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Taking Stock: Independent Views on TARP's Effectiveness

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The Troubled Asset Relief Program has contributed significantly to restoring stability to the financial system. In turn, this financial stability has been instrumental to ending the Great Recession.

Some aspects of the TARP program have been more successful than others. Most effective has been the use of TARP funds to provide capital to the banking system during the height of the financial panic. The financial system would not have stabilized without this help. The use of TARP money to purchase troubled assets, through such efforts as the Fed's TALF program and Treasury's PPIP program, have not brought a significant increase in transactions, but have substantially improved credit spreads and the pricing of these assets, reducing pressure on the financial system. TARP also helped bring about the orderly bankruptcies of GM and Chrysler, forestalling what otherwise would have been a disorderly liquidation accompanied by massive layoffs throughout the industry during the worst of the recession. Where TARP has been least effective has been in stemming the foreclosure crisis and stopping the crash in house prices. Efforts to jump-start small business lending have also been largely unsuccessful.

TARP's ultimate cost to taxpayers is projected to be between \$100 and \$150 billion. This is consequential, but falls well short of the program's original \$700 billion price tag.

TARP History

Only a year ago, the nation's financial system was near collapse. Fannie Mae and Freddie Mac and insurer AIG had been effectively nationalized, Lehman Brothers, Wachovia and Washington Mutual were no longer going concerns, and nearly every other major financial institution was on the brink of failure. There were deposit runs on banks and money market funds, and financial markets were in disarray. The commercial paper market had shut down, threatening the ability of major non-financial businesses to finance their operations.

Poor policymaking helped turn what had been a serious but controllable financial crisis into an out-of-control panic in the fall of 2008. Policymakers' uneven treatment of troubled institutions from Bear Stearns to Fannie and Freddie to Lehman Brothers created uncertainty among shareholders and creditors regarding the value of all financial institutions. Stockholders dumped their shares and creditors demanded much more collateral in exchange for providing liquidity to financial institutions. The entire financial system was thrown into disarray.

The Troubled Asset Relief Program was the first large-scale attempt to restore stability to the system. In September 2008, the U.S. Treasury and Federal Reserve asked Congress to establish a \$700 billion fund, primarily to purchase poorly performing residential and commercial loans that were threatening the viability of the financial system. For a variety of economic and political reasons, Congress initially rejected TARP, further exacerbating the financial turmoil.

With the financial panic intensifying and the threats to the economy clear, Congress quickly reversed itself and TARP was established. Unfortunately, with economic conditions eroding rapidly and asset purchases extremely complex, the TARP's objective shifted to injecting capital directly into major financial institutions. This initially involved buying senior preferred stock and warrants in the nine largest American banks, and was then extended to other banks. TARP funds were subsequently used for a number of other purposes, including support for the housing and auto industries as well as back-stopping efforts by the Federal Reserve and Treasury to facilitate the purchase of troubled assets.

TARP Costs

As of mid-November 2009, an estimated \$558 billion of the original \$700 billion in TARP funds had been committed by policymakers for various purposes (see Table 1).

	Committed	Provided	Ultimate Cost
Total	558	401	100-150
CPP (Financial institutions)	208	205	15-20
<i>Less: Tarp Repayments</i>		71	
Homeowner Affordability and Stability Plan	50	27	20-30
AIG	70	70	30-35
Citi (TIP)	20	20	0
Bank of America (TIP)	20	20	0
Citi debt guarantee	5	5	0
Bank of America debt guarantee			0
Federal Reserve (TALF)	55	20	2-5
GMAC	13	13	5
GM	50	49	25-30
GM (for GMAC)	1	1	0
Chrysler	15	15	5
Chrysler Financial (loan 1/16)	2	repaid	0
Public-Private Investment Fund	30	23	2-5
SBA loan purchase	15	0	4-6
Auto suppliers	5	4	4-5

Sources: Treasury Department, Moody's Economy.com

The largest commitment of TARP funds has involved \$205 billion to recapitalize the banking system via the Capital Purchase Program (CPP). Another \$115 billion has been committed to support three distressed and systemically important financial institutions: AIG, Bank of America and Citigroup. The commitment to the motor vehicle industry, including GM, GMAC, Chrysler, and the auto suppliers, totals \$85 billion. An additional \$85 billion was committed to support the Fed's TALF program and the Treasury's PPIP program. The housing industry received a commitment of \$50 billion and some \$15 billion has been set aside to facilitate small business lending.

Of the TARP funds that were committed, I estimate that close to \$400 billion has actually been provided. Funds for the CPP total \$134 billion, as \$71 billion that was originally committed has already been repaid by stronger financial institutions that don't need direct government help. All the TARP funds committed to AIG, Bank of America and Citibank have been provided, as have most of the funds committed to the motor vehicle industry. Less than half the TARP funds committed to the housing market have been provided, as take-up on the HAMP loan modification and HARP refinancing plans backed by these funds has been very modest to date. Slow take-up on TALF and PPIP has slowed the provision of TARP funds so that well

under half the amount committed has been provided. None of the funds committed for small business lending has been provided.

Assuming no other major initiatives using the TARP fund, the ultimate cost to taxpayers of TARP is expected to be between \$100 and \$150 billion. The mostly costly aspect of TARP will be the aid to the motor vehicle industry, which could total up to nearly \$50 billion. AIG will cost taxpayers up to \$35 billion. Support to the housing market is expected to cost as much as \$30 billion. The CPP program is ultimately expected to cost between \$15 and \$20 billion, while credit losses on the TALF and PPIP programs are expected to reach \$10 billion. Some \$5 billion will be lost on the small business lending program.

To put these costs into context, the total direct cost to taxpayers of the financial panic and Great Recession is expected to end up close to \$1.2 trillion (see Table 2). Much of the cost beyond TARP relates to the fiscal stimulus packages passed in early 2008 and again in early 2009, which together will cost taxpayers nearly \$900 billion. After considering the nearly \$750 billion in indirect taxpayer costs resulting from the weaker economy and its impact on tax revenues and government spending, the total cost to taxpayers of the crisis and Great Recession is projected to be nearly \$2 trillion, equal to 14% of GDP. The savings and loan crisis in the early 1990s cost taxpayers some \$350 billion in today's dollars; \$275 billion in direct costs and \$75 billion due to the associated recession. This was equal to almost 6% of GDP at that time.

Table 2: Federal Government Response to the Financial Crisis*Billions \$, Week Ending November 12, 2009*

	Committed	Provided	Ultimate Cost
Total	12,136	4,037	1,195
Federal Reserve			
Term auction credit	900	109	0
Other loans	Unlimited	108	3
Primary credit	Unlimited	20	0
Secondary credit	Unlimited	0	0
Seasonal credit	Unlimited	0	0
Primary Dealer Credit Facility	Unlimited	0	0
Asset-Backed Commercial Paper Money Market Mutual Fund	Unlimited	0	0
AIG	41	44	2
AIG (for SPVs)	9	0	0
AIG (for ALICO, AIA)	26	0	1
Rescue of Bear Stearns (Maiden Lane)**	27	26	4
AIG-RMBS purchase program (Maiden Lane II)**	23	16	1
AIG-CDO purchase program (Maiden Lane III)**	30	23	4
Term Securities Lending Facility	200	0	0
Commercial Paper Funding Facility**	1,800	14	0
TALF	1,000	44	0
Money Market Investor Funding Facility	540	0	0
Currency swap lines	Unlimited	29	0
Purchase of GSE debt and MBS	1,450	925	0
Guarantee of Citigroup assets	286	0	0
Guarantee of Bank of America assets	108	0	0
Purchase of long-term Treasuries	300	299	0
Treasury			
TARP****	558	401	136
Fed supplementary financing account	479	479	0
Fannie Mae and Freddie Mac	400	97	51
FDIC			
Guarantee of U.S. banks' debt*	1,400	330	4
Guarantee of Citigroup debt		10	0
Guarantee of Bank of America debt		3	0
Transaction deposit accounts	500	0	0
Public-Private Investment Fund Guarantee	1,000	0	0
Bank Resolutions	Unlimited	23	83
Federal Housing Administration			
Refinancing of mortgages, Hope for Homeowners	100	0	0
Expanded Mortgage Lending	Unlimited	150	22
Congress			
Economic Stimulus Act of 2008	170	170	170
American Recovery and Reinvestment Act of 2009***	717	717	717

Notes:

*Includes foreign denominated debt

**Net portfolio holdings

*** Excludes AMT patch

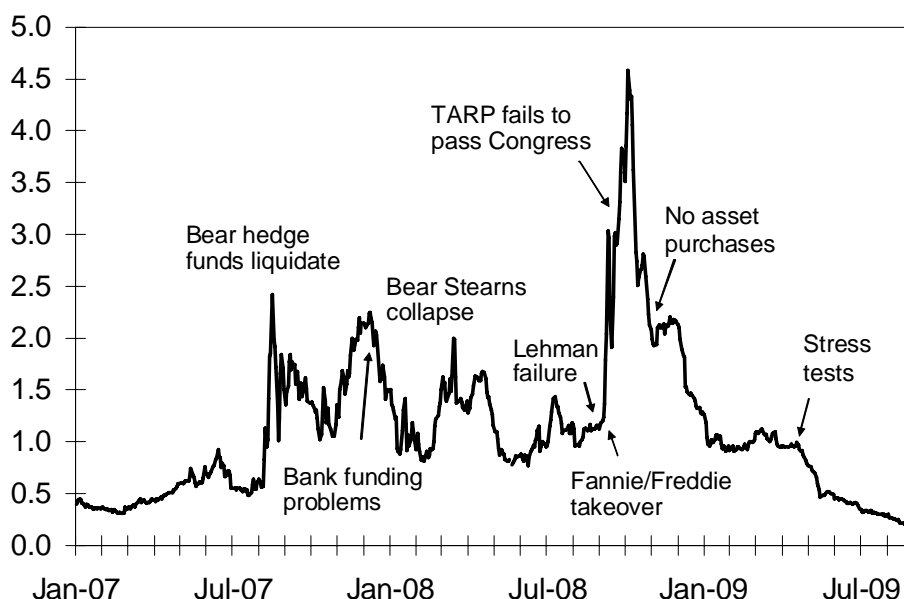
****The ultimate cost of TARP shown is the point estimate in the range of \$100 to \$150 billion

*Sources: Treasury Department, Moody's Economy.com***Capital Purchase Program**

The most successful part of the TARP program has been the CPP. Without capital injections from the federal government, the financial system would have likely collapsed. It is difficult to imagine what that would have looked like, but we can say at the very least that credit would have been pulled back much more dramatically. As it is, the economy has suffered a very severe credit crunch as private financial and non-financial debt outstanding contracted sharply during the past year.

Today, while the financial system is still not functioning normally – small banks continue to fail in large numbers and the structured finance market remains largely dormant – it is stable. This is evident in the sharp narrowing of the spread between LIBOR and Treasury bill yields. This so-called TED spread was a record wide 450 basis points at the height of the financial panic a year ago (see Chart 1). It has recently fallen to less than 25 basis points, close to the level that prevailed prior to the crisis. Depository institutions remain reluctant to extend credit to businesses and consumers, but they are lending more freely to each other, which is the first step towards the freer flow of credit across the economy.

Chart 1: Policymakers Stabilize the Banking System
Difference between 3-mo Libor and Treasury bill yields



A variety of policy initiatives helped restore stability to the financial system. The unprecedented monetary policy response, including an effective zero federal funds rate target, credit easing and a range of new credit facilities has been instrumental. Stress tests of the 19 major bank holding companies in spring 2009 and the FDIC's new guarantees of bank debt as well as higher deposit insurance limits were also important. Yet none of these efforts would likely have succeeded without the CPP, which provided the time necessary to allow these other efforts to work.

The CPP has been so successful that there is now a growing list of banks that are repaying their TARP funds. Banks have paid an appropriately high price for their TARP funds, in the form of significant dividends, restrictions on executive compensation and additional regulatory oversight. These high costs provide significant incentives for banks to repay TARP aid as quickly as possible and allow the government to exit more quickly from its significant intervention in the financial system.

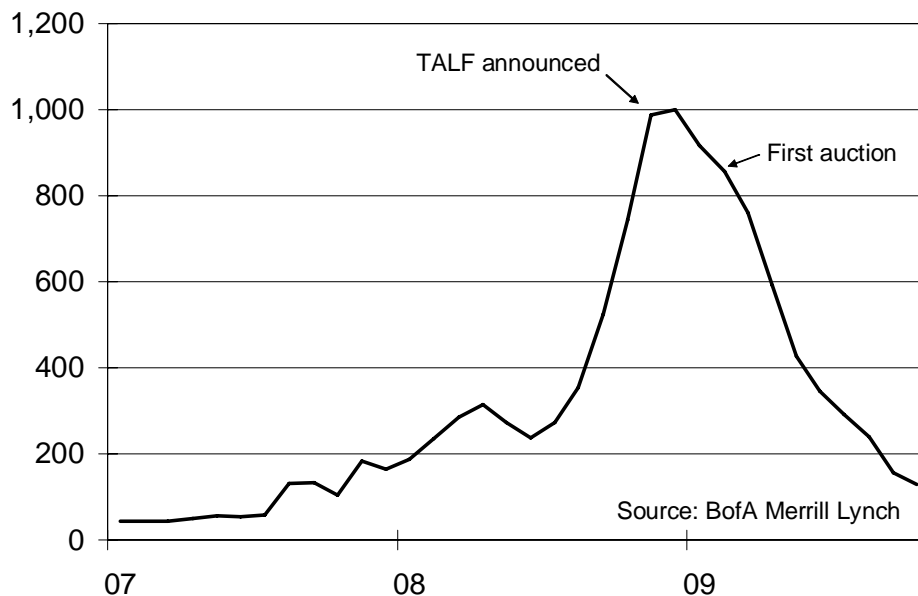
Troubled Assets

It is unfortunate that the TARP program was unable to fulfill its original objective, namely to fund the purchase of troubled assets on the balance sheet of financial institutions. These assets are still sitting on the balance sheets of these institutions and thus impairing the flow of credit. Institutions are uncertain of the value of these assets and thus their own capital adequacy. This uncertainty is limiting their willing and ability to extend credit more broadly.

Various policy efforts have been implemented to reduce the financial pressure on financial institutions of having these troubled assets on their balance sheet. For example, the bank stress tests required most of the nation's largest banks to raise substantially more capital in order that they could withstand the serious erosion in the performance of these assets that would occur under a very adverse economic scenario.

The Fed's TALF program and Treasury's PPIP program provide favorable financing to investors to purchase a wide range of assets. TARP money is used to cover the potential losses on both programs, making them possible. Neither program has resulted in a significant amount of investment activity, but they have helped to support asset prices as interest rates have fallen and spreads with risk-free Treasury yields have narrowed. When TALF was announced in late 2008, the option-adjusted spread on auto loan asset backed securities stopped rising at a whopping 1,000 basis points (see Chart 2). By the first TALF auction in early 2009, the spread had narrowed to 900 basis points and is hovering close to 100 basis points today. This spread narrowing has been driven by a multitude of factors, but arguably most importantly has been TALF.

Chart 2: TALF Risk Asset Prices
Automobile ABS, option-adjusted spread, bps



TARP funds have also been used to forestall the failure of AIG, Bank of America and Citi, thus supporting asset prices broadly. AIG has been effectively nationalized, while the government holds sizable ownership stakes in Bank of America and Citi. In a sense, the troubled assets owned by these institutions have been quarantined so that they will not infect asset markets and drive prices lower, which in turn would threaten the viability of other financial institutions.

TARP has not been able to directly remove troubled assets from the financial system, but it has been effective in mitigating the systemic risks posed by the still sizable amount of troubled assets within the financial system.

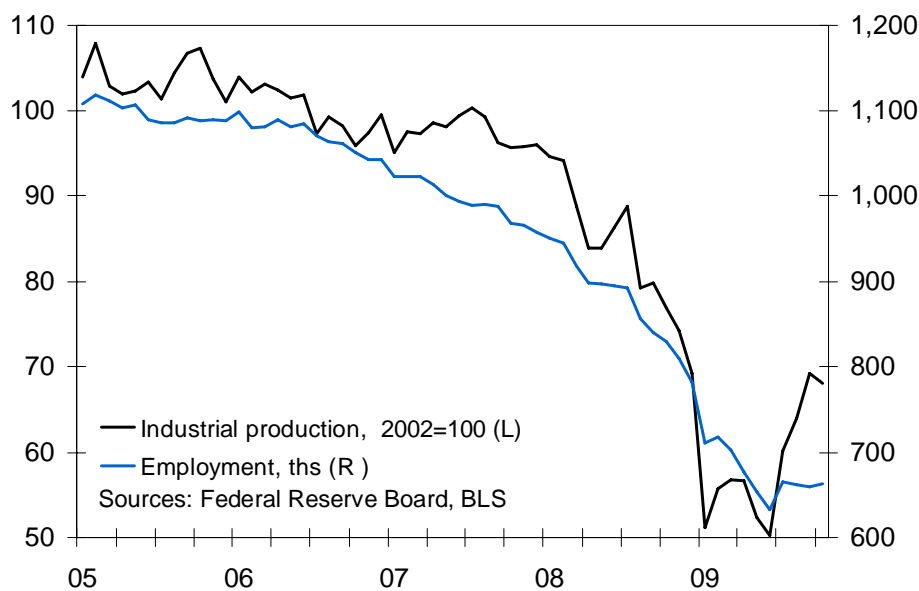
Auto Bailout

TARP was instrumental in assuring the orderly bankruptcy of GM and Chrysler and supporting the entire motor vehicle industry. Without TARP monies, these firms would have entered into bankruptcy early this year and they would have very likely ceased as going concerns. The liquidation of GM and Chrysler would have in turn caused the bankruptcy of many vehicle part suppliers and as a result Ford as well.

Without any government help, liquidation was likely, resulting in hundreds of thousands of lost jobs at the worst time for the sliding economy. The vehicle manufacturers would have filed for Chapter 11, a restructuring, but it would have likely turned into a Chapter 7, a liquidation. Their factories and other operations would be shut down and their assets sold to pay creditors. Given the collapse in the financial system and resulting credit crunch, debtor in possession, or DIP, financing would be all but impossible to get. Bankrupt firms need DIP financing to operate their businesses – to pay suppliers, finance inventories and meet payroll – while they restructure. It is a risky business for the DIP creditors even in good times, but they are a senior creditor when the bankruptcy court distributes the bankrupt firms' assets, and they also charge high rates and fees for the risk. However, in current credit crunch that prevailed earlier this year nothing would have persuaded creditors to take the risk. TARP monies were necessary to fill this void.

GM and Chrysler have been significantly rationalized, but they appear to be financially viable even at currently still very depressed vehicle sales rates. GM is considering when to begin repaying the government loans it has received and there is even discussion of when it may go public. Ford is doing measurably better and conditions actors the entire vehicle industry has improved; production is up and employment has stabilized (see Chart 3). Just a few months ago, this would have seemed very unlikely. TARP has played an instrumental role in this industry's turnaround.

Chart 3: Autos Go From Free-Fall to Stability
Motor vehicles and parts



Foreclosure Crisis

One aspect of the TARP program that has not worked well is the effort to bring an end to the residential mortgage foreclosure crisis. The Housing Affordability Stability Plan or HASP, which is funded by TARP money, has not been a success. HASP is composed of a mortgage loan modification plan known as the Home Affordability Mortgage Plan or HAMP and the Home Affordability Refinancing Plan or HARP.

The idea behind HAMP is to provide monetary incentives to homeowners, mortgage servicers and mortgage owners to modify mortgage loans largely by temporarily reducing their mortgage rate and thus monthly mortgage payment. The idea behind HARP is to allow Fannie and Freddie to refinance the loans they own or insure even if the homeowners are deeply underwater – the value of their home is less than the debt they owe on the home.

Some \$50 billion in TARP money has been committed to HAMP and HARP, but it is very unlikely these programs will be large enough to use this money. The take-up on HARP has been particularly low as homeowners are discovering that the interest rate they are being offered on a refinancing is not low enough to cover the transaction costs involved, at least sufficiently quickly. The rates are higher as the credit characteristics of many potential refiers have weakened as they have become casualties of the very difficult economy.

Take-up on the HAMP plan also looks to be falling well short of what policymakers had hoped for. When the plan was announced back in the spring, President Obama had said he expected that there would be 3-4 million in loan modifications. Instead, there will more likely be between 500K and 750k in permanent modifications (see Table 3). The problem is that many homeowners are so far underwater that even with a modification that lowers their monthly payment there is still a high probability that they will default on their modified loans. Mortgage servicers and owners have little interest in modifying these loans.

Table 3: HAMP Performance

Millions of First Mortgage Loans, January 2009

Total First Mortgage Loans	55.00
HAMP Eligible Loans <i>(Owner-occupied, non jumbo, imminent default)</i>	8.50
Less: Insufficient income even at 2% rate	2.00
Less: Too far underwater	2.50
Less: Default probability too high or too low	2.00
Loans That are NPV Positive	2.00
Less: Servicers don't participate in HAMP	0.30
Trail Modifications	1.70
Less: Trail mods that fail	1.02
Permanent Modifications	0.68
Less: Redefaults	0.20
Foreclosures Avoided	0.48

Assumptions:

Based on historical data through 2009q3

Peak-to-trough house price decline 38% based on Case Shiller national house price index; trough in 1010q3

10.7% peak unemployment rate in 2010q3

Federal funds rate 0% at year-end 2009, 1% year-end 2010, 3.25% year-end 2011, 4.5% by year-end 2012

10-year Treasury yield of less than 5.5% through 2012

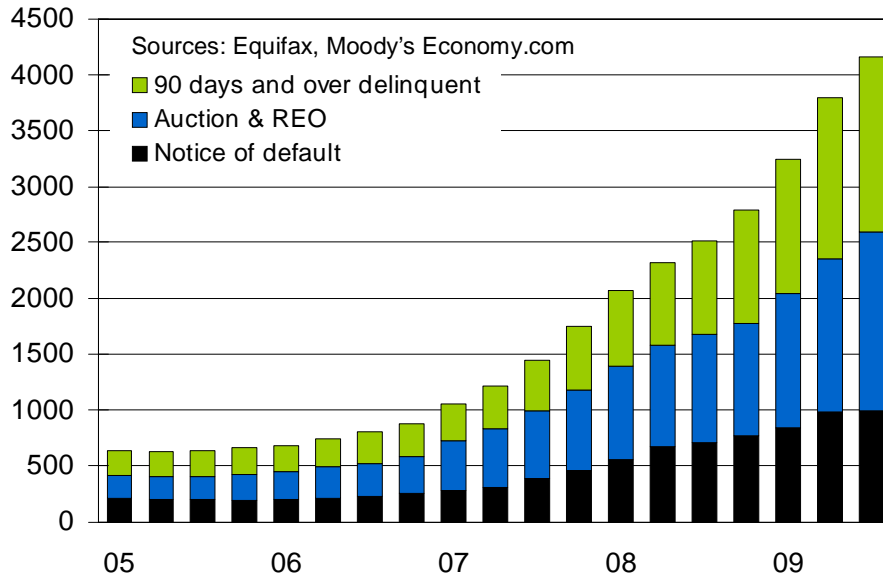
30% redefault rate

40% pass-through from trial to permanent HAMP modification

Source: Equifax, Moody's Economy.com

However, the HAMP plan has slowed down the foreclosure process this summer. Mortgage servicers and owners have been working to determine which of their troubled mortgage loans might qualify for the plan. The slowing in foreclosure sales has also resulted in more stable house prices this past summer. Loans are backing up in the foreclosure pipeline. As of the end of September, based on credit file data there were an astounding 4.2 million first mortgage loans in the foreclosure process or headed in that direction as they were 90 days and over delinquent (see Chart 4). For context, there are 52 million first mortgage loans outstanding.

Chart 4: The Foreclosure Crisis Continues to Mount
Ths of first mortgage loans



Mortgage servicers and owners will eventually determine that many of these loans are not viable candidates for the HAMP plan and will resume pushing these loans through the foreclosure process to a sale. Foreclosure sales are thus expected to increase measurably early in 2010, forcing a resumption of the house price declines.

For the HAMP plan to work more effectively it will have to be modified to include incentives for mortgage services and owners to engage in principal writedowns. At this time, this seems less than likely given pernicious and unanswered questions about moral hazard, adverse selection and fairness, although this could change if house prices resume declining next year and threaten the fragile economic recovery.

Conclusions

The TARP plan has come under withering criticism since its inception in the teeth of the financial panic over a year ago. Indeed, it was nearly still-born. These criticisms have been largely misplaced. While TARP has not been a universal success, it has been instrumental to the stabilization of the financial system and bringing an end to the Great Recession.

The CPP program gave many financial institutions a lifeline when there was no other. Without the CPP's equity infusions it is very likely the entire financial system would have come to a grinding halt. TARP has also been used to shore up asset prices and by extension the financial system by backstopping Fed and Treasury efforts to provide cheap financing to investors and ring-walling troubled assets in large systemically important financial institutions. The use of TARP money to help in the rationalization of the motor vehicle industry was vital to ensuring an orderly winding down of the industry at a time when an unraveling of the industry would have been a serious blow to the economy. TARP funds have not been

used effectively in foreclosure mitigation efforts, but policymakers will hopefully not give up and will implement the changes necessary to make the effort a success in coming months.

When all is said and done, TARP will cost taxpayers a substantial sum of money, but not nearly as much as most taxpayers and policymakers thought when the plan was conceived. TARP was well worth its' cost.