Chairman Johnson and other members of the Committee, I thank you for the opportunity to provide written testimony for the hearing on the evaluation of the effectiveness of the Troubled Asset Relief Program in stabilizing the financial system and the U.S. economy. You requested that I consider empirical evidence regarding the rollout and the implementation of TARP. I begin with a summary of that evidence.

**Rollout and Implementation**

My empirical research on the rollout and implementation of TARP goes back to its very early days. Conducted in real time, the research results were first presented in November 2008, prior to the first hearings or reports of the Congressional Oversight Panel or the Special Inspector General for the TARP. As part of an ongoing research project I had been following several measures of stress in the financial markets. I became concerned when these measures started showing that the rollout of the TARP was actually worsening the crisis. So I began to study the issue further.

The chart below summarizes some of the evidence. It is reproduced from my November 2008 study and shows the Libor–OIS spread during the period when TARP was being rolled out. The Libor-OIS spread is a well-known measure of stress in the financial markets. It is the difference between the interest rate on longer term interbank loans (Libor) and an expectation of what the overnight interest rate (federal funds rate) would be over the maturity of the loan (OIS). Higher values of the spread indicate greater stress in the markets.

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1 Mary and Robert Raymond Professor of Economics at Stanford University and George P. Shultz Senior Fellow in Economics at Stanford University’s Hoover Institution.
The chart highlights several key events in September and October 2008: the bankruptcy of Lehman brothers, the announcement of TARP, the first congressional testimony about the TARP at this Committee, and a major change in the design of program as it was implemented. Note that the spread started rising sharply in late September and kept rising until mid-October when it started to move down. The sharply worsening conditions in the markets are thus quite evident in the chart. Never before had I seen this spread rise so sharply. The question I addressed then—and am again addressing now—was what caused the worsening conditions.

Many rightly argue that when evaluating policy decisions it is important to try to place oneself close to the time of the events. So let me quote from my November 2008 paper:

“It is evident that the spread moved a bit on 15 September, which is the Monday after the weekend decision not to intervene in Lehman Brothers. It then bounced back down a little bit on 16 September, around the time of the AIG (American International Group) intervention. While the spread did rise during the week following the Lehman Brothers decision, it was not far out of line with the events of the previous year.”

“On Friday of that week, the Treasury announced that it was going to propose a large rescue package, though the size and details hadn’t yet been determined. Over the weekend, the package was put together and on Tuesday, 23 September, Federal Reserve Board Chairman Ben Bernanke and Treasury Secretary Henry Paulson testified at the Senate Banking Committee about the TARP, saying that it would be $700 billion in size. They provided a 2½-page draft of legislation with no mention of oversight and few restrictions on the use. They were questioned intensely in this testimony and the reaction was quite negative, judging by the large volume of critical mail received by many members of the United States Congress….it was following this testimony that one really begins to see the crisis deepening, as measured by the relentless upward movement in the LIBOR-OIS spread for the next three weeks. The situation steadily deteriorated, and the spread went through the roof to 3.5 per cent.”
“… it is plausible that events around 23 September actually drove the market, including the realization by the public that the intervention plan had not been fully thought through and that conditions were much worse than many had been led to believe. At a minimum, a great deal of uncertainty about what the government would do to aid financial institutions, and under what circumstances, was revealed and thereby added to business and investment decisions at that time. Such uncertainty would have driven up risk spreads in the interbank market and elsewhere. Some evidence of the uncertainty is found in a survey taken later (5 November) by the Securities Industry and Financial Markets Association (SIFMA); it showed that 94 per cent of securities firms and banks found that the TARP lacked clarity about its operations.”

“The problem of uncertainty about the procedures or criteria for government intervention to prevent financial institutions from failing had existed since the time of the Bear Stearns intervention in March. The implication of that decision for future interventions was not made clear by policy-makers. This lack of predictability about Treasury-Fed intervention policy and recognition of the harm it could do to markets likely increased in autumn 2008 when the underlying uncertainty was revealed for all to see.”

Further examination of the empirical evidence confirms the view expressed at that time. Note that the Libor-OIS spread ended its upward climb at the same time that a major source of uncertainty about the TARP was removed. Recall that the original idea of TARP, upon which the TARP was sold, was to relieve certain financial institutions of their troubled assets by buying the assets from the institutions. Few understood how this idea would work—how the price would be determined for example—which added to the uncertainty. This original idea was changed after the TARP was enacted and the government announced that it would simply inject capital into the banks. When the uncertainty was removed, conditions began to improve.

Another aspect of the TARP rollout that is consistent with the view that it helped to worsen financial conditions is that government officials told lawmakers in closed hearings, which soon leaked out to an alarmed public, that America would experience another great depression if the TARP legislation were not passed, and perhaps even if it were passed. Clearly this helped cause panic in the financial markets. You can see this in the equity markets in the United States and abroad. As shown in the chart below, covering the September-October 2008 period, the S&P 500 closed at 1252 on Friday, September 12, 2008, before the Lehman bankruptcy. It fell on Monday after the news of the bankruptcy but recovered during the week closing on the following Friday, September 19 at 1255, above the level before the bankruptcy. It was not until the following week and the rollout of the TARP that the market began to fall sharply. And it continued to fall until Friday October 10, when the S&P 500 hit 899. This was the last trading day before the government clarified how the TARP would be used.
Here are the corresponding data for equity markets in Britain, Germany, France, Brazil, and Japan. The timing of the moves tells the same story.

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<th>Date</th>
<th>S&amp;P 600</th>
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Other views

There have been other assessments of the effectiveness of the TARP. In a book published last year, former FDIC chairman William Isaac concluded\(^3\) that “any objective analysis would conclude that the TARP legislation did nothing to stabilize the financial system that could not have been done without it. Moreover, the negative aspects of the TARP legislation far outweighed any possible benefit.” In recent testimony before the Congressional Oversight Panel, economist Joseph Stiglitz\(^4\) said that “TARP has not only been a dismal failure…but the way the program was managed has, I believe, contributed to the economy’s problems.”

Not everyone of course has such negative assessments. In its last report\(^5\) the Congressional Oversight Panel said, “It is now clear that, although America has endured a

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wrenching recession, it has not experienced a second Great Depression. The TARP does not deserve full credit for this outcome, but it provided critical support to markets at a moment of profound uncertainty.” In testimony before the Congressional Oversight Panel, acting Assistant Secretary of Treasury Timothy Massad goes further arguing that the TARP prevented an even more severe crisis, citing as empirical evidence a paper by Alan Blinder and Mark Zandi. However, Blinder and Zandi explain in their paper that they did not do a separate evaluation of the TARP, stating that “We make no attempt to decompose the financial-policy effects into portions attributable to TARP, to the Fed’s quantitative easing policies, etc.” Empirical evidence showing the effectiveness of TARP is lacking.

It should also be noted that many of those economists who view the TARP as having a beneficial effect argue that there were much better alternatives that could have avoided the financial panic and would have been far less costly with fewer long-term side effects. For example, Luigi Zingales notes that “it is both false and misleading to say that there were no other alternatives. False because there were feasible, and in fact superior, alternatives. Misleading because it made TARP appear inevitable, forcing people not to question its costs.”

In my view the TARP was not effective in stabilizing the financial system, especially if one takes into account the panic caused by its chaotic rollout and the fact that other actions could have been taken. Indeed other actions were taken, including the Fed’s support for the commercial paper market and money market mutual funds, and I believe these were effective in mitigating the panic, which evidence shows was in part caused by the TARP

**Legacy Costs**

Although disagreement remains about whether TARP was destabilizing or stabilizing in the short run, there is very little disagreement about the longer-run legacy costs which are substantial, long-lasting, and already being felt. Consider the views from recent reports by oversight bodies and independent observers.

In January the Special Investigator General of the TARP listed these costs:

- “damage to Government credibility that has plagued the program,”
- “failure of programs designed to help Main Street rather than Wall Street,”
- “moral hazard and potentially disastrous consequences associated with the continued existence of financial institutions that are ‘too big to fail’”

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7 Alan Blinder and Mark Zandi “Policy Responses and the Great Recession,” July 2010
9 Quarterly Report, Office of the Special Inspector General for the Troubled Asset Relief Program, January 26, 2011
At the last hearing of the Congressional Oversight Panel earlier this month, economists Joseph Stiglitz, Allan Meltzer, Simon Johnson, and Luigi Zingales, who rarely all agree with each other, were unanimous in their view that the precedent set by TARP has created an incentive for financial institutions and their creditors to take high risks due to the expectation of being bailed out, unfairly favoring large financial institutions and leaving the financial system more vulnerable than ever to financial crisis. Here they echoed the third point of Special Inspector General for the TARP. They also agreed that the Dodd-Frank legislation has not solved the too big to fail problem.

And just yesterday the Congressional Oversight Panel released its final report listing these additional effects of TARP:

- “continuing distortions in the market”
- “public anger toward policymakers,”
- “a lack of full transparency and accountability.”

To these I would add that the TARP established an unfortunate precedent of heavy government intervention in the operations of private businesses along with the use of a great deal of power. For example, the government forced some financial institutions to take TARP capital injections, even if they did not want them, by threatening costly actions from their regulators, and then placed additional controls on such institutions because they had the unwanted capital. In addition, the government used the TARP for purposes other than originally stated in Congressional hearings, including the bailing out of automobile companies.

Most of these legacy costs will be a drag on the U.S. financial system and economy for years to come unless the precedents are reversed, perhaps through legislation. Some argue that the costs of TARP are small because estimates show that the government will lose less money than budget experts originally thought. But government programs can cause much harm to the economy and to people even if they raise revenue. For example, inflation is enormously costly to society even though it is a source of revenue to the government.

Conclusion

In sum, in my view there is no convincing evidence to support the view that the TARP had a stabilizing effect on the financial markets or the U.S. economy. On the contrary there is evidence that the chaotic rollout of the TARP exacerbated the crisis. Even if one can find some stabilizing effects, it is clear that other actions could have been taken that did not have these rollout costs. Finally, there is a considerable consensus among economists that the legacy costs of TARP are large, especially the perpetuation and amplification of the destabilizing “too big to fail” problem in our financial system caused by the expectations of more bailouts in the future.