

## Assessing the Federal Policy Response to the Economic Crisis

Testimony before the  
Committee on the Budget  
United States Senate

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Thank you, Chairman Conrad, Ranking Member Gregg, and other members of the Senate Budget Committee for inviting me to testify on the role of federal policy in the economic crisis.

It has been more than three years since the economic crisis first flared up in August 2007, and the U.S. economy is still operating far below its potential. Unemployment is high at 9.6 percent. Economic growth is low at 1.6 percent. Hopes for a strong economic recovery were high after the fall 2008 panic phase of the crisis, but these hopes were dashed as the recovery fizzled and economic growth fell sharply this year compared to last year. Unfortunately, slow growth and high unemployment are projected to continue largely due to the drag of uncertainty about economic policy including the risks and burdens of the growing government debt.

The purpose of this testimony is to assess the impact of federal economic policy related to the crisis. I have written and testified earlier about the role of federal policy in *causing* the crisis, including the role of monetary policy in keeping interest rates too low for too long leading up to the crisis, the role of Fannie Mae and Freddie Mac in encouraging the origination of risky mortgages, and the role of regulatory policy in failing to administer effectively financial regulations on the books.

Here I focus on the overall *response* of federal policy to the crisis, including fiscal policy and monetary policy. I draw on and summarize the results of a research project (described in the appendix) in which I have been engaged at Stanford University during the past three years. The main purpose of the research is to provide a comprehensive empirical evaluation of policy and thereby draw policy lessons for the future.

### ***Fiscal Policy Responses***

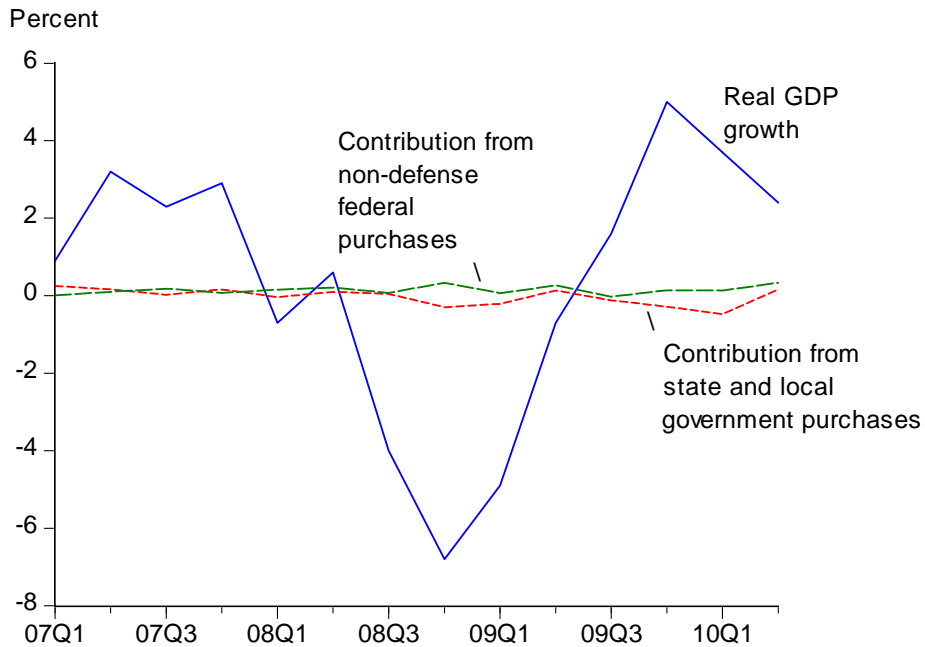
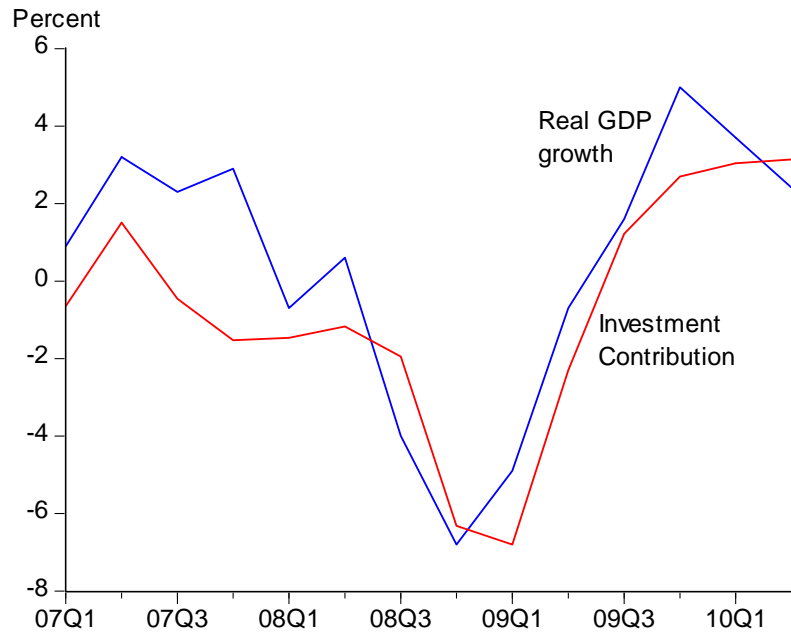
The federal fiscal policy response to the economic crisis mainly took the form of discretionary short-term stimulus packages. In my view these did not stimulate the economy much if at all. Now, rather than leaving the economy in a stronger growth position, the interventions have weakened the economy and left it with the burdens of increased debt and higher government spending as well as concerns about future tax increases. While the cash-for-clunkers and the first-time home buyers programs moved purchases forward by a few months, they did not increase economic growth on a more permanent basis.

I base my conclusions on empirical research that examines the direct impacts of different components of the stimulus packages as well as on basic economic theory including the theory incorporated in modern econometric models. First consider the American Recovery and Reinvestment Act of 2009. One component of this stimulus package focused on temporarily increasing people's disposable income by sending checks, temporarily increasing tax credits, and correspondingly reducing withholding. The objective of this part of the package was to jump-start consumption demand and thereby jump-start the economy. Aggregate disposable personal income did jump at the start of the stimulus; however, aggregate personal consumption expenditures did not increase by much if at all around that time. If you examine data at the aggregate level, the stimulus package had no noticeable effect on consumption. The same was true of the fiscal policy response passed in February 2008 in which checks were also sent to people on a one-time basis. Disposable income rose but there was no noticeable increase in personal consumption expenditures. It is important to emphasize that this is what well-known economic principles—in particular the permanent income theory and the life cycle theory of consumption—would predict from such temporary payments. In other words the small impact of the policy response is exactly what one would have expected based on economic reasoning.

Next consider the government purchases part of the stimulus package of 2009, also designed to stimulate economic growth. An examination of what actually happened indicates that such purchases had little to do with the recovery in economic activity, and they have not prevented the recent slowdown. Data from the Bureau of Economic Analysis provide the evidence: Changes in government purchases did not correlate with the changes in economic growth from recession to recovery. On the contrary, most of the recovery last year has been due to investment—including inventory investment—and has little to do with the discretionary stimulus package.

The two charts below illustrate the story in simple graphical terms. The first chart shows the growth rate of real GDP and the percentage contribution to that growth from private investment, including inventory investment. Note that real GDP growth declined in the recession, then began to increase in the recovery, and now has slowed down again. Note also that the changes in investment are closely correlated with these ups and down in the economy.

The second chart shows the contribution of both nondefense federal government purchases and state-local government purchases of goods and service to the growth rate of GDP. Contributions from defense spending are not shown because they were not part of the stimulus package. Note that these government purchases have little to do with the ups and downs of GDP during this period. If the increase in government spending in the stimulus package actually increased real GDP growth and created jobs, one would likely have seen a more noticeable effect in the decompositions. The impact of government purchases is particularly small in comparison with investment. Changes in consumption and net exports (not shown here) are also more significant than the changes in government purchases, but the main story is investment.



**Decompositions of Real GDP Growth into Contribution Due to Investment (upper graph) and Contribution due to Government Purchases (lower graph).**

Source: Bureau of Economic Analysis

How can the contributions of the change in government purchases be so small given that the stimulus was \$862 billion? One reason is that the part of the package explicitly devoted to federal purchases of goods and services was quite small. In fact, of the \$862 billion package, the amount of government purchases at the federal level was \$7.9 billion in 2009 and \$10.5 in the first half of 2010 according to the Bureau of Economic Analysis. Focusing on infrastructure spending (gross investment) at the federal level the amount was even smaller: \$.9 billion in 2009 and \$1.5 billion in the first two quarters of 2010. Thus, of the total \$862 billion only 3 tenths of a percent has been on federal infrastructure projects.

A larger amount of government purchases might be expected at the state and local level, and indeed grants by the federal government to the states were a large part of the stimulus package of 2009. However, uncertain timing by which state governments spend federal grant money as well as the fungible nature of grant funds makes it difficult to translate grants into purchases. In fact, both government gross investment (infrastructure) and government consumption purchases at the state and local level have declined since the economic crisis began. Moreover, according to aggregate statistics they show little positive association with the federal grants to state and local government once one controls for the state of the economy and other sources of receipts. In any case there is little evidence that on balance the stimulus packages increased government purchases at the state and local level.

One could posit other counterfactuals in which state and local government spending might have declined by a larger amount without the stimulus, but more research is needed to determine what would have happened in the counterfactual of “no discretionary stimulus.” In the meantime these data at the least suggest that the recovery and the slowdown have been due to changes in investment not government purchases.

Another approach to evaluate the impact of the response of policy is to use econometric model simulations. However, in most attempts to evaluate policy using models, the results are built in to the models, and were built in well before the stimulus package was enacted. Frequently the same economic models that said, a year and half ago, that the impact would be large are now used to show that the impact is in fact large. In other words these assessments are not based on the actual experience with the stimulus.

For example, economists John Cogan, Volker Wieland, Tobias Cwik and I raised questions about the robustness of estimates of the impact of the stimulus package soon after they were released by the Administration (in a white paper by Christina Romer and Jared Bernstein) in January 2009. Their estimates were based on models which were much different from more modern models which take account of expectations of the future, including increases in debt and future taxes. We found the economic impacts to be much smaller using the more forward looking models than the older Keynesian models. Since then many technical papers have been written on this subject and in my view the consensus is that the impacts of the stimulus package are much smaller than originally reported by the Administration.

Another example is the recent working paper by economists Alan Blinder and Mark Zandi on the impact of federal stimulus policies. In this case, the policies are run through a model and the paper reports what the model says would happen. It does not look at what actually happened, and it does not look at other models. I explained the defects with this type of exercise

in testimony at a July 1, 2010 House Budget Committee hearing. I showed that the results are entirely dependent on the model: old Keynesian models show large effects and more modern models show smaller effects.

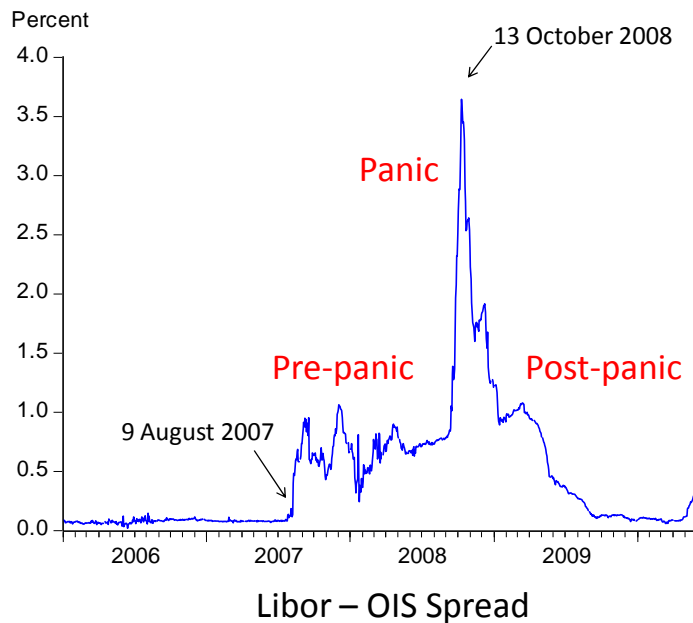
Other evidence from models comes from an International Monetary Fund study which reports estimates of government spending impacts which are much smaller than those previously reported by the Administration. The IMF uses a very large complex model called the Global Integrated Monetary and Fiscal (GIMF) Model. It shows that a one percent increase in government purchases (as a share of GDP) increases GDP by a maximum of 0.7 percent and then fades out rapidly. This means that government spending crowds out other components of GDP (investment, consumption, net exports) immediately and by a large amount. The IMF estimate is much less than the impact reported in the Romer and Bernstein paper.

### ***Monetary Policy Responses***

In evaluating the monetary policy response to the crisis, I think it is useful to divide the crisis into three periods. (1) The period from the flare-up of the crisis in August 2007 to the panic in late September 2008. (2) The period of the panic from late September through October 2008. (3) The period after the panic.

The three periods are illustrated in the following chart which shows a frequently used measure of financial stress in the interbank market: the interest rate spread between the 3 month interbank lending rate (Libor) and the expected federal funds rate over the same 3-month period (OIS). Note how the beginning of the economic crisis is quite evident in August 2007 and that the panic begins in late September 2008 and reaches its peak in October 2008.

## Three Phases of the Crisis: Pre-Panic, Panic, Post-Panic



The main monetary policy responses to the crisis were a cut in the federal funds rate and the use of the Fed's balance sheet to finance massive and extraordinary lending and securities purchase programs. The Federal Reserve cut the federal funds rate by two percentage points during the panic and this helped to counteract the rising interest rate spreads and thereby alleviated some of the negative impacts of the panic. In my view, however, the cuts in early 2008 were at times too sharp and erratic and may have caused a depreciation of the dollar and thereby rising oil prices, which had negative effects on the economy.

By far the most unusual response of monetary policy to the economic crisis, however, was the massive extraordinary measures in which the Federal Reserve used its balance sheet. I assess their impacts during the three phases mentioned above.

My assessment of the extraordinary monetary measures that were taken in the year before the panic is that they did not work, and that some were harmful. The Term Auction Facility (TAF) did little to reduce tension in the interbank markets during this early period, as I reported in research at that time, and it drew attention away from counterparty risks in the banking system. The extraordinary bailout measures, which began with Bear Stearns, were the most harmful in my view. The Bear Stearns actions led many to believe that the Fed's balance sheet would again be available in the case that another similar institution failed. But the Fed closed its balance sheet in the case of Lehman Brothers, and then reopened it again in the case of AIG. It was then closed off again for such bailouts and the TARP was proposed. Event studies show that the roll out of the TARP coincided with the severe panic. So I have to disagree with those who view all the extraordinary interventions as having worked.

The panic period is the most complex to analyze because the Fed's main measures during this period—those designed to deal with problems in the money market mutual fund and the commercial paper markets—were intertwined with the FDIC bank debt guarantees and the clarification that the TARP would be used for equity injections, which was a major reason for the halt in the panic. In any case, a detailed examination of micro data shows that the Fed's asset backed commercial paper money market mutual fund liquidity facility (AMLF) was effective. And I have argued that the Federal Reserve should also be given credit for rebuilding confidence by quickly starting up these complex programs from scratch in a turbulent period and for working closely with central banks abroad in setting up swap lines.

The main policy responses during the post-panic period were the large scale asset purchase programs. Much of the work evaluating these programs has been based on “announcement effects” which I think can be quite misleading. It is therefore necessary to look at the programs themselves—at the amount purchased and the timing—not just the announcement effects. Consider the impact of the Fed's mortgage backed securities (MBS) purchase program, which at \$1.25 trillion is the largest single extraordinary program. My research on that program shows that it had a rather small and uncertain effect on mortgage rates once one controls for prepayment risk and default risk. If so, such a program is not an effective monetary instrument. The initial announcement of the MBS program on November 25, 2008 had a noticeable effect on mortgage spreads but the effects soon disappeared. The March 18, 2008 announcement effect of the extension of the program actually raised interest rate spreads, but it too was soon reversed.

Whether one believes that these unorthodox monetary programs worked or not, there are reasons to believe that their consequences going forward are negative. First, they raise questions about central bank independence. The programs are not monetary policy as conventionally defined, but rather fiscal policy or credit allocation policy because they try to help some firms or sectors and not others and are financed through money creation rather than taxes or public borrowing. Unlike monetary policy, there is no established rationale that such policies should be run by an independent agency of government. By taking these extraordinary measures, the Fed has risked losing its independence over monetary policy.

A second negative consequence of the programs is that unwinding them involves considerable risks. In order to unwind the programs in the current situation, for example, the Fed must reduce the size of its MBS portfolio and reduce reserve balances. But there is uncertainty about how much impact the purchases have had on mortgage interest rates, and thus there is uncertainty about how much mortgage interest rates will rise as the MBS are sold. There is also uncertainty and disagreement about why banks are holding so many excess reserves now. If the current level of reserves represents the amount banks desire to hold, then reducing reserves could cause a further reduction in bank lending.

A third negative consequence is the risk of future inflation. If the Fed finds it politically difficult to reduce the size of the balance sheet as the economy recovers and as public debt increases, then inflationary pressures will undoubtedly increase.

## *Conclusion*

In conclusion I find that on balance the federal policy responses to the crisis have not been effective. Three years after the crisis began the recovery is weak and unemployment is high. A direct examination of the fiscal stimulus packages shows that they had little effect and have left a harmful legacy of higher debt. The impact of the extraordinary monetary actions has been mixed: while some actions were helpful during the panic stage of the crisis, others brought the panic on in the first place and have had little or no impact since the panic. The monetary actions have also left a legacy of a large monetary overhang which must eventually be unwound.

Is there another policy response which would have worked better or would work better in the future? In testimony entitled “The State of the Economy and Principles for Fiscal Stimulus” which I gave before this Committee nearly two years ago in November 2008, I recommended a different type of fiscal policy response to the crisis. The response was based on certain established economic principles, which I summarized by saying that policy should be *predictable, permanent and pervasive* affecting incentives throughout the economy. I argued “that there are many good fiscal packages that are consistent with these three principles. One would consist of the following”: (1) Committing to keep income tax rates where they are, effectively making current income tax rates permanent. (2) Making the worker’s tax credit, which President Obama had proposed, permanent rather than temporary. (3) Enacting a responsible government spending plan that met reasonable long-term objectives, put the U.S. economy on a credible path to budget balance, and would be expedited to the degree possible without causing waste and inefficiency. (4) Recognizing that the “automatic stabilizers” will help stabilize the economy, and therefore counting them as part of the overall fiscal package even though they do not require legislation.

This is not the kind of economic policy that has been followed. Rather than predictable, the policy response has created uncertainty about the debt, growing federal spending, future tax rate increases, new regulations, and the exit from the unorthodox monetary policy. Rather than permanent, it has been temporary and thereby has not created a lasting economic recovery. And rather than being pervasive, it has targeted certain sectors or groups such as automobiles, first time home buyers, large financial firms and not others. It is not surprising, therefore, that the policy response has left us with high unemployment and low growth. Given these facts, the best that one can say about the policy response is that things could have been even worse, a claim that I disagree with and see no evidence to support.

The good news is that we can get back to a strong recovery by following an economic policy based on these fundamental economic principles. As argued in a *Wall Street Journal* article “Principles for Economic Revival” published last week by George Shultz, Michael Boskin, John Cogan, Allan Meltzer and me, the experience of the past two years makes the case for doing so stronger than ever.



## Appendix: Empirical Research Project on the Economic Crisis

The above testimony is based on an empirical research project on economic policy and the financial crisis at Stanford University and the Hoover Institution. The research began in the summer of 2007. The findings of this research have been reported in books, published research papers, and reports, which are listed for the record below. I have summarized the results in congressional testimony and in newspaper articles, which are also listed below. In order to download any of these items, go to [www.JohnBTaylor.com](http://www.JohnBTaylor.com)

### Books

- Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*, Hoover Institution Press, Stanford, 2009, Translated into Italian, Spanish, Polish and Japanese
- The Road Ahead for the Fed*, with John Ciorciari (Eds.), Hoover Institution Press, Stanford, California, 2009
- Ending Government Bailouts As We Know Them*, with Kenneth Scott and George Shultz (Eds.), Hoover Institution Press, Stanford, California, 2010

### Research Papers and Reports

- “Housing and Monetary Policy,” published in *Housing, Housing Finance, and Monetary Policy* proceedings of FRB of Kansas City Symposium, Jackson Hole, WY, September 2007.
- “The Costs and Benefits of Deviating from the Systematic Component of Monetary Policy,” Conference on Monetary Policy and Asset Markets Federal Reserve Bank of San Francisco, February 22, 2008
- “The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong,” *A Festschrift in Honour of David Dodge's Contributions to Canadian Public Policy*, Bank of Canada, November 2008, pp. 1-18. Reprinted in *Critical Review*, 21 (2-3), 2009, pp. 341-364
- “Further Results on a Black Swan in the Money Market,” with John C. Williams, Stanford Institute for Economic Policy Research, Discussion Paper No. 07-046, May 2008.
- “A Black Swan in the Money Market,” with John C. Williams, Federal Reserve Bank of San Francisco, Working Paper Series, 2008-04, April 2008.
- “A Black Swan in the Money Market,” with John C. Williams, *American Economic Journal: Macroeconomics*, 1 (1), January 2009, pp. 58-83.
- “The Lack of an Empirical Rationale for a Revival of Discretionary Fiscal Policy,” *American Economic Review: Papers and Proceedings*, 99 (2), May 2009, pp. 550-555.
- “The Need to Return to a Monetary Framework,” *Business Economics*, 44 (2), 2009, pp. 63-72.
- “Systemic Risk and the Role of Government,” Conference on Financial Innovation and Crises, Federal Reserve Bank of Atlanta, May 12, 2009
- “The Need for a Clear and Credible Exit Strategy,” in John Ciorciari and John Taylor (Eds.) *The Road Ahead for the Fed*, Hoover Institution Press, Stanford, 2009.
- “Empirically Evaluating Economic Policy in Real Time,” Inaugural Martin Feldstein Lecture, *NBER Reporter*, 3, July 2009.

- “Should the G-20 Reconsider the Decision to Treble IMF Recourses?” *Renewing Globalization and Economic Growth in a Post-Crisis World: The Future of the G-20 Agenda*, Carnegie Mellon University Press, Pittsburgh, Pennsylvania, August 2009.
- “Analysis of Daily Retail Sales Data during the Financial Panic of 2008,” Working Paper, Stanford University, October 2009.
- “Responses to Additional Questions from the Financial Crisis Inquiry Commission,” November 2009
- “Estimated Impact of the Fed’s Mortgage-Backed Securities Purchase Program,” with Johannes C. Stroebe, NBER Working Paper Number 15626, December 2009
- “Government Actions and Interventions, More Harm Than Good?” *Development Outreach*, The World Bank Institute, Washington D.C., December 2009, pp. 50-53.
- “Globalization and Monetary Policy: Missions Impossible,” in Mark Gertler and Jordi Gali (Eds.) *The International Dimensions of Monetary Policy*, The University of Chicago Press, 2009, pp. 609-624
- “Defining Systemic Risk Operationally,” published in Kenneth Scott, George Shultz and John B. Taylor (Eds.) *Ending Government Bailouts As We Know Them*, Hoover Press, Stanford, California, 2010
- “Better Living through Monetary Economics,” in John Siegfried (Ed.) *Better Living Through Economics*, Harvard University Press, 2010, pp. 146-163.
- “Getting Back on Track: Macroeconomic Policy Lessons from the Financial Crisis” *Federal Reserve Bank of St. Louis Review*, May/June 2010, 165-176
- “Simple and Robust Rules for Monetary Policy,” with John C. Williams, in Benjamin Friedman and Michael Woodford (Eds.), *Handbook of Monetary Economics*, 3, Elsevier, forthcoming, 2010
- “New Keynesian versus Old Keynesian Government Spending Multipliers,” (with John F. Cogan, Tobias Cwik, and Volker Wieland), *Journal of Economic Dynamics and Control*, Vol. 34, 2010, pp 281-295,
- “Origins and Policy Implications of the Crisis,” in Roger Porter (Ed.) *New Directions in Financial Services Regulation*, MIT Press, 2010
- “Macroeconomic Lessons from the Great Deviation,” *Macroeconomics Annual*, National Bureau of Economic Research, 2010
- “Comment On ‘Global Effects of Fiscal Stimulus During the Crisis,’ by Charles Freedman, Michael Kumhof, Douglas Laxton, Dick Muir, Susanna Mursula,” *Journal of Monetary Economics*, forthcoming, 2010
- “Lessons from the Financial Crisis for Monetary Policy in Emerging Markets,” L. K. Jha Memorial Lecture, Reserve Bank of India, Mumbai, February 24, 2010
- “Does the Crisis Experience Call for a New Paradigm in Monetary Policy?” Presentation at the Warsaw School of Economics, Warsaw, Poland, 23 June 2010
- “Commentary: Monetary Policy after the Fall,” Presentation at the Symposium “Macroeconomic Challenges: The Decade Ahead” Sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 28, 2010
- “Monetary Policy Implications of the Global Crisis,” Presented at the *International Journal of Central Banking* Conference, Bank of Japan, September, 17 2010

### *Congressional Testimony*

- “Monetary Policy and the State of the Economy,” Testimony before the Committee on Financial Services, U.S. House of Representatives, February 26, 2008.
- “The State of the Economy and Principles for Fiscal Stimulus,” Testimony before the Committee on the Budget, United States Senate, November 19, 2008.
- “Monetary Policy and the Recent Extraordinary Measures Taken by the Federal Reserve,” Testimony before the Committee on Financial Services, U.S. House of Representatives, February 26, 2009
- “Monetary Policy and Systemic Risk Regulation,” Testimony before the Committee on Financial Services, U.S. House of Representatives, July 9, 2009.
- “Testimony,” Subcommittee on Commercial and Administrative Law , Committee on the Judiciary United States House of Representatives , October 22, 2009
- “An Exit Rule for Monetary Policy,” Testimony on unwinding emergency Federal Reserve liquidity programs and implications for economic recovery” before the Committee on Financial Services, U.S. House of Representatives, March 25, 2010
- “Perspectives on the U.S. Economy: Fiscal Policy Issues,” before the Committee on the Budget, U.S. House of Representatives, July 1, 2010

### *Articles*

- “Why Permanent Tax Cuts Are the Best Stimulus,” *Wall Street Journal*, November 25, 2008
- “How Government Created the Financial Crisis,” *Wall Street Journal*, February 9, 2009
- “The Threat Posed by Ballooning Reserves,” *Financial Times*, March 24, 2009
- “Valid Complaints about Spending,” *New York Times*, April 1, 2009
- “Exploding Debt Threatens America,” *Financial Times*, May 27, 2009
- “Why Toxic Assets Are So Hard to Clean Up,” *Wall Street Journal*, July 20, 2009
- “Fed Needs Better Performance, Not Powers,” *Financial Times*, August 10, 2009
- “Taylor Rule Change Will Hurt Fed’s Inflation Fight,” *Bloomberg*, August 25, 2009
- “The Coming Debt Debacle,” *New York Daily News*, August 31, 2009
- “The Stimulus Didn’t Work,” *Wall Street Journal*, September 17, 2009 (with John Cogan and Volker Wieland)
- “Fuel for the Financial Fire,” *Forbes Magazine*, November 2, 2009
- “Analyzing the Impact of the Fed’s Mortgage-Backed Securities Purchases,” with Johannes C. Stroebel, *VoxEU.org*, January 27, 2010
- “How to Avoid a ‘Bailout Bill,’” *Wall Street Journal*, May 3, 2010
- “Central Banks are Losing Credibility,” *Financial Times*, May 11, 2010
- “The Dodd-Frank Financial Fiasco,” *Wall Street Journal*, July 1, 2010
- “The Fed and the Crisis: A Reply to Ben Bernanke,” *Wall Street Journal*, January 11, 2010
- “What Should the Federal Reserve Do Next?” *Wall Street Journal*, September 9, 2010
- “Principles for Economic Revival,” (with George Shultz, Michael Boskin, John Cogan, and Allan Meltzer) *Wall Street Journal* September 16, 2010