention, and that some specific government missteps exacerbated the panic.<sup>2</sup>

By the end of January 2010, many of the programs that were introduced had either expired or are shrinking. Assuming financial conditions continue to improve, one can estimate with relative confidence approximately how much these programs will ultimately cost (or generate income for) the taxpayers. For a few programs that are still growing in size, and for assistance to firms that are still relying on government support to function, estimates of ultimate gains or losses are more uncertain.

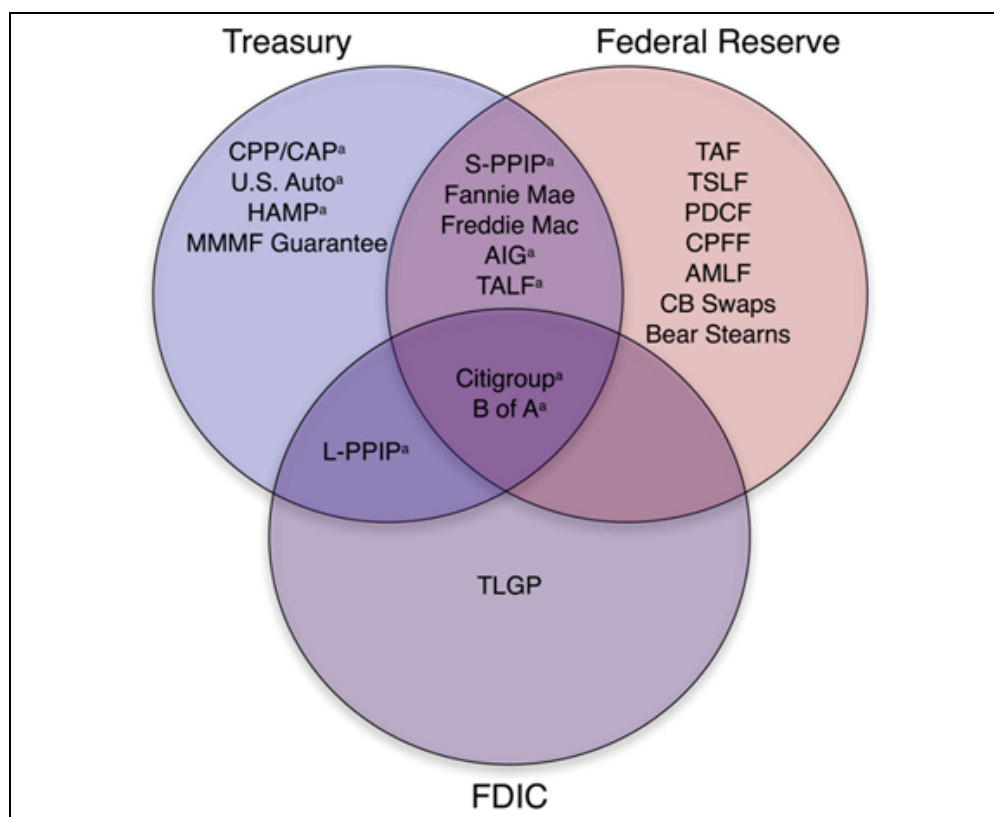
Congress has oversight responsibilities for the government's crisis response, through existing oversight committees and newly created entities such as a Special Inspector General for the TARP (SIGTARP), a Congressional Oversight Panel, and a Financial Crisis Inquiry Commission. Congress is also interested in an accurate accounting of the costs of the crisis in the interest of determining how to cover its costs in the long run. For example, Section 134 of EESA requires the President to propose a method for recouping TARP costs. On January 14, 2010, President Obama proposed a "Financial Crisis Responsibility Fee" to be levied on the debt of certain large financial firms to cover the costs of TARP.

This report reviews the costs of new programs introduced, and other actions taken, by the Treasury, Federal Reserve, and Federal Deposit Insurance Corporation. **Figure 1** presents the programs discussed in this report by organization, with programs in the overlapping circles denoting joint programs. It does not cover longstanding programs such as the Federal Reserve's discount window, mortgages guaranteed and securitized by the Federal Housing Administration and Ginnie Mae, respectively, or FDIC receivership of failed banks.

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<sup>2</sup> See, for example, Taylor, John, *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*, Stanford: Hoover Institution, 2009.

Figure I. Financial Crisis Programs by Organization



Source: CRS.

Notes: See text below for details of these programs.

a. Program using TARP funds.

## Estimating the Costs of Government Interventions

The primary goal of the various interventions was to end the financial panic and restore normalcy to financial markets. By this measure, the programs were arguably a success—financial markets are largely functioning again, although access to credit is still limited for many borrowers over a year later. The goal of intervening at zero cost to the taxpayers was never realistic, at least initially, or meaningful, since non-intervention would likely have led to a much more costly loss of economic output that indirectly would have worsened the government’s finances. Nevertheless, an important part of evaluating the government’s performance is whether financial normalcy was restored at a minimum cost to the taxpayers.

One can distinguish in the abstract between funds provided to solvent companies and those provided to insolvent companies. For insolvent firms with negative net worth at the time of intervention, the government’s chances of fully recouping losses are low.<sup>3</sup> But for solvent firms, if properly implemented, it should be possible to provide funds through widely available lending

<sup>3</sup> As discussed above, providing funds to insolvent firms could still be justified if preventing those firms from failing is the only way to avoid the panic from spreading further.



mechanisms or “lending facilities” at a low ultimate cost to the taxpayers. In a panic, investors typically refuse to provide funds to firms because they are unable to distinguish between healthy and unhealthy firms, and so they err on the side of caution and do not provide any funds. For those private investors who perceive profitable opportunities to lend or invest, not enough liquidity is available to do so. In this situation, the government can theoretically provide those funds to healthy firms at what would normally be a profitable market rate of return. In practice, the challenge is that the government is arguably no more able to accurately distinguish between healthy firms and unhealthy firms than private individuals are, so some widely available lending facilities are likely to be accessed by firms that will ultimately prove not to be solvent, and this is the most likely source of long-term cost for a widely available facility. The latest data bear this out—as shown in **Table 2**, most of the long-term cost of government interventions to date has come from assistance to AIG, Fannie Mae, Freddie Mac, Bear Stearns, and the U.S. automakers. None of the widely available facilities set up by the government are showing significant expected losses at present, and some may end up generating a profit. Of course, this is not evidence that taxpayers bore no risk for facilities currently making a profit—had general outcomes in financial markets proven worse or if they become worse in the future, losses would be larger. Estimates of expected losses for these programs made before the crisis had ended were much larger than expected losses at this point because actual financial conditions have improved.

**Table 2. Cost of TARP Programs and Assistance to GSEs**

(billions of dollars)

Program	CBO Estimate Gain(+)/Loss(-)	OMB Estimate Gain(+)/Loss(-)
<b>TARP</b>		
Capital Purchase Program	+3	-1
Targeted Investment Program (Total)	+3	+4
Citigroup	+2	n/a
Bank of America	+1	n/a
Asset Guarantee Program	0	+3
AIG	-9	-50
Auto Industry	-47	-31
TALF	-1	+1
PPIP	-3	0
HAMP <sup>a</sup>	-20	-49
TARP Funds Used in Future	-25	-3
<b>Total</b>	<b>-99</b>	<b>-127</b>
<b>Fannie Mae and Freddie Mac</b>		
Business to 2009	-291	n/a
Business for 2010-2020 <sup>b</sup>	-85	n/a
<b>Total<sup>b</sup></b>	<b>-376</b>	n/a

**Source:** Congressional Budget Office, *Budget and Economic Outlook*, January 2010; OMB, *Analytical Perspectives, FY2011 President’s Budget*, Table 4-7; February 2010; Congressional Budget Office, *CBO’s Budgetary Treatment of Fannie Mae and Freddie Mac*, January 2010.

**Notes:** All programs described in the text below. Estimates made according to the Federal Credit Reform Act adjusted for market risk. Total may not sum due to rounding.

- a. HAMP is considered a spending program with no potential financial gain.
- b. Summing of years not discounted for present value.

News sources have put the “potential cost to taxpayers,” “amount taxpayers are on the hook for,” and “taxpayer exposure” as a result of the financial crisis as high as \$23.7 trillion.<sup>4</sup> These totals are reached by calculating the maximum potential size of programs or using the total size of markets being assisted when the programs have no announced potential size. This method of calculation is problematic for several reasons. First, these amounts refer to potential government outlays with no indication as to whether outlays would ever reach the potential maximum, particularly for programs without announced maximums. In fact, outlays for most programs have turned out to be far smaller than their potential size.

Second, these totals typically refer to the cash outlay by the government to initially acquire the financial asset (whether it be a common stock, preferred share, or loan), but typically do not take into account the value of the asset that the government receives in exchange. These assets give the government legal claims on the future earnings of the company.<sup>5</sup> All of the government’s programs have generated income to the government in the form of dividends, fees, interest, or warrants,<sup>6</sup> and in exchange for all of its outlays, the government has received financial assets or loans that can be sold or repaid in the future. The true cost to the government of these programs is the difference in value between the initial outlay to acquire or guarantee the asset or make the loan, and the money recouped by the government from income payments and subsequent sale or repayment. To compare those costs, economists use present value calculations that reduce costs or income in the future relative to the present by a discount rate. Ultimately, the true cost to the government will be much smaller than the initial outlay, and if the income payments or the asset resale price is high enough, the government could ultimately make a profit on these outlays (i.e., the present value of revenues could exceed initial outlays).

Of course, the true cost of the government’s programs will not be known until they have been completely wound down. Most programs, including those that have been shrinking or are closed to new transactions, still have assets or loans outstanding. For some of these assets, the expected net cost of the program can be estimated using the current market value of the assets, since the current market value should reflect expectations of future gains or losses. When current market values are available, this report uses those values to calculate expected gains or losses. For other

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<sup>4</sup> See, for example, Dawn Kopecki and Catherine Dodge, “U.S. Rescue May Reach \$23.7 Trillion, Barofsky Says,” *Bloomberg News*, July 20, 2009, <http://www.bloomberg.com/apps/news?pid=20601087&sid=aY0tX8UysIaM>; “Potential Cost of U.S. Financial Bailout: Over \$8 Trillion,” *CNBC.com*, November 25, 2008, <http://www.cnbc.com/id/27912307>.

<sup>5</sup> The order of priority for those claims from first to last is generally debt, subordinated debt, preferred shares, and common stock or equity. Equity confers ownership, unlike debt. Preferred shares are a form of equity that incorporate some characteristics of debt. In the case of the preferred shares taken by TARP, they generally have fixed income payments (in the form of dividends), do not rise or fall in value with the value of the firm, and do not confer voting rights to the government over the firm’s corporate governance.

<sup>6</sup> Warrants through the TARP program give the government the option to buy common stock in a company in the future at a predetermined price. If the government does not wish to exercise that option in the future, it can sell the warrants back to the firm or to a third party. If the company’s stock price subsequently rises (falls), the value of the warrant rises (falls). Warrants were proposed on the grounds that they would give the government some upside profits if asset prices went up, while limiting the government’s exposure (the value of a warrant cannot fall below zero) if asset prices went down.

assets, market values are not readily available because the assets are illiquid or cannot be compared to anything available in the private market. When held by TARP, the Treasury and the Congressional Budget Office (CBO) have modeled expected future losses on these types of assets based on assumptions they have made about future default rates and future income or losses. These calculations are highly uncertain, particularly at a time when financial markets are atypically volatile. In these calculations, Treasury and CBO are directed by Section 123 of EESA to adjust their estimates by current market borrowing rates, as opposed to the borrowing rate paid by Treasury.<sup>7</sup> Using market rates instead of government borrowing rates increases the net calculated cost of these investments, and is meant to better represent the true economic costs of the programs. As financial conditions have improved, assumptions about default rates and market borrowing rates have become much more favorable, and the expected cost of the programs has fallen considerably from initial estimates. For example, CBO has reduced its estimate for the lifetime cost of TARP from \$356 billion to \$99 billion; excluding the costs for the Home Affordable Modification Program (HAMP), which is not a financial investment, and funds that have not yet been used, CBO's estimated cost is \$54 billion. This figure can be compared to TARP's originally authorized value of asset holdings, \$700 billion.<sup>8</sup>

Following the Federal Credit Reform Act,<sup>9</sup> expected losses for TARP and the GSEs presented in **Table 2** are added to the federal budget deficit by CBO in the fiscal year the transactions are made;<sup>10</sup> the programs' effects on the government's cash flow are not counted toward outlays and revenues.<sup>11</sup> (Expected gains and losses for the emergency programs of the Fed and FDIC are not explicitly identified in budget documents, although they influence spending or revenue totals for those agencies within the budget.) This way the change in the deficit represents the "opportunity cost" of using those government funds instead of the change in the amount of debt issued by the government, as would normally be the case. By this calculation, even a transaction that led to net positive cash flow over time could increase the deficit since the government could hypothetically have used those funds in more profitable ways. For example, although the government could buy an asset and later sell it for a higher value, if CBO estimates that the government could have bought the asset at a lower initial price (because the market value was lower), then there would be a subsidy cost to the transaction that increases the budget deficit.

For each program below, CRS reports data on government holdings or guarantees of assets or loans for the end of CY2009; the peak amount for the same measure; income earnings of the program from dividends, interest, or fees; estimates of the program's profits or losses; the

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<sup>7</sup> Following receivership, CBO has placed the GSEs on budget, and accounts for losses at the GSEs using an approach similar to the one it uses for TARP.

<sup>8</sup> Congressional Budget Office, *Budget and Economic Outlook*, January 2010, p. 59.

<sup>9</sup> For more information, see CRS Report RL30346, *Federal Credit Reform: Implementation of the Changed Budgetary Treatment of Direct Loans and Loan Guarantees*, by James M. Bickley.

<sup>10</sup> OMB measures the cash flow from the Treasury to the GSEs in the federal budget, rather than measuring expected losses of the GSEs, as CBO does. Since cash flow from Treasury does not include future or unrealized losses, OMB's estimate is smaller than CBO's.

<sup>11</sup> As an example, one can imagine an asset that did not pay interest or dividends was purchased in 2009 for \$10 billion and is expected to be sold in 2010 for \$8 billion. Under cash flow accounting, the projected deficit would rise by \$10 billion in 2009 and fall by \$8 billion in 2010. Assuming a market borrowing rate of, say, 10%, this investment would be counted under the Federal Credit Reform Act as increasing the 2009 budget deficit by (\$10 billion less \$8 billion/1.10), or \$2.7 billion, with no effect on the 2010 deficit. If the government borrowing rate of, say, 5% were used instead, the 2009 budget deficit would have been increased by (\$10 billion less \$8 billion/1.05), or \$2.4 billion.

dividend or interest rate charged by the program; warrants received in the transactions; subsequent modifications to the assistance (if any); and the expiration date for the program.

## Troubled Asset Relief Program (TARP)

Under the authority granted in EESA, Treasury has broad discretion to structure TARP, and several programs have been created. The first and largest of the TARP programs is the Capital Purchase Program (CPP), which initially planned to inject \$250 billion into the banking system by purchasing preferred stock in banks, although ultimately approximately \$205 billion was disbursed. Treasury has also provided additional assistance to three financial institutions (Citibank, Bank of America, and AIG) through three smaller TARP programs (the Targeted Investment Program, the Asset Guarantee Program, and the Systemically Important Institutions Program). At one time, these programs had planned to spend up to a combined total of \$115 billion, although significantly less than that amount has been tapped. Treasury plans to provide up to \$85 billion for automobile manufacturers, their financing affiliates, and suppliers in two TARP programs, the Automotive Industry Financing Program and the Automotive Supplier Support Program. Treasury initially planned to spend up to \$100 billion to buy \$1 trillion of assets from banks through the Public-Private Investment Program (PPIP), although the first transactions totaling less than \$17 billion did not occur until October 2009. The current total planned for PPIP is \$30 billion. Treasury plans to provide up to \$60 billion in the Consumer and Business Lending Initiative (CBLI), some of which would cover losses in the Fed's Term Asset-Backed Securities Lending Program, and some of which was not yet identified at the end of 2009. Treasury plans to provide \$50 billion in the Home Affordable Mortgage Modification Program (HAMP) to encourage mortgage servicers to modify more loans.

As of December 31, 2009, Treasury reports plans to spend a total of \$545 billion of the \$700 billion authorized under TARP, with \$483.4 billion committed to specific institutions through signed contracts, and \$374.6 billion paid out under such contracts. Of that total, \$165.2 billion of funds paid out have already been returned to the Treasury.<sup>12</sup> Data on TARP disbursements, planned uses of funds, and income are reported by Treasury periodically. The legal authority for TARP purchases is scheduled to expire on October 3, 2010.

**Table 3. Troubled Asset Relief Program Totals**

<b>As of December 31, 2009</b>	
Authorized	\$700 billion <sup>a</sup>
Planned Outlays	\$545 billion
Committed Outlays	\$483.4 billion
Actual Disbursed	\$374.6 billion
Returned Funds	\$165.2 billion

**Source:** December 2009 TARP 105(a) Report.

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<sup>12</sup> All amounts in the preceding are from U.S Treasury, *Troubled Assets Relief Program Monthly 105(a) Report—December 2009*, January 11, 2010, pp 5-6. This report can be found at <http://financialstability.gov/latest/reportsanddocs.html>. Hereafter referred to as “December 2009 TARP 105(a) Report.”

- a. Original authorization, subsequently reduced to \$689.7 billion by P.L. 111-22.

Programs consisting solely of TARP funds are discussed immediately below, while those involving other agencies, such as the Federal Reserve and FDIC, are discussed under the heading “Joint Interventions.”

## **Capital Purchase Program and Capital Assistance Program**

In October 2008, during the 110<sup>th</sup> Congress, Treasury announced the Capital Purchase Program. Under this program, \$125 billion in capital was immediately provided to the nine largest banks, with up to another \$125 billion reserved for smaller banks that might wish to apply for funds through their primary Federal banking regulator. This capital was provided in the form of preferred share purchases by TARP under contracts between the Treasury and banks. The initial contracts with the largest banks (eight rather than nine because of a merger) prevented these banks from exiting the program for three years. The contracts included dividend payments to be made on the preferred shares outstanding and for the granting of warrants to the government. By the end of 2008, the CPP program had 214 participating banks with approximately \$172.5 billion in share purchases outstanding.

The Obama Administration and the 111<sup>th</sup> Congress implemented changes to the CPP. EESA was amended by the new 111<sup>th</sup> Congress, placing additional restrictions on participating banks in the existing CPP contracts, but also allowing for early repayment and withdrawal from the program without financial penalty.<sup>13</sup> The Obama Administration announced a review of the banking system, in which the largest participants were subject to stress tests to assess the adequacy of their capital levels. Passage of the stress test was one regulatory requirement for large firms that wished to repay TARP funds. Large firms that failed the stress test would be required to raise additional capital, and the firms would have the option of raising that capital privately or from the government through a new Capital Assistance Program. No funding has been provided through the Capital Assistance Program, although GMAC, formerly General Motors’ financing arm, received funding to meet stress test requirements through the Automotive Industry Financing Program (discussed below). In addition, Citigroup, one of the initial eight large banks receiving TARP funds, agreed with the government to convert its TARP preferred shares into common equity to meet stress test requirements (see discussion of Citigroup below). With the advent of more stringent executive compensation restrictions, many banks began to repay, or attempt to repay, TARP funds. By June 30, 2009, \$70.1 billion of \$203.2 billion CPP funds had been repaid and by December 31, 2009, \$121.9 billion of \$204.9 billion had been repaid.

Realized losses to date on the CPP preferred shares have been small. The Treasury’s Office of Financial Stability (OFS) reported in its FY2009 report that three CPP recipients had failed and the value of their investments had been written down by TARP–CIT Group, with preferred shares of \$2.3 billion written down to zero, UCBH Holdings, with preferred shares of \$298.7 million written down to \$22.5 million, and Pacific Coast National Bancorp, with preferred shares of \$4.1 million written down to \$154,000.<sup>14</sup> Additional losses may occur in the future as a result of more recipients failing.

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<sup>13</sup> Title VII of the American Recovery and Reinvestment Act of 2009 (H.R. 1/P.L. 111-16/123 Stat. 115).

<sup>14</sup> U.S. Department of Treasury, Office of Financial Stability, *Agency Financial Report FY2009*, p. 97.

An indicator of how many preferred shares may currently be at risk of future losses might be gleaned from the number of recipients who have missed dividend payments on TARP funds. If a bank were short of funds to pay TARP dividends, it may also be unable to pay other liabilities and thus close to failure. As of December 31, 2009, SIGTARP reported that 74 institutions had missed dividend payments worth \$140.7 million. (Of this total, \$58.3 million were owed by CIT Group.<sup>15</sup>) This also may be a misleading measure of troubled participants, however, because there is no penalty or moral opprobrium for missing a dividend payment – missed dividend payments are simply rolled into the outstanding balance. Thus, healthy banks could be missing dividend payments in order to increase the amount of capital available to support their business. Alternatively, some of the banks who cannot afford dividend payments now may become more profitable as the economy recovers and ultimately repay TARP funds.

A key part of the ultimate profitability of TARP will hinge on proceeds from the warrants received from the companies. To date, Treasury has not exercised warrants to take common stock in CPP recipients.<sup>16</sup> Following the contracts initially agreed upon, Treasury has allowed institutions to purchase their warrants directly upon repayment of preferred shares, as long as both sides can reach an acceptable price. To reach an initial offering price, Treasury is using complex option pricing models to price the warrants that require assumptions to be made about future prices and interest rates. Since these pricing models are by their nature uncertain, some critics urge Treasury to auction the warrants on the open market (allowing the issuing firm to bid as well) to ensure that Treasury receives a fair price for them. Open auctions have been used, but only when an agreement between the Treasury and the firms cannot be reached.

CPP earns income from dividends with a rate of 5% for the first five years, and 9% thereafter. (For S-Corp banks, the dividend rate is 7.7% for the first five years and 13.8% thereafter.) It also receives earnings from the sale of warrants. For 2009, CPP received \$12.3 billion from dividends, fees, and warrants. For the life of the program, OMB estimates a subsidy or expected loss of \$1.4 billion on the CPP. By contrast, CBO estimates the program will result in a net gain of \$3 billion.<sup>17</sup>

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<sup>15</sup> Special Inspector General, Troubled Asset Relief Program, *Quarterly Report to Congress*, January 2010, Table 2.10.

<sup>16</sup> In a special arrangement, the government converted its Citigroup preferred shares to common stock without exercising its warrants. For more information, see the section “Citigroup.”

<sup>17</sup> The subsidy equals the present value of expected defaults plus the difference between the actual dividend rate and comparable market rates. When more banks repay, the expected value of defaults declines.

**Table 4. Capital Purchase Program (CPP)**

Federal Government			Terms and Conditions			
Asset Holdings End of CY2009	Asset Holdings at Peak	Total Income CY2009	Current or Expected Gains(+)/ Losses(-)	Dividend Rate	Warrants	Expiration Date
\$83 billion	\$204.9 billion <sup>a</sup>	\$12.3 billion	+\$3 billion (CBO); -\$1.4 billion (OMB)	5% for first 5 years, 9% thereafter <sup>b</sup>	15% of preferred shares (5% immediately exercised for privately-held banks)	Preferred Shares outstanding until repaid. No new contracts/modifications to program after Oct. 3, 2010.

**Source:** December 2009 TARP 105(a) Report; Congressional Budget Office, *Budget and Economic Outlook*, January 2010; SIGTARP, *Quarterly Report to Congress*, January 30, 2010; OMB, *Analytical Perspectives, FY2011 President's Budget*, Table 4-7; February 2010.

**Notes:** CBO estimates through June 2009, Treasury subsidy estimates through end of FY2009. Data includes preferred shares to Citigroup and Bank of America under CPP, which are also detailed in sections on assistance to those companies below.

- a. Amount represents total investments over the life of the program. Because of staggered repayments and investments, \$204.9 billion was never outstanding at one time.
- b. For S-Corp banks, the dividend rate is 7.7% for the first five years and 13.8% thereafter.

## Home Affordable Modification Program (HAMP)

One criticism leveled at the early stages of TARP was its focus on assisting financial institutions, thus providing only indirect assistance to individual homeowners facing foreclosure. Sections 103, 109 and 110 of the EESA specifically embody congressional intent that homeowners be aided under TARP. In March 2009, the TARP Home Affordable Modification Program (HAMP) was announced.<sup>18</sup> Up to \$50 billion in TARP funds are planned for HAMP, which is intended to encourage modification of mortgages to benefit homeowners. The program's goal is to offer 3-4 million homeowners lower mortgage payments through 2012. The program operates by paying servicers if they modify mortgages such that the monthly payments equal no more than 31% of a borrower's monthly gross income. As of December 31, 2009, 103 servicers agreed to participate with more than \$35.5 billion committed to implement the program. The actual amount of funding disbursed, however, was only \$1.27 billion.<sup>19</sup> Unlike other TARP programs which have resulted in asset purchases that may eventually return some funds to the government, the HAMP program has no mechanism for returning funds. Expected outlays under HAMP have been scored by the Congressional Budget Office as 100% spending.

<sup>18</sup> HAMP is part of the Administration's broader Making Home Affordable Program, whose other aspects include an FDIC-sponsored loan modification program and lower mortgage-interest rates through Fannie Mae and Freddie Mac. Much of the funding for these programs is not through TARP.

<sup>19</sup> December 2009 TARP 105(a) Report, pp. 18-20, 32-33

## **U.S. Automakers<sup>20</sup>**

In addition to financial firms, non-financial firms have also sought support under TARP, most notably U.S. automobile manufacturers. Initially, the Treasury did not provide TARP funds to such firms, arguing that the program was intended to buy assets only from financial institutions.<sup>21</sup> On November 17, Senator Harry Reid introduced an amendment to EESA that would have directed Treasury to use TARP funds to aid the automobile industry (S. 3688), but such legislation did not pass prior to the adjournment of the 110<sup>th</sup> Congress.

The Administration suggested instead using funds already appropriated for the development of advanced technology vehicles under a direct loan program operated by the Department of Energy and authorized under the Energy Independence and Security Act (EISA).<sup>22</sup> Representative Barney Frank, Chairman of the House Financial Services Committee, introduced H.R. 7321 in December 2008, directing the reprogramming of the \$14 billion in EISA loans to support GM and Chrysler. The legislation, which passed the House passed 237-170, also established a presidential designee (or “car czar”) to oversee compliance. Despite urging from the Bush Administration, there were disagreements in the Senate over this legislation and it was never voted on.

With H.R. 7321 seeing no action in the Senate, the Bush Administration indicated that, after all, it would consider making loans to the auto companies from the TARP program. On December 19, 2008, the U.S. Treasury announced it was providing support through TARP to General Motors and Chrysler. The initial package included up to \$13.4 billion in a secured loan to GM and \$4 billion in a secured loan to Chrysler. In addition, \$884 million was lent to GM for its participation in a rights offering by GMAC as GM’s former financing arm was becoming a bank holding company. On December 29, 2008, the Treasury announced that GMAC also was to receive a \$5 billion capital injection through preferred share purchases, which was followed by another \$7.5 billion on May 21, 2009. On January 16, 2009, Treasury announced a \$1.5 billion loan to Chrysler Financial.

Up to \$5 billion in funding for TARP’s auto industry supplier program was funded under the Auto Supplier Support Program (ASSP), which provided loans “to ensure that auto suppliers receive compensation for their services and products, regardless of the condition of the auto companies that purchase their products.”<sup>23</sup>

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<sup>20</sup> This section prepared with the assistance of Bill Canis, Specialist in Industrial Organization and Business. For a comprehensive analysis of federal financial assistance to U.S. automakers, see CRS Report R40003, *U.S. Motor Vehicle Industry: Federal Financial Assistance and Restructuring*, coordinated by Bill Canis. Statistics in the section taken from the December 2009 TARP 105(a) Report, from Congressional Oversight Panel, *September Oversight Report: The Use of TARP Funds in the Support and Reorganization of the Domestic Automotive Industry*, September 9, 2009, available at <http://cop.senate.gov/documents/cop-090909-report.pdf> and from various contracts posted by the U.S. Treasury at <http://financialstability.gov/roadtostability/autoprogram.html>.

<sup>21</sup> See, for example, Statement by Secretary of the Treasury Henry Paulson in U.S. Congress, House Committee on Financial Services, *Oversight of Implementation of the Emergency Economic Stabilization Act of 2008 and of Government Lending and Insurance Facilities: Impact on the Economy and Credit Availability*, 110<sup>th</sup> Cong., 2<sup>nd</sup> sess., November 18, 2008.

<sup>22</sup> P.L. 110-140.

<sup>23</sup> U.S. Department of the Treasury, “Troubled Assets Relief Program, Section 105(a) Monthly Congressional Report,” January 11, 2010, p. 28, [http://financialstability.gov/docs/105CongressionalReports/December%20105\(a\)\\_final\\_1-11-10.pdf](http://financialstability.gov/docs/105CongressionalReports/December%20105(a)_final_1-11-10.pdf).



Unable to work out their differences with a group of creditors, the two companies were ultimately compelled to enter bankruptcy. On April 30, 2009, Chrysler filed for Chapter 11 bankruptcy and announced that Fiat would take an initial 20% stake and take over management of the new company. On June 1, 2009, General Motors Corporation filed for Chapter 11 bankruptcy and announced a major restructuring plan that would allow it to leave most of its liabilities in bankruptcy and sell most of its assets to a new General Motors Company. This restructuring plan included eliminating brands, closing dealerships, and shutting plants.<sup>24</sup> Federal assistance considerably shortened the amount of time the two companies spent in bankruptcy court.

Additional government support was provided to the auto industry before and during bankruptcy. The outstanding amount at its peak included \$49.9 billion in loans to GM and up to \$15.2 billion in loans to Chrysler, of which \$10.8 billion were drawn. Of these totals, \$280 million was provided to Chrysler and \$361 million to GM for a Warranty Commitment Program; those funds were subsequently repaid. In addition, \$884 million was lent to GM for its participation in a rights offering after GMAC became a bank holding company.

Once the bankruptcy process was completed, the assets and liabilities of GM and Chrysler were divided between “old” GM and Chrysler corporations left behind in bankruptcy and “new” Chrysler and GM companies where future business will take place. Of the money owed to the government at the end of bankruptcy, some of the loans remained with the “old” GM and Chrysler corporations, some were assigned to the “new” Chrysler and GM companies, and some were replaced with common equity in the “new” Chrysler and GM companies. Whether this equity ultimately has value depends on whether the “new” firms can return to profitability. In the third quarter of 2009, New GM reported a loss. The Congressional Oversight Panel notes that “New GM will have to achieve a capitalization that is higher than was ever achieved by Old GM if taxpayers are to break even.”<sup>25</sup> New Chrysler did not report financial results in 2009. The Congressional Oversight Panel believes that repayment of loans remaining in Old Chrysler is unlikely.<sup>26</sup>

As of December 31, 2009, TARP support for the auto industry totaled approximately \$85 billion, with \$73.8 billion outstanding. The assistance outstanding currently takes the form of: government ownership of 9.9% of the equity in post-bankruptcy New Chrysler, with \$5.1 billion in loans outstanding; loans of \$5.4 billion outstanding to Old Chrysler; government ownership of 60.8% of post-bankruptcy GM with \$6.7 billion in loans and \$2.1 billion in preferred stock outstanding; a \$985.8 million loan outstanding to Old GM. The loan to Chrysler Financial was completely repaid with interest. Additional assistance was provided to GMAC on December 31, 2009 that resulted in the government holding 56.3% of GMAC common stock and \$11.4 billion in convertible preferred stock. CBO estimates the ultimate net cost of this assistance to be \$47 billion, while OMB estimates it to be \$31 billion.

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<sup>24</sup> For an explanation of the decision process to assist General Motors and Chrysler, see Steven Rattner, “The Auto Bailout: How We Did It,” *Fortune*, vol. 160, no. 9, November 9, 2009, pp. 55-71.

<sup>25</sup> Congressional Oversight Panel, *Oversight Report*, September 2009, p. 57.

<sup>26</sup> Congressional Oversight Panel, *Oversight Report*, September 2009, p. 57.

**Table 5. Government Support to the Auto Industry**

Beneficiary/ Program	Federal Government			Terms and Conditions			
	Outstanding Balance End of CY2009	Total Assistance at Peak	Total Income CY2009	Current or Expected Gain(+)/Loss(-)	Dividend/ Interest Rate	Subsequent Conversion	Expiration Date
“new” General Motors (post-bankruptcy)	\$6.7 billion loan; \$2.1 billion preferred stock	\$49.5 billion loans (before bankruptcy completed)	\$361.6 million	Not Reported	LIBOR + 5% <sup>a</sup>	Loan converted into 60.8 % of common equity and preferred stock	January 2015 (loan); preferred shares have no expiration
“old” General Motors (pre- and during bankruptcy)	\$985.8 million		\$0	Not Reported	LIBOR + 5% <sup>a</sup>	n/a	December 2010
GMAC	\$11.4 billion convertible preferred stock	\$16.3 billion convertible preferred stock; \$884 million loan through GM	\$855 million	Not Reported	9%	Loan and preferred shares converted into 56.3% of common equity	No expiration
“New” Chrysler (post-bankruptcy)	\$5.1 billion loan	\$10.5 billion drawn of \$14.9 billion loans (before bankruptcy completed)	\$0	Not Reported	LIBOR + 7.9% <sup>a</sup>	9.9% of common equity	June 2017
“Old” Chrysler (pre- and during bankruptcy)	\$5.4 billion loan		\$55.1 million	Not Reported	LIBOR + 3%; LIBOR + 5% <sup>a</sup>	None	December 2011
Chrysler Financial	\$0	\$1.5 billion loan until July 14, 2009	\$7.4 million	n/a		None	n/a
Auto Suppliers	\$3.4 billion loan	\$3.4 billion drawn of \$5.0 billion loan	\$11.3 million	Not Reported	Greater of LIBOR+ 3.5% or 5.5% <sup>a</sup>	None	Apr. 2010
GM and Chrysler Warranty Commitment	\$0	\$641 million until July 10, 2009	\$5.5 million	n/a	LIBOR+3.5% <sup>a</sup>	None	n/a

Federal Government					Terms and Conditions		
Beneficiary/ Program	Outstanding Balance End of CY2009	Total Assistance at Peak	Total Income CY2009	Current or Expected Gain(+)/Loss(-)	Dividend/ Interest Rate	Subsequent Conversion	Expiration Date
Total	n/a	n/a	n/a	-\$47 billion (CBO); -\$30.8 billion (OMB)	n/a	n/a	Support outstanding until repaid. No new contracts/modifications to program after Oct. 3, 2010.

**Source:** December 2009 TARP 105(a) Report; December 2009 TARP Dividends and Interest Report; Congressional Oversight Panel September 2009 Oversight Report; Congressional Budget Office, *Budget and Economic Outlook*, January 2010; SIGTARP, *Quarterly Report to Congress*, January 30, 2010; OMB, *Analytical Perspectives, FY2011 President's Budget*, Table 4-7; February 2010.

a. LIBOR = London Inter-bank Offered Rate

## Federal Reserve

Beginning in December 2007, the Federal Reserve introduced a number of emergency credit facilities to provide liquidity to various segments of the financial system.<sup>27</sup> Most, but not all, of these facilities make short-term loans backed by collateral that exceeds the value of the loan, with recourse if the borrower defaults. These facilities were widely available to all qualified participants. (Fed assistance to individual companies is discussed separately below.) Since the Fed's creation nearly 100 years ago, the Fed has always made short-term collateralized loans to banks through its discount window. In the years before the crisis, loans outstanding through the discount window were consistently less than \$1 billion at any time. At the peak of the crisis, total assistance outstanding would peak at over \$1 trillion. What distinguished these new facilities from the Fed's traditional lending was the fact that many served non-banks that were not regulated by the Fed.

Profits or losses on Fed lending accrue to the taxpayer just as if those loans were made by the Treasury. The Fed generates income from its assets and loans that exceed its expenses. Any income that remains after expenses, dividends, and additions to its surplus is remitted to the Treasury. If its profits rise because its lending facilities are more profitable than alternative uses, more funds will be remitted to the Treasury. If it suffers losses on its facilities, its remittances to the Treasury will fall. The risk to most of the Fed's broad credit facilities is relatively low since the loans are short-term, collateralized, and the Fed has the right to refuse borrowers it deems to be not credit-worthy. (As discussed below, the Fed's assistance to firms deemed "too big to fail" was significantly riskier.) In 2009, the Fed remitted \$46 billion to the Treasury. This was \$14 billion more than in 2008; the main reason the Fed's profits rose was because it greatly increased its assets in an attempt to provide more liquidity to the financial system. In that sense, taxpayers have profited from the creation of the Fed's lending facilities, although that was not their purpose and those facilities were not risk free.

The Fed has standing authority to lend to banks and buy certain assets, such as GSE-issued securities. For many new programs, the Fed relied on broad emergency authority (Section 13(3) of the Federal Reserve Act) that had not been used since the 1930s. The Fed is self-financing and did not receive any appropriated funds to finance its activities.

Throughout 2009, credit outstanding under most of these facilities has consistently fallen, primarily because financial firms have begun returning to private sources of funding as financial conditions have improved. Most emergency facilities expired on February 1, 2010. Two notable exceptions of Fed programs that have continued to grow through 2009 are the Term Asset-Backed Securities Lending Facility (TALF), which did not begin operation until March 2009, and the Fed's purchases of mortgage-related securities.

Estimating a subsidy rate on Fed lending is not straightforward, and some would argue is not meaningful. The Fed's loans are usually made at some modest markup above the federal funds rate; in that sense they can be considered higher than market rates – whether the markup is high enough to avoid a subsidy depends on the riskiness of the facility. But the Fed controls the federal

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<sup>27</sup> More detail on all of the facilities discussed in this section of the report can be found in CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte.

funds rate, even though it is a private market for overnight inter-bank lending. During the crisis, the Fed drove the federal funds rate gradually down from 5.25% in September 2007 to nearly zero in December 2008 by creating the liquidity needed to avert a liquidity crisis; as a result, its direct loans were made at a very low rate. (Indeed, the Fed's emergency activities helped it provide more total liquidity to financial markets and reduce the federal funds rate. In normal periods, this would be done through purchases of Treasury securities instead.) Since the purpose of the Fed is to supply financial markets with adequate liquidity, which has some characteristics of what economists call a "public good" that cannot always be provided by the private sector, it is not clear that reducing the federal funds rate should be classified as a subsidy. Further, the Fed would argue that it was only providing credit because there was no private sector alternative during the crisis—an argument that is less compelling over time as market conditions continue to stabilize.

The Fed reports extensive data on its activities. Outstanding balances for each facility are available on a weekly basis from the H.4.1 data release, *Factors Affecting Reserve Balances of Depository Institutions*. Detailed information on the number of borrowers, concentration of loans, types of collateral, and overall earnings for each facility is available on a monthly basis in *Federal Reserve System Monthly Report on Credit and Liquidity Programs and the Balance Sheet*. Some Members of Congress have criticized the Fed, however, for not providing the details of specific transactions, particularly the identities of recipients and specific collateral posted.

## **Term Auction Facility**

In December 2007, the Fed created its first facility in response to financial conditions, the Term Auction Facility (TAF). This facility auctions reserves to banks in exchange for collateral. Economically and legally, this facility is equivalent to the discount window, and was created primarily out of a concern that banks were not accessing the discount window as much as needed as a result of the stigma associated with discount window lending. Since this facility was not created with emergency authority, it need not be temporary, but the Fed has announced no further auctions after March 8, 2010.

Any depository institution eligible for discount window lending can participate in the TAF, and hundreds at a time have accessed the TAF and the discount window since its inception. The auction process determines the rate at which those funds will be lent, with all bidders receiving the lowest winning bid rate. The winning bid may not be lower than the prevailing federal funds rate. Auctions through the TAF have been held twice a month beginning in December 2007. The amounts auctioned have greatly exceeded discount window lending, which averaged in the hundreds of millions of dollars outstanding daily before 2007 and more than \$10 billion outstanding during the crisis. Loans outstanding under the facility peaked at \$493 billion in March 2009, and have fallen steadily since. Between the discount window and the TAF, banks were consistently the largest private sector recipient of Fed assistance.

TAF loans mature in 28 days—far longer than overnight loans in the federal funds market or the typical discount window loan. (In July 2008, the Fed began making some TAF loans that matured in 84 days.) Like discount window lending, TAF loans must be fully collateralized with the same qualifying collateral accepted by the discount window. Loan previously made by depository institutions and asset-backed securities are the most frequently posted collateral. Although not all collateral has a credit rating, those that are rated typically have the highest rating. As with discount window lending, the Fed faces the risk that the value of collateral would fall below the loan amount in the event that the loan was not repaid. For that reason, the amount lent diminishes

as the quality of the collateral diminishes. Most borrowers borrow much less than the posted collateral. In the first three quarters of 2009, the Fed earned \$713 million from the TAF.

**Table 6. Term Auction Facility (TAF)**

Federal Reserve			Terms and Conditions		
Loans Outstanding End of 2009	Loans Outstanding at Peak	Total Income 2009 through Q3	Current or Expected Gains(+)/ Losses(-)	Lending Rate	Expiration Date
\$75.9 billion	\$493 billion in March 2009	\$713 million	\$0	no lower than federal funds rate	March 8, 2010

**Source:** CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

## Term Securities Lending Facility

Shortly before Bear Stearns suffered its liquidity crisis in March 2008, the Fed created the Term Securities Lending Facility (TSLF) to expand its securities lending program for primary dealers, who include investment banks that were ineligible to access the Fed’s lending facilities for banks at the time. The proximate cause of Bear Stearns’ crisis was the inability to roll over its short-term debt, and the Fed created the TSLF and the Primary Dealer Credit Facility (discussed below) to offer an alternative source of short-term liquidity for primary dealers.

Under the TSLF, up to \$75 billion (previously up to \$200 billion) of Treasury securities could be lent for 28 days instead of overnight. Treasury securities are valuable to primary dealers because of their use in repurchase agreements (“repos”) that are an important source of short-term financing. Loans could be collateralized with private-label MBS with an AAA/Aaa rating, agency commercial mortgage-backed securities, and agency collateralized mortgage obligations.<sup>28</sup> On September 14, 2008, the Fed expanded acceptable collateral to include all investment-grade debt securities. Since August 2009, no securities have been borrowed through this facility, and the facility expired February 1, 2010. The Fed does not report income from the TSLF separately from its overall portfolio earnings.

<sup>28</sup> As of June 2009, Treasury securities, Agency securities, and Agency-guaranteed mortgage-backed securities were no longer accepted as collateral for the TSLF because the Fed deemed these assets to no longer be illiquid. Few of these assets were posted as collateral when the Fed discontinued their use.

**Table 7. Term Securities Lending Facility (TSLF)**

Federal Reserve				Terms and Conditions	
Loans Outstanding End of 2009	Loans Outstanding at Peak	Total Income 2009 through Q3	Current or Expected Gains(+)/ Losses(-)	Fee	Expiration Date
\$0	\$260 billion on Oct. 1, 2008	n/a	\$0	10 to 25 basis points	February 1, 2010

**Source:** CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

## Primary Dealer Credit Facility

Shortly after Bear Stearns' liquidity crisis, the Fed created the Primary Dealer Credit Facility (PDCF), which can be thought of as similar to a discount window for primary dealers. Loans are made at the Fed's discount rate, which has been set slightly higher than the federal funds rate during the crisis. Loans are made on an overnight basis and fully collateralized, limiting their riskiness. Acceptable collateral initially included Treasuries, government agency debt, and investment grade corporate, mortgage-backed, asset-backed, and municipal securities. On September 14, 2008, the Fed expanded acceptable collateral to include certain classes of equities. The Primary Dealer Credit Facility expired on February 1, 2010.

Borrowing from the facility has been sporadic, with average daily borrowing outstanding above \$10 billion in the first three months, and falling to zero in August 2008. Much of this initial borrowing was done by Bear Stearns, before its merger with J.P. Morgan Chase had been completed. Loans outstanding through the PDCF picked up again in September 2008 and peaked at \$148 billion on October 1, 2008. Since May 2009, outstanding loans through the PDCF have been zero, presumably because the largest investment banks converted into or were acquired by bank holding companies in late 2008, making them eligible to access other Fed lending facilities. The PDCF's interest income for the first three quarters of 2009 was \$37 million.

**Table 8. Primary Dealer Credit Facility (PDCF)**

Federal Reserve				Terms and Conditions	
Loans Outstanding End of 2009	Loans Outstanding at Peak	Total Income 2009 through Q3	Current or Expected Gains(+)/ Losses(-)	Lending Rate	Expiration Date
\$0	\$148 billion on Oct. 1, 2008	\$37 million	\$0	equal to Fed's discount rate	February 1, 2010

**Source:** CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

## Term Asset-Backed Securities Loan Facility

In November 2008, the Fed created the Term Asset-Backed Securities Loan Facility (TALF) in response to problems in the market for asset-backed securities (ABS). According to the Fed, "new

issuance of ABS declined precipitously in September and came to a halt in October. At the same time, interest rate spreads on AAA-rated tranches of ABS soared to levels well outside the range of historical experience, reflecting unusually high risk premiums.”<sup>29</sup> Data support the Fed’s view: issuance of non-residential mortgage asset-backed securities fell from \$902 billion in 2007 to \$5 billion in the fourth quarter of 2008, according to the Securities Industry and Financial Markets Association. The Fed fears that if lenders cannot securitize these types of loans, less credit will be extended to consumers, and eventually households will be forced to reduce consumption spending, which would exacerbate the economic downturn.

Rather than purchase ABS directly, the Fed is making non-recourse loans to private investors to purchase recently issued ABS receiving the highest credit rating, using the ABS as collateral. The minimum loan size is \$10 million. If the ABS lose value, the losses would be borne by the Fed and the Treasury (through TARP) instead of by the borrower – an unusual feature for a Fed lending facility which makes TALF riskier for the taxpayers than typical Fed lending facilities. Thus far, Treasury has set aside \$20 billion of TARP funds to cover future TALF losses, although it has discussed increasing that amount. Eligible collateral includes new securities backed by auto loans, student loans, small business loans, and credit card loans. TALF was later expanded to include “legacy” commercial mortgage-backed securities as part of the Public Private Investment Program (PPIP). The Fed lends less than the current value of the collateral, so the Fed would not bear losses on the loan until losses exceed the value of this reduction or “haircut” (different ABS receive different haircuts). The loans have a term of up to three years for most types of assets (and up to five years for some types of assets), but can be renewed. Interest rates are set at a markup over different maturities of the London inter-bank offered rate (LIBOR) or the federal funds rate, depending on the type of loan and underlying collateral.

Thus far, TALF has been a relatively small program compared to the \$200 billion program envisioned by the Fed or the \$1 trillion program later envisioned by Treasury. In part, this is because the issuance of assets eligible for TALF has remained low, which reflects the continuing depressed state of securitization markets and may imply that TALF has been unable to overcome current investor aversion to ABS. (Since TALF began operation in March 2009, a sizable share of ABS issued have been used as collateral for TALF loans.) The termination date of the facility has been extended, most recently to the end of June 2010 for loans against newly issued CMBS and March 2010 for loans against other assets. Unlike most other Fed lending facilities, the amount outstanding under TALF steadily rose through 2009.

At the end of the 2009, there had been no defaults on TALF loans reported, and therefore no use of TARP funds beyond \$103 million for initial administrative costs. In the first three quarters of 2009, TALF’s interest income was \$214 million.

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<sup>29</sup> Board of Governors of the Federal Reserve System, press release, November 25, 2008.



**Table 9. Term Asset-Backed Securities Loan Facility (TALF)**

Federal Reserve			Terms and Conditions		
Loans Outstanding End of 2009	Loans Outstanding at Peak	Total Income 2009 through Q3	Current or Expected Gains(+)/ Losses(-)	Lending Rate	Expiration Date
\$48 billion	\$48 billion	\$214 million	-\$1 billion (CBO); +\$0.5 billion (OMB)	different markups over LIBOR or federal funds rate	Mar. 31, 2010 (June 30, 2010 for new CMBS)

**Source:** CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

## Commercial Paper Funding Facility and Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility

To meet liquidity needs, many large firms routinely issue commercial paper, which is short-term debt purchased directly by investors that matures in less than 270 days, with an average maturity of 30 days. There are three broad categories of commercial paper issuers: financial firms, non-financial firms, and pass-through entities that issue paper backed by assets. The commercial paper issued directly by firms tends not to be backed by collateral, as these firms are viewed as large and creditworthy and the paper matures quickly.

Individual investors are major purchasers of commercial paper through money market mutual funds and money market accounts. On September 16, 2008, a money market mutual fund called the Reserve Fund “broke the buck,” meaning that the value of its shares had fallen below face value. This occurred because of losses it had taken on short-term debt issued by Lehman Brothers, which filed for bankruptcy on September 15, 2008. Money market investors had perceived “breaking the buck” to be highly unlikely, and its occurrence set off a run on money market funds, as investors simultaneously attempted to withdraw an estimated \$250 billion of their investments – even from funds without exposure to Lehman.<sup>30</sup> This run greatly decreased the demand for new commercial paper. Firms rely on the ability to issue new debt to roll over maturing debt to meet their liquidity needs.

Fearing that disruption in the commercial paper markets could make overall problems in financial markets more severe, the Fed announced on September 19, 2008 that it would create the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF). This facility would make non-recourse loans to banks to purchase asset-backed commercial paper. Because the loans were non-recourse, the banks would have no further liability to repay any losses on the commercial paper collateralizing the loan. At its peak in early October 2008, there were daily loans of \$152 billion outstanding through the AMLF. The AMLF would soon be superseded in importance by the creation of the Commercial Paper Funding Facility, and lending fell to zero in

<sup>30</sup> Figure cited in Chairman Ben Bernanke, “Financial Reform to Address Systemic Risk,” speech at the Council on Foreign Relations, March 10, 2009.

October 2009. In the first nine months of 2009, it earned \$72 million. The facility is expired on February 1, 2010.

On October 7, 2008, the Fed announced the creation of the Commercial Paper Funding Facility (CPFF), a special purpose vehicle (SPV) controlled by the Fed that would borrow from the Fed to purchase all types of three-month, highly rated U.S. commercial paper, secured and unsecured, from issuers. The interest rate charged by the CPFF was set at the three month overnight index swap plus 1 percentage point for secured corporate debt, 2 percentage points for unsecured corporate debt, and 3 percentage points for asset-backed paper. The CPFF can buy as much commercial paper from any individual issuer as that issuer had outstanding in the year to date. Any losses borne by the CPFF would ultimately be borne by the Fed. The facility is authorized under Section 13(3) of the Federal Reserve Act, and was subsequently extended until February 1, 2010. At its peak in January 2009, the CPFF held \$351 billion of commercial paper, and has fallen steadily since. In the first nine months of 2009, it earned \$3.9 billion.

On October 21, 2008, the Fed announced the creation of the Money Market Investor Funding Facility (MMIFF), and pledged to lend it up to \$540 billion. The MMIFF was planned to lend to private sector SPVs that invest in commercial paper issued by highly rated financial institutions. Each SPV would have been owned by a group of financial firms and could only purchase commercial paper issued by that group. The intent was for these SPVs to purchase commercial paper from money market mutual funds and similar entities facing redemption requests to help avoid runs such as the run on the Reserve Fund. The MMIFF never became operational, and the facility expired on February 1, 2010.

**Table 10. Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)**

Federal Reserve			Terms and Conditions		
Loans Outstanding End of 2009	Loans Outstanding at Peak	Total Income 2009 through Q3	Current or Expected Gains(+)/ Losses(-)	Lending Rate	Expiration Date
\$0	\$152 billion on Oct. 8, 2009	\$72 million	\$0	Fed's Discount Rate	February 1, 2010

**Source:** CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

Table 11. Commercial Paper Funding Facility (CPFF)

Federal Reserve				Terms and Conditions	
Holdings End of 2009	Holdings at Peak	Total Income 2009 through Q3	Current or Expected Gains(+)/ Losses(-)	Interest Rate	Expiration Date
\$14 billion	\$351 billion Jan 2009	\$3.9 billion	\$4.4 billion	various markups over overnight index swap rate	February 1, 2010

**Source:** CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

## Central Bank Liquidity Swaps

In December 2007, the Fed announced the creation of temporary reciprocal currency agreements, known as swap lines, with the European Central Bank and the Swiss central bank. These agreements let the Fed swap dollars for euros or Swiss francs, respectively, for a fixed period of time. Since September 2008, the Fed has extended similar swap lines to central banks in several other countries. To date, most of the swaps outstanding have been with the European Central Bank and Bank of Japan. In October 2008, it made the swap lines with certain countries unlimited in size. Interest is paid to the Fed on a swap outstanding at the rate the foreign central bank charges to its dollar borrowers. The temporary swaps are repaid at the exchange rate at the time of the original swap, meaning that there is no downside risk for the Fed if the dollar appreciates in the meantime (although the Fed also does not enjoy upside gain if the dollar depreciates). The swap lines expired February 1, 2010. Except in the unlikely event that the borrowing country's currency becomes unconvertible in foreign exchange markets, there is no credit risk involved for the Fed. Swaps outstanding peaked at \$583 billion in December 2008, and have fallen steadily since. The Fed has reported no losses under the program and income of \$2.1 billion in the first three quarters of 2009.

The swap lines are intended to provide liquidity to banks in non-domestic denominations. For example, many European banks have borrowed in dollars to finance dollar-denominated transactions, such as the purchase of U.S. assets. Normally, foreign banks could finance their dollar-denominated borrowing through the private inter-bank lending market. As banks have become reluctant to lend to each other through this market, central banks at home and abroad have taken a much larger role in providing banks with liquidity directly. But normally banks can only borrow from their home central bank, and central banks can only provide liquidity in their own currency. The swap lines allow foreign central banks to provide needed liquidity in dollars. Initially, the swap lines were designed to allow foreign central banks to U.S. dollars. In April 2009, the swap lines were modified so that the Fed could access foreign currency to provide to its banks as well; to date, the Fed has not accessed foreign currency through these lines.

Table 12. Central Bank Liquidity Swaps

Federal Reserve				Terms and Conditions	
Swaps Outstanding End of 2009	Swaps Outstanding at Peak	Total Income, First 3 Quarters 2009	Current or Expected Gains(+)/ Losses(-)	Interest Rate	Expiration Date
\$10 billion	\$583 billion on Dec. 10, 2008	\$2.1 billion	\$0	Equal to participating central bank's lending rate	February 1, 2010

**Source:** CRS; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009.

## Bear Stearns

On March 16, 2008, JPMorgan Chase agreed to acquire the investment bank Bear Stearns. As part of the agreement, the Fed lent \$28.82 billion to Maiden Lane I, a Delaware limited liability corporation (LLC) that it created, to purchase financial securities from Bear Stearns. These securities were largely mortgage-related assets that were too illiquid for JPMorgan Chase to be willing to acquire. The interest and principal is to be repaid to the Fed by the LLC using the funds raised by the sale of the assets. The Fed's loan was made at an interest rate set equal to the discount rate (2.5% when the terms were announced, but fluctuating over time) for a term of 10 years, renewable by the Fed.<sup>31</sup> In addition, JPMorgan Chase extended a \$1.15 billion loan to the LLC that will have an interest rate equal to 4.5 percentage points above the discount rate. Thus, in order for the principal and interest to be paid off, the assets would need to appreciate enough or generate enough income so that the rate of return on the assets exceeds the weighted interest rate on the loans (plus the operating costs of the LLC). The interest on the loan will be repaid out of the asset sales, not by JPMorgan Chase.

Any difference between the proceeds and the amount of the loans would produce a profit or loss for the Fed, not JPMorgan Chase. Because JPMorgan Chase's \$1.15 billion loan was subordinate to the Fed's \$28.8 billion loan, if there are losses on the \$29.95 billion assets, the first \$1.15 billion of losses would be borne, in effect, by JPMorgan Chase. If the assets appreciate in value by more than operating expenses, the Fed would make a profit on the loan. If the assets decline in value by less than \$1.15 billion, the Fed would not suffer any direct loss on the loan. Any losses beyond \$1.15 billion would be borne by the Fed. By the third quarter of 2009, the Fed's loan exceeded the value of the assets by \$3.1 billion.

<sup>31</sup> Federal Reserve Bank of New York, "Summary of Terms and Conditions Regarding the JP Morgan Chase Facility," press release, March 24, 2008.

**Table 13. Bear Stearns Support (Maiden Lane I, LLC)**

Federal Reserve				Terms and Conditions		
Loans Outstanding to Fed, End of FY2009	Original Fed Loan Balance	Value of Assets, End of FY2009	Net Income to Fed, Q1-Q3 2009	Current or Expected Gains(+)/ Losses(-), End of FY2009	Interest Rate	Expiration Date
\$29.2 billion	\$28.8 billion	\$26.1 billion	\$348 million	-\$3.1 billion	discount rate	Securities held long-term.

**Source:** Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009, Table 38.

## Federal Deposit Insurance Corporation (FDIC)

The FDIC has undertaken a significant role in the financial crisis through its standing authority to resolve failed banks and administer the federal guarantees on individual deposits. In addition, the FDIC has carried out several exceptional measures, including a broad guarantee program on debt issued by banks and supporting combined interventions in Citigroup and Bank of America.

### Temporary Liquidity Guarantee Program<sup>32</sup>

On October 14, 2008, the FDIC announced the creation of the Temporary Liquidity Guarantee Program (TLGP) to encourage liquidity in the banking system, including a Debt Guarantee Program (DGP) and a Transaction Guarantee Program (TAG).<sup>33</sup> This program was not specifically authorized by Congress; it was authorized under the FDIC's standing systemic risk mitigation authority (USC 1823(c)(4)(G)). Financial institutions eligible for participation in the TLGP program include entities insured by the FDIC, bank holding and financial holding companies headquartered in the United States, and savings and loan companies under Section 4(k) of the Bank Holding Company Act (12 U.S.C. 1843). Although the TLGP is a voluntary program, eligible financial institutions were automatically registered to participate unless they had opted out by November 12, 2008. Eligible entities could also opt out of one or both of the program components. As the program has been extended, participants have been offered the chance to opt out with each extension.

The Debt Guarantee Program guarantees bank debt, including commercial paper, interbank funding debt, promissory notes, and any unsecured portion of secured debt. The program originally applied to debt issued before June 30, 2009, but was extended in March 2009 to apply to debt issued before October 31, 2009. The guarantee remains in effect until December 31, 2012 at the latest. Fees for the guarantees are up to 1.1% of the guaranteed debt on an annualized basis

<sup>32</sup> This section was prepared using material from CRS Report R40843, *Bank Failures and the Federal Deposit Insurance Corporation*, by Darryl E. Getter.

<sup>33</sup> See the initial announcement at <http://www.fdic.gov/news/news/press/2008/pr08100.html>. See <http://www.fdic.gov/news/news/press/2008/pr08105.html>, which provides further details of the program.

with additional surcharges of up to 0.5% depending on the maturity length of the debt and whether or not the institution is FDIC insured.<sup>34</sup>

Upon the expiration of the Debt Guarantee Program the FDIC established a limited successor program to “ensure an orderly phase-out” of the program.<sup>35</sup> This six-month emergency guarantee facility is limited to certain participating entities, who must apply to the FDIC for permission to issue FDIC-guaranteed debt during the period starting October 31, 2009 through April 30, 2010. The fee for issuing debt under the emergency facility will be at least 3%. The FDIC has not reported any guarantees issued under the emergency guarantee program in 2009.

The Transaction Account Guarantee insures all non-interest-bearing deposit accounts, primarily payroll processing accounts used by businesses, which often exceed the \$250,000 deposit insurance limit. On August 26, 2009, the FDIC adopted a final rule extending the TAG portion of the Temporary Liquidity Guarantee Program for six months, through June 30, 2010.<sup>36</sup> For institutions that choose to remain in the program, the fee will range from 0.15% to 0.25% depending on the institution’s risk.<sup>37</sup>

Participation in the TGLP has been widespread with over 7,000 of the 8,300 FDIC-insured institutions participating, most of them in both parts of the program. As of December 31, 2009, total debt issuance under the guarantee program was approximately \$209.4 billion. Amounts guaranteed under the transaction guarantee are not separately reported. Approximate fees collected on the TGLP for 2009 totaled \$7.6 billion, with \$0.6 billion of this from the transaction guarantee portion of the program.<sup>38</sup> Through 2009, the FDIC has not reported any payouts for debt defaults guaranteed under the program; if this trend continues, there would be no cost to the government from the program that would offset the program’s earnings.

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<sup>34</sup> See <http://www.fdic.gov/news/news/press/2009/pr09041.html> and <http://www.fdic.gov/regulations/resources/TLGP/faq.html>.

<sup>35</sup> The text of the final rule establishing the facility is on the FDIC website at <http://www.fdic.gov/news/board/Oct098.pdf>.

<sup>36</sup> See <http://www.fdic.gov/news/board/aug26no4.pdf>.

<sup>37</sup> See <http://www.fdic.gov/news/news/financial/2009/fi109048.html>.

<sup>38</sup> Monthly reports on debt issuance and fees assessed under the TLGP program may be found at <http://www.fdic.gov/regulations/resources/tlgp/reports.html>.

Table 14. Temporary Liquidity Guarantee Program (TLGP)

Program	FDIC			Terms and Conditions		
	Debt Guaranteed Dec. 31 2009	Debt Guaranteed at Peak	Total Income 2009 through Nov.	Current or Expected Gains(+)/ Losses(-)	Fee	Expiration Date
Debt Guarantee	\$309.4 billion	\$345.8 billion (May 2009)	\$7.0 billion	n/a	0.5%-1.1% annualized rate plus up to 0.5% surcharge; at least 3% for emergency extension.	Guarantees debt issued before Oct. 31, 2009 until Dec. 31 2012; emergency extension for debt issued before Apr. 30, 2010.
Transaction Guarantee	Not reported	Not Reported	\$0.6 billion	\$0	0.15% to 0.25%	June 30, 2010

Source: CRS; FDIC.

## U.S. Department of the Treasury

Prior to the passage of EESA and the implementation of TARP, the Treasury had comparatively little authority to intervene in financial markets. It did, however, implement one program intended to address concerns about money market mutual fund failures.

### Money Market Mutual Fund Guarantee Program

After the run on the Reserve Fund, a money market mutual fund holding Lehman Brothers commercial paper, there was an estimated \$250 billion run on other money market mutual funds. To stop the run, Treasury announced an optional program to guarantee deposits in participating money market funds. Treasury would finance any losses from this guarantee with assets in the Exchange Stabilization Fund (ESF). Treasury announced this program without seeking specific Congressional authorization, justifying the program on the grounds that the ESF can be used to protect the value of the dollar, and guaranteeing money market funds would protect the value of the dollar. After the fact, Congress addressed the money market guarantee in Section 131 of EESA, reimbursing the ESF from EESA funds, but also forbidding the future use of the ESF to provide such a guarantee. The program expired after one year in September 2009. Over the life of the program, Treasury reported that no guaranteed funds had failed, and \$1.2 billion in fees had been collected. Over \$3 trillion of deposits were guaranteed and, according to the Bank of International Settlements, 98% of money market mutual funds were covered by the guarantee, with most exceptions being funds that invested only in Treasury securities.<sup>39</sup>

<sup>39</sup> Naohiko Babanaohiko, Robert N McCauley, and Srichander Ramaswamysrichander, "US Dollar Money Market Funds and Non-US Banks," *BIS Quarterly Review*, March 2009.

Depositors in the Reserve Fund were not covered by this program, but the ESF was used to purchase its \$3.6 billion holdings of GSE securities in order to increase its liquidity.

**Table 15. Money Market Mutual Fund Guarantee Program**

Program	Federal Government				Terms and Conditions	
	Deposits Guaranteed/Assets Held End of 2009	Deposits Guaranteed/Assets Held at Peak	Total Income, Life of Program	Current or Expected Gains (+) /Losses(-)	Fee	Expiration Date
MMMF Guarantee	\$0	over \$3 trillion (life of program)	\$1.2 billion	\$0	1.5% to 2.3% of shares guaranteed	Sept. 18, 2009
Purchase of Reserve Fund's Assets	n/a	\$3.6 billion	n/a	n/a	n/a	n/a

**Source:** CBO, *Budget and Economic Outlook*, January 2009; U.S. Department of Treasury, press release, December 9, 2009; U.S. Department of Treasury, press release, September 29, 2008.

## Joint Interventions

### Public Private Investment Program (PPIP)

On March 23, 2009, Treasury announced a new plan to provide financial stability. The PPIP consists of two asset purchase programs designed to leverage private funds with government funds to remove troubled assets from bank balance sheets. Perhaps closer to the original conception of TARP, PPIP dedicates TARP resources as equity to (1) acquire troubled loans in a fund partially guaranteed by the FDIC and (2) acquire troubled securities in a fund designed to be used with loans from the Federal Reserve's TALF program and/or TARP. Both funds would match TARP money with private investment, and profits or losses would be shared between the government and the private investors. Private investors would manage the funds and the day-to-day disposition of assets. Treasury originally envisioned assets purchases through PPIP would be as high as \$1 trillion (using as much as \$200 billion in TARP funds), but to date purchases have been much more modest.

### Legacy Loan Program

A legacy loan is a problem loan that is already on a bank's balance sheet, as opposed to a potential new loan or refinance. The Legacy Loan Program is intended to reduce uncertainty about bank balance sheets and draw private capital to the financial services sector by providing FDIC debt guarantees and Treasury equity co-investment to fund private-public entities purchasing problem loans from banks.

There are several basic steps in the Legacy Loan Program as planned. Banks would identify a pool of loans that they are willing to sell. These pools would then be auctioned off by the FDIC to private bidders who have access to a 50% equity contribution by the Treasury. In addition to the



Treasury's equity contribution, the FDIC could guarantee additional loans up to a 6-to-1 debt-to-equity ratio. In an example provided by the Treasury, \$100 face value of loans might sell for \$84 in an auction. The \$84 could be financed with equity investors providing \$6, Treasury providing \$6 in equity, and other investors providing loans of \$72. The FDIC would provide guarantees on the \$72 in loans. The investors who provided the \$6 equity would manage the servicing of the loans and ongoing disposition of the assets.

As of the end of 2009, Treasury reports no TARP funds committed or disbursed under this program. On September 30, 2009, the FDIC held a pilot Legacy Loan sale, auctioning a portfolio of residential mortgages with unpaid principal of \$1.3 billion from a bank that the FDIC had taken into receivership. Residential Credit Solutions placed a winning bid of \$64 million to receive a 50% stake in this pool, and will finance the purchase with \$728 million of debt guaranteed by the FDIC.<sup>40</sup>

### **Legacy Securities Program (S-PPIP)**

The second part of the PPIP is designed to deal with existing mortgage-related securities on bank balance sheets. Unlike the Legacy Loan Program, the securities program does not provide an FDIC guarantee. Instead, the securities program is designed to be compatible with parts of the existing Term Asset-Backed Securities Loan Facility (TALF) program from the Federal Reserve, discussed in greater detail above. TALF was extended to cover legacy CMBS so that it could be accessed by PPIP participants. Under TALF, investors can use ABS as collateral for loans from the Federal Reserve, which can be used to fund the transactions.

There are several basic steps to the Legacy Security Program. Investors identify non-agency MBS that were originally rated AAA. Agency MBS refer to loans issued by Fannie Mae and Freddie Mac and non-agency MBS refers to mortgage-related securities issued by other financial institutions, such as investment banks. Private fund managers apply to Treasury to pre-qualify to raise funds to participate in the program. Approved fund managers that raise private equity capital receive matching Treasury capital and an additional loan to the fund that matches the private capital (thus far, the private investor that raises \$100 has a total of \$300 available). In addition to this basic transaction, Treasury reserves discretion to allow up to another matching loan so that, in some cases, raising \$100 makes a total of \$400 available.

Nine funds were pre-qualified by the Treasury in June 2009, and as of December 31, 2009, these funds had raised approximately \$6.2 billion of private equity capital, matched by \$18.6 billion in TARP equity and debt capital. In early January 2010, however, one of the funds reached a liquidation agreement with Treasury and will be wound down.<sup>41</sup>

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<sup>40</sup> Federal Deposit Insurance Corporation, "Legacy Loans Program – Winning Bidder Announced in Pilot Sale," press release, September 16, 2009, <http://www.fdic.gov/news/news/press/2009/pr09172.html>. FDIC reports seven other public-private partnership transactions since 2008, but classifies only the September 2009 transaction as a PPIP transaction.

<sup>41</sup> December 2009 TARP 105(a) Report, pp. 15, 30-32.

**Table 16. Public Private Investment Program (PPIP)**

Program	Federal Government			Terms and Conditions			
	Funds Disbursed/ Guaranteed End of CY2009	Funds Disbursed/ Guaranteed at Peak	Total Income 2009 through Nov.	Current or Expected Gains(+)/ Losses(-)	Interest/Dividend Rate	Warrants	Expiration Date
Legacy Securities	\$18.6 billion	\$18.6 billion	\$0.1 million	-\$3 billion (CBO) <sup>a</sup> ; -\$0.3 billion (OMB) <sup>a</sup>	LIBOR <sup>b</sup> plus “applicable margin”	yes (amount unspecified)	No new contracts/modifications to program after Oct. 3, 2010.
Legacy Loans	\$728 million	\$728 million	n/a	-\$0.3 billion (OMB) <sup>a</sup>	no contracts	yes (amount unspecified)	No new contracts/modifications to program after Oct. 3, 2010.

**Source:** December 2009 TARP 105(a) Report; December 2009 TARP Dividends and Interest Report; Congressional Oversight Panel September 2009 Oversight Report; Congressional Budget Office, *Budget and Economic Outlook*, January 2010; SIGTARP, *Quarterly Report to Congress*, January 30, 2010; OMB, *Analytical Perspectives, FY2011 President’s Budget*, Table 4-7; February 2010; Data on Structured Loan Sales from FDIC.

**Note:** For legacy securities, funds disbursed to date (not committed). For legacy loans, loans guaranteed.

- a. Expected losses for Legacy Securities and Legacy Loans combined.
- b. LIBOR = London Interbank Offered Rate.

## American International Group (AIG)

On September 16, 2008, the Fed announced that it was taking action to support AIG, a federally chartered thrift holding company with a broad range of businesses, primarily insurance subsidiaries, which are state-chartered.<sup>42</sup> Using emergency authority, this support took the form of a secured two-year line of credit with a value of up to \$85 billion and a high interest rate. In addition, the government received warrants to purchase up to 79.9% of the equity in AIG. On October 8, 2008, the Fed announced that it would lend AIG up to an additional \$37.8 billion against securities held by its insurance subsidiaries. These securities had been previously lent out and were not available as collateral at the time of the original intervention. In October 2008, AIG also announced that it had applied to the Fed’s general Commercial Paper Facility and was approved to borrow up to \$20.9 billion at the facility’s standard terms.

The financial support for AIG was restructured in early November 2008. The restructured financial support included up to a \$60 billion loan from the Fed, with the term lengthened to five years and the interest rate reduced by 5.5%; \$40 billion in preferred share purchases through TARP; up to \$52.5 billion total in asset purchases by the Fed through two Limited Liability Corporations (LLCs) known as Maiden Lane II and Maiden Lane III. AIG is contributing an additional \$6 billion for the LLCs and will bear the first \$6 billion in any losses on the asset values. Any gains from these LLCs will be shared between the government and AIG. The 79.9%

<sup>42</sup> For a comprehensive analysis of federal assistance to AIG, see CRS Report R40438, *Ongoing Government Assistance for American International Group (AIG)*, by Baird Webel.

equity position of the government in AIG remained essentially unchanged after the restructuring of the intervention.

In March 2009, a further restructuring was announced including the following:

- A partial payback of the Fed loan through a debt for equity swap of approximately \$26 billion and debt for securitized loan proceeds swap of approximately \$8.5 billion.
- Additional future TARP purchase of up to \$29.8 billion in preferred shares, at AIG's option.

The debt for equity swap closed in December 2009, with a final amount of \$25 billion being credited against the loan balance outstanding and a reduction of the maximum loan amount to \$35 billion. Finalization of the life insurance securitization has not been announced. With each restructuring, costs were reduced for AIG and risks were shifted away from AIG to the government. Since the government holds 79.9% of the common stock in AIG, however, a case can be made that the benefits of any restructuring that improves AIG's future profitability mostly accrues to the government.

To date, only the Fed loan and commercial paper bought by the Fed has generated net earnings for the government. AIG has chosen not to pay dividends on TARP funds,<sup>43</sup> and the Fed loans to Maiden Lane exceed the assets' value as of September 2009. In the long run, CBO and OMB estimate losses of \$9 billion and \$49.9 billion, respectively, on the preferred shares. Estimating long-run losses is highly uncertain, as the firm announced its first quarter of positive net earnings in the second quarter of 2009.

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<sup>43</sup> Unlike CPP preferred shares, the preferred shares issued to AIG no longer have mandatory dividends.

**Table 17.AIG Support**

Program	Federal Government			Terms and Conditions				
	Outstanding Amount End of CY2009	Outstanding Amount at Peak	Total Income CY2009	Current or Expected Gain(+) /Loss(-)	Dividend/ Interest Rate	Warrants/ Equity Interests	Subsequent Conversion	Expiration Date
Federal Reserve Loan to AIG	\$22.2 billion loan	\$87.3 billion loan (Oct. 29, 2008)	\$1.9 billion (first 9 months of 2009)	-\$989 million (provision for loan restructuring)	3 month LIBOR+3% <sup>a</sup>	warrants for 79.9% (later reduced to 77.9%) of common shares	Reduced balance by \$25 billion in exchange for equity in life insurance subsidiaries	September 2013
TARP Preferred Share Purchase	\$45.3 billion preferred shares	\$45.3 billion preferred shares	\$0	-\$9 billion (CBO); -\$49.9 billion (OMB)	10% (dividends paid at AIG's discretion)	warrants for 2% of common shares	\$1.6 billion balance outstanding <sup>b</sup>	Preferred Shares outstanding until repaid. No new contracts/ modifications to program after Oct. 3, 2010.
Fed Loan for Troubled Asset Purchases	\$33.8 billion in loans to purchase assets	\$43.9 billion loans to purchase assets (Dec. 31, 2008)	-\$275 million	-\$604 million	LIBOR+1% <sup>a</sup>	none	n/a	Securities held long-term.
Commercial Paper Funding Facility <sup>c</sup>	\$5.8 billion loan (Oct. 31, 2009) <sup>d</sup>	\$16.7 billion (Dec 31, 2008)	n/a	\$0	overnight index swap (OIS) rate+1%; OIS+3%	none	n/a	February 2010

**Source:** December 2009 TARP 105(a) Report; Federal Reserve, statistical release H.4.1, *Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks*, December 31, 2009; Federal Reserve, *Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, January 2009; AIG, *10-Q Financial Statement*, Third Quarter, 2009; Congressional Budget Office, *Budget and Economic Outlook*, January 2010; OMB, *Analytical Perspectives, FY2011 President's Budget*, Table 4-7; February 2010.

- a. LIBOR = London Inter-bank Offered Rate.
- b. In return for conversion of shares paying a mandatory dividend to shares paying an optional dividend, AIG took on an obligation of \$1.6 billion due to the outstanding dividend balance.
- c. AIG total also included in overall CPFF activity in section above.
- d. Latest date available.

## **Fannie Mae and Freddie Mac<sup>44</sup>**

The Housing and Economic Recovery Act of 2008 (HERA)<sup>45</sup> created a new regulator, the Federal Housing Finance Agency (FHFA), for Fannie Mae and Freddie Mac, and included authorization for the government to take the companies into conservatorship and temporary authority to provide unlimited funds to Fannie Mae and Freddie Mac if necessary. There were no specific limits to these purchases or loans, but they were subject to the statutory limit on the federal government's debt.

On September 7, 2008, FHFA placed Fannie Mae and Freddie Mac into conservatorship.<sup>46</sup> FHFA defines conservatorship as "the legal process in which a person or entity is appointed to establish control and oversight of a Company to put it in a sound and solvent condition. In a conservatorship, the powers of the Company's directors, officers, and shareholders are transferred to the designated Conservator."<sup>47</sup> As part of this conservatorship, the firms signed contracts to issue new senior preferred stock to the Treasury, which agreed to purchase up to \$100 billion of this stock from each of them to cover realized shortfalls between the GSEs' assets and liabilities.<sup>48</sup> This \$100 billion limit was later raised to \$200 billion, and, a week before the authority to sign new contracts expired, the contracts were amended to remove the cap between 2010 and 2012. Treasury also agreed to make open market purchases of new Fannie Mae- and Freddie Mac-issued mortgage-backed securities until its authority expired at the end of 2009. Treasury also agreed that if the companies had difficulty borrowing money, Treasury would create a Government Sponsored Enterprise Credit Facility to provide liquidity to them, secured by mortgage-backed securities (MBS) pledged as collateral. The facility was never formalized or accessed, and expired at the end of 2009. In return for the Treasury support, each company issued the Treasury \$1 billion of senior preferred stock without additional compensation, as well as warrants (options) to purchase up to 79.9% of each company's common stock.

On November 25, 2008, the Fed announced it would purchase direct obligations (e.g., bonds) issued by these institutions and the Federal Home Loan Banks and mortgage-backed securities (MBS) guaranteed by Fannie Mae, Freddie Mac, and Ginnie Mae, a government agency. The Fed eventually settled on planned purchases of \$175 billion of bonds and \$1.25 trillion of MBS. These obligations would be purchased through auctions and MBS would be purchased on the Fed's behalf by private investment managers on the open market. Assets purchased under these programs would be held passively and long-term.

According to the latest figures, FHFA reports that the Treasury had purchased \$110.6 billion of preferred shares and \$220.8 billion debt issued by Fannie Mae and Freddie Mac at the end of

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<sup>44</sup> This section prepared with the assistance of N. Eric Weiss, Specialist in Financial Economics.

<sup>45</sup> P.L. 110-140, 122 Stat. 2654.

<sup>46</sup> For more information see the September 7, 2008, statement by Treasury Secretary Henry Paulson at <http://ustreas.gov/press/releases/hp1129.htm>; and CRS Report RL34661, *Fannie Mae's and Freddie Mac's Financial Problems*, by N. Eric Weiss and CRS Report RS22950, *Fannie Mae and Freddie Mac in Conservatorship*, by Mark Jickling.

<sup>47</sup> Federal Housing Finance Agency, *Questions and Answers on Conservatorship*, press release, September 7, 2008.

<sup>48</sup> For an analysis of options to restructure these two housing GSEs, see CRS Report R40800, *Options To Restructure Fannie Mae and Freddie Mac*, by N. Eric Weiss. For information about the conservatorship of Fannie Mae and Freddie Mac, see CRS Report RL34657, *Financial Institution Insolvency: Federal Authority over Fannie Mae, Freddie Mac, and Depository Institutions*, by David H. Carpenter and M. Maureen Murphy.

December 2009. As of December 30, 2009, The Federal Reserve had purchased \$1,012.5 billion of MBS guaranteed by Fannie and Freddie and \$128.8 billion of their debt.<sup>49</sup> The Fed earned \$1.2 billion on their debt holdings and \$11.4 billion on their MBS, offset by \$411 million in realized capital losses. The Fed faces no default risk on its GSE holdings as long as the Treasury continues to stand behind the GSEs.

On a risk-adjusted present value basis, CBO estimated that Fannie Mae's and Freddie Mac's combined liabilities exceeded their assets by \$291 billion in present value terms in 2009 – a gap that Treasury pledged to bridge with federal funds. In addition, CBO projected that, going forward, the entities will undertake new business over the next ten years with a cumulative net cost to the government of \$98 billion in risk-adjusted present value terms (assuming no further policy change to the entities' business activities).<sup>50</sup>

It is doubtful that Fannie Mae and Freddie Mac could repay the large outstanding liabilities in the course of their normal operations. This may require consideration of a larger reform of these enterprises. Previously, the Administration had stated that it would present proposals for the future of the GSEs with the FY 2011 budget, which contained the statement, "The Administration continues to monitor the situation of the GSEs closely and will continue to provide updates on considerations for longer term reform of Fannie Mae and Freddie Mac as appropriate."<sup>51</sup>

**Table 18. Fannie Mae and Freddie Mac Support**

Program	Federal Government			Terms and Conditions			
	Asset Holdings End of CY2009	Asset Holdings at Peak	Total Income CY2009	Current or Expected Gains(+)/ Losses(-)	Dividend Rate	Warrants	Expiration Date
Senior Preferred Stock (Treasury)	\$110.6 billion	\$110.6 billion	\$6.8 billion; \$1 billion of preferred stock	-\$291 billion for GSE operations to date (CBO)	10%, rising to 12% if dividends are unpaid	79.9% of common stock with strike price near zero?	Contracts cannot be amended after end of 2009
New MBS Purchases (Treasury)	\$220.8 billion	\$220.8 billion	n/a	n/a	n/a	none	End of 2009
Existing MBS Purchases (Fed)	\$1,012.5 billion	\$1,012.5 billion	\$11.4 billion through Q3	-\$411 million	n/a	none	none
Debt Purchases (Fed)	\$128.8 billion	\$128.8 billion	\$1.2 billion through Q3	\$0	n/a	none	none

<sup>49</sup> Federal Housing Finance Agency, Current Data on Treasury and Federal Reserve Purchase Programs for GSE and Mortgage-Related Securities, January 28, 2010, <http://www.fhfa.gov/webfiles/15387/TreasFED12272009.pdf>.

<sup>50</sup> Congressional Budget Office, *Budget and Economic Outlook*, p. 26, January 2009.

<sup>51</sup> Office of Management and Budget, *Budget of the U.S. Government: Analytical Perspectives*, February 1, 2010, p. 352, <http://www.gpoaccess.gov/usbudget/fy11/pdf/spec.pdf>.

**Source:** Federal Housing Finance Agency, Current Data on Treasury and Federal Reserve Purchase Programs for GSE and Mortgage-Related Securities, January 28, 2010; Congressional Budget Office, *CBO's Budgetary Treatment of Fannie Mae and Freddie Mac*, January 2010.

## Citigroup

On November, 23, 2008, the Treasury, Federal Reserve, and FDIC announced a joint intervention in Citigroup, which had previously been a recipient of \$25 billion in TARP Capital Purchase Program funding. This exceptional intervention consisted of an additional \$20 billion purchase of preferred shares through the TARP Targeted Investment Program (TIP) and a government guarantee for a pool of \$306 billion in Citigroup assets (reduced to \$301 billion when the guarantee was finalized on January 16, 2009) through the TARP Asset Guarantee Program. Should there have been losses on the pool, Citigroup exclusively would have borne up to the first \$29 billion. Any additional losses would have been split between Citigroup and the government, with Citigroup bearing 10% of the losses and the government bearing 90%. The first \$5 billion of government's losses would have accrued to the TARP; the next \$10 billion would have accrued to the FDIC; and all further losses would have been borne by the Fed through a non-recourse loan. Citigroup paid the federal government a fee for the guarantee in the form of \$4 billion in trust preferred securities paying an 8% dividend rate. The government also received warrants in both of these transactions that were "out of the money" at the end of FY2009, meaning their strike (redemption) price was above the current market price.

On February 27, 2009, Citigroup and Treasury officials agreed that the Treasury Department would convert \$25 billion of its CPP investment in Citigroup preferred stock into Citigroup common stock, and cancel the warrants taken by Treasury under the CPP. After this conversion, the U.S. government owned approximately 33.6% of Citigroup common stock. The conversion of preferred shares to common stock worsens the government's relative claims on Citigroup's assets in the event of liquidation. By reducing the overall claims on Citigroup, it improved certain capital ratios and was no longer required to pay the government dividends on these shares. The conversion also exposes the government to more potential risk and potential upside reward. The government's preferred shares had to be redeemed at par value, regardless of the performance of the company while the government's holdings of common stock will rise and fall in value based on the market capitalization of the company. At the end of FY2009, the market value of the common stock had risen by \$12 billion compared to what the government had paid – TARP recorded this as a financial gain although it is unrealized. Common stock also confers voting rights to Treasury, which it plans to exercise in limited situations. In addition, the additional TIP preferred shares held by the government were converted into approximately \$27.1 billion in trust preferred securities.<sup>52</sup>

In December 2009 Citigroup and the Treasury reached an agreement to repay the outstanding \$20 billion in preferred securities and to cancel the asset guarantee. As part of this agreement, Treasury agreed to cancel \$1.8 billion worth of the trust preferred securities originally paid as a fee for the guarantee. While the asset guarantee was in place, no losses were claimed and no federal funds paid out. The common equity holdings in Citigroup were still outstanding at the end of 2009.

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<sup>52</sup> See page 8 of Citigroup's quarterly SEC Form 10-Q at <http://www.citigroup.com/citi/fin/data/q0902c.pdf>.

**Table 19. Citigroup Support**

Program	Federal Government			Terms and Conditions				
	Asset Holdings/ Guarantees End of CY2009	Asset Holdings/ Guarantees at Peak	Total Income CY2009	Current or Expected Gains(+)/ Losses(-)	Dividend/Fee	Warrants end of FY2009	Subsequent Conversion/ Amendment	Expiration Date
Capital Purchase Program	\$25 billion (par value)	\$25 billion (par value)	\$932 million dividend payments	+\$12 billion (Treasury)	preferred: 5% dividend for first 5 years, 9% thereafter; common: none	cancelled upon conversion to common stock	Converted preferred shares to common stock. Shares outstanding until sold.	No new contracts/modifications to program after Oct. 3, 2010.
Targeted Investment Program	\$0 billion	\$27.1 billion trust preferred securities until Dec. 2009	\$1.6 billion	+\$2 billion (CBO); +\$1.9 billion (OMB) <sup>a</sup>	8% dividend	188,501,404 (10% of preferred shares issued) with strike price of \$10.61	Converted preferred shares to trust preferred securities.	n/a
Asset Guarantee Program	\$0 billion	\$301 billion (up to \$244.8 billion of losses borne by Fed, Treasury and FDIC) until Dec. 2009	\$277 million in dividends; \$50 million termination fee to Fed	\$0 (CBO); +\$3 billion (Treasury)	following termination, \$2.2 billion in trust preferred securities with 8% dividend	66,531,728 with strike price of \$10.61 per share	\$1.8 billion canceled upon termination of Asset Guarantee.	n/a

**Sources:** December 2009 TARP 105(a) Report, SIGTARP, *Quarterly Report to Congress*, October 21, 2009, CBO, TARP.

**Note:** Assistance to Citigroup through CPP is also included in the CPP Table.

a. OMB reports total TIP gain of \$3.7 billion; CRS assumes gain is split evenly between Citigroup and Bank of America.



## Bank of America

On January 16, 2009, the Treasury, Federal Reserve, and FDIC announced a joint intervention in Bank of America, which had previously been a recipient of \$25 billion in TARP Capital Purchase Program funds. This exceptional assistance included the purchase of an additional \$20 billion of Bank of America preferred shares through the TARP Targeted Investment Program and a joint guarantee on a pool of up to \$118 billion of Bank of America's assets (largely acquired through its merger with Merrill Lynch) through the TARP Asset Guarantee Program, the FDIC, and the Federal Reserve. The announced guarantee was to remain in place for 10 years for residential mortgage-related assets and five years for all other assets. Bank of America will bear up to the first \$10 billion of losses on the assets, with subsequent losses split 90% by the government and 10% by Bank of America. Within the government, the losses were to be split between TARP, the FDIC, and the Fed. Bank of America was to pay the federal government a fee for the guarantee in the form of \$4 billion in preferred stock with an 8% dividend rate and warrants to purchase common stock worth \$2.4 billion at the time of the agreement. At the end of FY2009, the warrants received through the CPP were "out of the money," meaning the strike (redemption) price was below the current market price, and the warrants received through the TIP were "in the money," meaning the strike (redemption) price was above the current market price.

While the asset guarantee was announced in January 2009, a final agreement was never signed. On September 21, 2009, Bank of America announced that it had negotiated a \$425 million termination fee that allowed it to withdraw from the Asset Guarantee Program, canceling the warrants and preferred shares issued for the program. On December 9, 2009, Treasury announced that Bank of America had repurchased the \$45 billion in preferred stock previously purchased under TARP. At the end of 2009, no government assistance to Bank of America was outstanding.

**Table 20. Bank of America Support**

Program	Federal Government			Terms and Conditions			
	Asset Holdings/ Guarantees End of CY2009	Asset Holdings/ Guarantees at Peak	Total Income CY2009	Current or Expected Gains(+)/ Losses(-)	Dividend Rate/Fee	Warrants End of FY2009	Expiration Date
Capital Purchase Program	\$0	\$25 billion until Dec. 2009 <sup>a</sup>	\$1.3 billion	n/a	5% for first 5 years, 9% thereafter	121,792,790 with strike price of \$30.79	n/a
Targeted Investment Program	\$0 billion	\$20 billion until Dec. 2009	\$1.4 billion	+\$1 billion (CBO); +\$1.9 billion (OMB) <sup>b</sup>	8%	150,375,940 (10% of preferred shares issued) with strike price of \$13.30	n/a

Federal Government				Terms and Conditions			
Program	Asset Holdings/ Guarantees End of CY2009	Asset Holdings/ Guarantees at Peak	Total Income CY2009	Current or Expected Gains(+)/ Losses(-)	Dividend Rate/Fee	Warrants End of FY2009	Expiration Date
Asset Guarantee Program <sup>c</sup>	\$0 billion	\$118 billion (up to \$97.2 billion of losses borne by Fed, Treasury and FDIC) until Sept. 2009	\$425 million termination fee to government (\$57 million termination fee to Fed)	n/a	n/a	n/a	n/a

**Source:** December 2009 TARP 105(a) Report, Congressional Budget Office, *Budget and Economic Outlook*, January 2010; SIGTARP, *Quarterly Report to Congress*, January 30, 2010; OMB, *Analytical Perspectives, FY2011 President's Budget*, Table 4-7; February 2010.

**Notes:** Assistance to Bank of America through CPP is also included in the CPP Table.

- a. Of the \$25 billion of preferred shares, \$10 billion were originally issued by Merrill Lynch, which subsequently merged with Bank of America.
- b. OMB reports total TIP gain of \$3.7 billion; CRS assumes gain is split evenly between Citigroup and Bank of America.
- c. Proposed agreement; never finalized.

## Appendix. Historical Financial Interventions

**Table A-1** presents a brief summary of selected government interventions to assist private firms in past crises, and includes information on the type of assistance, initial outlay, and final cost to the Treasury.

**Table A-1. Summary of Major Historical Financial Interventions by the Federal Government**

Beneficiary/Source	Action	Financial Commitment	Final Cost to Treasury
U.S. Airlines P.L. 107-42 (September 22, 2001)	Loan Guarantees	Up to \$10 billion	None except implicit value of loan guarantees; under \$2 billion in loans made.
Savings and Loan Failures P.L. 101-73 (August 9, 1989)	Savings and Loan Failures and Insolvency of Federal Savings and Loan Insurance Corporation	Full faith and credit backing of Federal Savings and Loan Insurance Corporation	\$150 billion.
Continental Illinois (May-July 1984)	Recapitalization of insolvent bank	\$3.5 billion purchase of problem loans, \$3.5 billion borrowing from Federal Reserve, \$1 billion purchase of preferred shares	\$1.1 billion.
Chrysler P.L. 96-185 (January 7, 1980)	Loan Guarantees	Authorized up to \$1.5 billion. \$1.3 billion used.	\$311 million profit from sale of warrants.
New York City P.L. 95-339 (August 9, 1978)	Loan Guarantees	\$1.65 billion in guaranteed bonds	None, except the implicit value of loan guarantee.
New York City P.L. 94-143 (December 9, 1975)	Short-Term Loans	\$2.3 billion	None, except the implicit cost of the risk of loan.
Penn Central P.L. 93-236 (January 2, 1974)	Loan Guarantees in the wake of Railroad Bankruptcy	\$125 million loan guarantees; \$7 billion in federal operating subsidies	\$3 billion net loss after sale of ownership stake plus the implicit value of loan guarantee.
Lockheed P.L. 92-70 (August 9, 1971)	Loan Guarantees	\$250 million of loans guaranteed for five years with three year renewal; guarantee and commitment fees charged	\$31 million profit from sale of warrants less the lost value of loan guarantee.

**Sources:** CRS, U.S. Treasury, Federal Reserve, FDIC.

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