

A Perspective on the Outlook, Output Gaps, and Price Stability

Money Marketeers
The Down Town Association
New York, New York
May 21, 2009

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FEDERAL RESERVE BANK
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The views expressed today are my own and not necessarily
those of the Federal Reserve System or the FOMC.

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Thank you for inviting me here tonight. The Money Marketeers has a long history as a public forum for the exchange of ideas, carrying on the work begun by former Fed official and NYU professor Dr. Marcus Nadler more than 80 years ago. Looking over the list of past speakers from near and far, I am honored to add my voice to this rich and distinguished tradition.

Tonight I want to discuss my near-term economic outlook and, as I do so, suggest reasons why policymakers and forecasters should be extremely cautious in relying on conventional measures of potential output and output gaps to restrain inflation. I will also suggest strategies for ensuring that the Fed can achieve its price stability goal in a clear and transparent way.

In sharing these thoughts, let me emphasize that in formulating policies, it is valuable to hear perspectives on the economy and policy from throughout the country — not just from Wall Street or Washington, but also from Philadelphia and from the other Districts of our uniquely decentralized central bank. I think the diverse and independent voices that are represented in the making of monetary policy result in a stronger and more effective institution and better policies. As the famous American journalist Walter Lippmann once said: “Where all men think alike, no one thinks very much.”

Just a few blocks from the Federal Reserve Bank of Philadelphia, you can find the historic relics of the First Bank and Second Bank of the United States, which both failed to find the balance and independence necessary to function as the central bank of a vast and diverse new country.

That is why when President Woodrow Wilson signed the Federal Reserve Act into law in 1913, it included an ingenious compromise proposed by President Wilson — a decentralized, central banking system that has so far lasted 95 years and served our country well. Indeed, this insight was not lost on the European Central Bank, whose structure was created with similar features.

Congress created the Federal Reserve System with independent regional Reserve Banks and a Board of Governors in Washington that provided checks and balances — checks and balances between centralization and decentralization, checks and balances between the public and

private sectors, and check and balances between Wall Street and Main Street — all to ensure that policy decisions were balanced and independent.

Congress also wanted a central bank accountable to Congress, yet not subject to undue political influences. That is why Congress chose to make the Fed independent from the Treasury Department and the administration; why Fed Governors have 14-year terms; why the 12 Reserve Banks are structured more like banks than like government agencies; and why Reserve Bank employees, officers, and directors are generally restricted from engaging in political activities.

As the president of one of the 12 regional Federal Reserve Banks, I receive a lot of information about business and financial conditions in the mid-Atlantic region and even more broadly from contacts in the national and international business communities. I use that information, along with incoming data on the national economy, when I prepare for meetings of the Federal Open Market Committee so that our nation's monetary policy reflects the most up-to-date and comprehensive picture of the economy. The information from the Reserve Bank Districts, in its detail and timeliness, is often invaluable in understanding how our economy is evolving.

Once known for its heavy concentration in the manufacturing sector, Philadelphia's Third District has become much more diverse over the past 30 years. In some cases, conditions in the District have foreshadowed national developments. For instance, the monthly general activity index for manufacturing firms participating in the Philadelphia Fed's Business Outlook Survey became consistently negative at the beginning of 2008. As it turned out, in December 2008, the NBER announced that the current recession had started in December 2007.

So far in 2009, our District's economy remains very weak. The negative levels of the Business Outlook Survey's general activity index, as well as the declines in the monthly coincident economic indexes for the 50 states published by our staff,¹ are consistent with the large 6.1 percent decline in real GDP in the first quarter, which nearly matches the decline in the fourth quarter of 2008.

Unemployment rates in our region, although not as high as in the nation overall, have risen sharply in the past few months. Some areas in our District that in past recessions saw substantially lower unemployment rates than the rest of the nation are now seeing unemployment rates above 7 percent.

Even so, both our District and the nation are beginning to see some signs that the severity of the recession is beginning to wane. The Business Outlook Survey includes an index of future general activity for six months ahead. That index has been positive for five consecutive months: it increased by more than 20 points in April and an additional 11 in May, to + 47.5, its highest level in more than four years.

¹ See the [State Coincident Indexes](#) published by the Federal Reserve Bank of Philadelphia.

While we have not seen such encouraging signs in the national data on manufacturing, we have seen some signs of stabilization — or, dare I say it, the bottoming out — of the housing market. Even some measures of house prices are not falling as sharply now. We have begun to hear anecdotal stories of stabilization in some parts of our region's housing sector as well. Another encouraging sign is that, at the national level, real consumer spending actually rose in the first quarter of this year, after falling sharply in the last half of 2008. Although April's decline in retail sales is a little disappointing, on balance, the news so far this year about overall consumer spending has not been as bad as many expected. Moreover, we must anticipate some noise in monthly data and some bumps or setbacks along the way as the economy moves from contraction to expansion.

Thus, while forecasting in the current environment is tricky, many forecasters, myself included, expect the second quarter of this year to exhibit a less severe decline in real GDP. Yet, I remain relatively optimistic and expect positive but modest growth in the second half, making fourth-quarter to fourth-quarter real GDP growth only slightly negative for 2009.

I am also relatively optimistic about growth next year. In fact, since January, I have not changed my growth forecast for 2010 or 2011. I expect the recovery to gain traction in 2010, with growth picking up to about 3 percent and then settling down to its long-run steady state of about 2.7 percent in 2011.

The sharp rise in the unemployment rate in the first few months of 2009 and the steep declines in payroll employment have led me to revise upward my unemployment rate forecasts. I expect the unemployment rate to peak sometime early next year above 9 percent, before falling gradually. This is consistent with my growth projections, since we know that unemployment rates only recede with a significant lag after the economy begins to recover.

The broad outlines of this forecast are shaped by a view that the economy has suffered from a significant and persistent adverse shock to financial intermediation, manifesting itself in the form of the credit crisis. The consequences of this shock require significant real adjustments in the economy. For example, we are undoubtedly seeing a shrinking of the financial and housing sectors, and resources, both labor and capital, should flow into other parts of the economy. We cannot and we should not attempt to prevent these reallocations.

This suggests that the appropriate measure of the equilibrium level of national output is now lower than it had been previously. What's more, this adverse shock is likely to persist for a while, and the necessary reallocations will take time to complete. Indeed, the economy's potential output may be lower than previously estimated for some time. This means measures of the so-called output gap, the difference between the level of actual and potential output, will not be as high as they otherwise would be and may be volatile and hard to measure, especially since potential output is inherently unobservable. This is an important point to which I will return shortly.

My view of the economic outlook is also shaped in part by a forecasting model we are developing at the Philadelphia Fed. This model is based on what has become the workhorse model of modern macroeconomics. One of its key features is that expectations of future economic variables are forward-looking.² Interestingly, this type of model produces a forecast that shows a significant recovery underway by the end of the year.

While I see somewhat more economic growth over the next 12 to 18 months than some private-sector forecasters, I also see less deflationary pressure in the near term than other forecasters, such as those in our latest Survey of Professional Forecasters.³ And I see greater risk of higher inflation over the intermediate to longer term.

I have several reasons for this view: First, monetary policy is extremely accommodative. Second, as I just mentioned, my forecast relies more on forward-looking expectations of inflation compared to the forecasts of many economic models, in which backward-looking elements are more heavily weighted. This means that the very low levels of inflation resulting from the plunge in oil prices during the past year are not given as much weight in assessing whether inflation will remain low in the future as in a model that depends less heavily on recent past inflation to determine inflation expectations. Third, I put less weight on output gaps or other measures of slack as predictors of inflation, which is consistent with both theory and empirical estimates from a variety of economic studies.⁴ And fourth, I am not convinced that the size of the output gap is nearly as big as suggested by others for reasons I just discussed.⁵

These last two points seem particularly appropriate and consistent with work that demonstrates the pitfalls of depending too much on measures of the output gap, which empirical studies have shown are not reliably measured in real time.⁶ Indeed, one study found that ex post revisions of the output gap are of the same order of magnitude as the output gap itself — which means that a data revision could make an output gap disappear.⁷ Since it is

² See Frank Schorfheide, Keith Sill, and Maxym Kryshko, “DSGE Model-Based Forecasting of Non-Modeled Variables,” Federal Reserve Bank of Philadelphia Working Paper No. 08-17, September 8, 2008.

³ See the second quarter 2009 release of [the Survey of Professional Forecasters](#), published by the Federal Reserve Bank of Philadelphia.

⁴ See for example, Stephanie Schmitt-Grohe and Martin Uribe, “Optimal Simple and Implementable Monetary and Fiscal Rules,” *Journal of Monetary Economics*, 54, September 2007, pp. 1702-25; Andrew Atkeson and Lee I. Ohanian, “Are Phillips Curves Useful for Forecasting Inflation?” Federal Reserve Bank of Minneapolis *Quarterly Review*, 25 (Winter 2001), pp. 2-11; Michael Dotsey and Thomas Stark, “The Relationship Between Capacity Utilization and Inflation,” Federal Reserve Bank of Philadelphia *Business Review*, Second Quarter 2005, pp. 8-17; Stephen G. Cecchetti, “Inflation Indicators and Inflation Policy,” *NBER Macroeconomics Annual 1995*, pp. 189-219.

⁵ This argument also applies if one prefers to think of an “unemployment gap” or some difference between the current unemployment rate and a natural rate of unemployment rather than an output gap. It is likely that the economic shock of the financial crisis has not only lowered potential output but also increased the natural rate of unemployment.

⁶ See Athanasios Orphanides and Simon van Norden, “The Unreliability of Output Gap Estimates in Real Time,” *Review of Economics and Statistics*, 84, November 2002, pp. 569-83. See also Susanto Basu and John Fernald, “What Do We Know and Not Know About Potential Output?” Federal Reserve Bank of San Francisco, Working Paper Series 2009-05, March 2009.

⁷ See Orphanides and van Norden (November 2002).

particularly hard to measure the output gap near business cycle turning points, making policy decisions based on measures of such gaps becomes problematical.

Our experience in the 1970s provides a good case study illustrating the dangers of relying on perceived large output gaps to keep inflation low. The nation experienced a severe recession in the mid-1970s, in part due to a large oil-price shock that forced significant reallocations in the real economy. At the time, many economists and Fed policymakers believed that a large output gap had emerged and would help slow inflation and keep it low, even as the Fed undertook a rapid monetary expansion to spur economic growth and lower the unemployment rate. Unfortunately, estimates of the output gap were poor and the gaps turned out to be much smaller than thought. Thus, the Fed's monetary expansion led to rising inflation. The Fed's lack of a credible commitment to maintain price stability only exacerbated the problem.

Today, I often hear forecasters argue that inflation will remain low in the coming years because of a large current output gap that is not likely to be closed for some time. But as I mentioned earlier, the large adverse productivity shock to financial intermediation means that equilibrium output and estimates of potential output are now lower, so the output gap is not likely to be as big as standard estimates suggest. If so, the economy may be at greater risk of inflation than the conventional wisdom indicates. The current circumstances pose an eerily similar set of conditions to those in the mid-1970s — we have rapid monetary expansion in the face of an apparently substantial output gap. While inflation expectations appear to remain anchored, we should not become sanguine about our credibility — it can be easily lost. I, for one, do not want to repeat the unpleasant experience of the late 1970s.

The theoretical and empirical evidence regarding the relevance of output gaps in modeling inflation should make us highly suspicious of inflation forecasts that depend heavily on measures of "gaps" and "slack." Instead, if we look at inflation forecasts from a model that runs solely off historical correlations in the data and incorporates forward-looking expectations, we find inflation rising significantly over the forecast horizon. The model's headline PCE inflation forecast rises above 3 percent in 2010 and exceeds 4 percent by 2012. Of course, I understand that the current episode may lie outside the historical norms. Nevertheless, we should not disregard such historical evidence in assessing the overall outlook.

Thus, I believe there is a growing risk of higher inflation in the out years of the forecast. For 2009, I am forecasting inflation near 1.2 percent. But it then rises over the forecast horizon to 2.5 percent in 2011. I base this forecast on an assumption that, as financial market conditions improve and the housing market stabilizes, the FOMC will contract its balance sheet and raise the fed funds rate in a prompt and timely manner. Doing so will help keep inflation expectations well anchored. My inflation forecast would show considerably more acceleration if I assumed that the FOMC would be slow to change its stance for monetary policy as financial markets return to operating more normally.

We must keep in mind that the failure to maintain well-anchored inflation expectations can wreak havoc with the real economy, foster unnecessary volatility, and make it more difficult for

the Fed to deliver on its mandate to keep the economy growing with maximum employment and price stability.

How can we ensure that the Federal Reserve can deliver on its responsibility to maintain price stability?

First, I and other economists have long proposed establishing an explicit inflation target as a way to signal the FOMC's commitment to price stability and to help anchor expectations.⁸ A public commitment to a numerical inflation target over an intermediate horizon is a clear and feasible goal for monetary policy and is consistent with the Federal Reserve's mandates. Such an inflation target would not only help prevent inflation expectations from rising to undesirable levels, but it would also help prevent expectations from falling to undesirable levels. It would offer greater clarity and transparency in communicating our monetary objectives for price stability and would give us a target that we could credibly commit to meet over time.

Yet I believe that there is more we should do to ensure sound monetary policy and price stability as we come out of this crisis.

During this crisis, the Fed has expanded its role in the economy in extraordinary ways as it sought to contain the financial crisis and its effects on the economy. These actions have the potential of altering the delicate political balance of the institution, putting at risk its independence and, in so doing, diminishing its credibility and ability to maintain price stability.

In an effort to promote financial stability, the Fed has strayed far into credit policies that differentially affect firms, asset classes, and sectors of the economy, which amounts to credit allocation. In my view, if the government engages in credit policies, doing so should be the responsibility of the fiscal authority, not the central bank.

The Fed historically has engaged in credit policies through its discount window lending to financial institutions and as the lender of last resort. In the past, the amount of such lending has been small and very temporary. That is no longer true. Through special purpose vehicles, direct lending to nonfinancial institutions, and purchases of private asset-backed securities, the Fed's credit policies now loom large on its balance sheet. This represents a mixing of monetary and fiscal policies to a degree not witnessed since before the famous Treasury-Fed Accord of 1951.

⁸ For instance, see the speech by Frederic Mishkin, "Whither Federal Reserve Communications?," at the Peterson Institute for International Economics, Washington, D.C., July 28, 2008; or the speech by Ben Bernanke, "A Perspective on Inflation Targeting," at the Annual Washington Policy Conference of the National Association of Business Economists, Washington, D.C., March 25, 2003. See also speeches by Charles I. Plosser, "Credibility and Commitment," at the New York Association for Business Economics, March 6, 2007; "The Benefits of Systematic Monetary Policy," at the National Association for Business Economics, March 2, 2008; "The Economic Outlook and Some Challenges Facing the Federal Reserve," at the 2009 Economic Outlook Panel, University of Delaware, January 14, 2009; and "Ensuring Sound Monetary Policy in the Aftermath of Crisis," at the U.S. Monetary Policy Forum, New York, February 27, 2009.

A mixing of monetary policy and fiscal policy in the Fed's actions increases the number of entities that might try to influence Fed decision-making in their favor. Both economic theory and practice indicate that central banks should operate independently from such political pressures and resist them when they arise, so that their policies benefit society at large over the longer term and not any particular constituency in the near term.

We need to draw a bright line once again between monetary policy and fiscal policy. The recent crisis has muddied that separation considerably and we must restore it. The Fed must not be seen by the public or the Congress as a piggy bank that can substitute for difficult fiscal policy decisions.

When a nation's treasury or finance ministry and its central bank work too closely together, there is a clear risk that the government's spending will end up being financed by the central bank's power to create money and that the public will become confused as to their respective roles. History shows us that you can get very bad economic outcomes with rapidly rising inflation. Zimbabwe's hyperinflation is the current extreme example of this. Independence is essential to central bank success and the Federal Reserve's current governance and decentralized structure has been an important contributor to ensuring that independence.

When financial markets begin to operate normally and the outlook for the economy improves, the Fed's balance sheet must contract if it is to maintain price stability. Some of the new lending facilities will naturally unwind once they are terminated. Yet, some of the assets will not go away so quickly. For example, the Fed has begun the process of purchasing more than \$1 trillion in mortgage-backed securities, many of which will not roll off the Fed's balance sheet for years unless the Fed sells them in the marketplace. We will need to have the fortitude to make some difficult decisions when it is time for our policies to be reversed or unwound.

Are there ways to improve the Fed's ability to unwind these lending programs and shrink its balance sheet when the time comes to do so? That is, is there a way to provide a clear exit strategy for the Fed? Is there a way to ensure the Fed's independence to fulfill its monetary policy responsibilities and insulate it from demands to use its credit policies as a fiscal tool?

I believe there is. This February I proposed that the Fed and Treasury agree to a new "accord."⁹ Specifically, the Fed and the Treasury should reach an agreement whereby the Treasury takes all the non-Treasury assets and non-discount-window loans from the Fed's balance sheet in exchange for Treasury securities.¹⁰ Going forward, for non-discount-window lending, the

⁹ See "Ensuring Sound Monetary Policy in the Aftermath of Crisis," by Charles I. Plosser at the U.S. Monetary Policy Forum, New York, New York, February 27, 2009.

¹⁰ For a discussion of such an accord in a different context, see J. Alfred Broaddus, Jr. and Marvin Goodfriend's article, "What Assets Should the Federal Reserve Buy?" and Goodfriend's article, "Why We Need an 'Accord' for Federal Reserve Credit Policy: A Note," Federal Reserve Bank of Richmond *Economic Quarterly* (Winter 2001). Such an accord would also be consistent with the recommendations made by the Group of Thirty's Working Group on Financial Reform about the role of central banks in providing financial stability. See "Financial Reform: A Framework for Financial Stability," Group of Thirty, Washington, D.C. (2009).

Federal Reserve would follow what can be called a “Treasuries-only policy.” If emergency circumstances arise, the Treasury could request the Fed to purchase non-Treasuries. The assets so acquired would promptly be exchanged for Treasury securities to preserve the central bank’s independence and the control of its own balance sheet.

The principles underlying such an “accord” would offer a number of benefits.

First, in the short run it would transfer funding for the current credit programs to the Treasury — which would issue Treasury securities to fund the programs. This would ensure that the Fed could shrink its balance sheet with as little distortion as possible and help preserve its ability to conduct independent monetary policy. Second, such an accord would provide a clearer separation between monetary and fiscal policy and ensure that credit policies that place taxpayer funds at risk are appropriately under the oversight of the fiscal authority.

Finally, the transparency of the Fed has received a great deal of attention in recent months. A “Treasuries-only policy” would ensure greater transparency and clarity of the Fed’s operations and objectives and help insulate it from political pressures to use central bank credit policy to conduct fiscal policy. This would preserve the Fed’s independence to conduct sound monetary policy.

I welcomed the joint statement of the Treasury and the Fed on March 23, 2009. It acknowledged that in carrying out its lender of last resort responsibilities, the Fed should avoid both taking credit risk and allocating credit to narrowly defined sectors or classes of borrowers. Instead, the Fed’s aim should be to improve financial or credit conditions broadly. The statement said plainly that government decisions to influence the allocation of credit are the province of the fiscal authorities.¹¹ This joint statement was a step in the right direction to ensure the Fed’s effectiveness in carrying out monetary policy in the future. However, more is required to institutionalize these principles. The accord I have proposed would be an important safeguard to an independent and effective monetary policy and would result in a more transparent institution.

Conclusion

To sum up, I am optimistic that the economy and the financial system will recover. As my grandmother used to tell all her children and grandchildren when times seemed difficult, “This too shall pass.” That does not mean the path to recovery will be smooth. There are plenty of opportunities for bumps and setbacks along the way. And even as the real economy begins to grow, unemployment will not improve for a while and may worsen some more. This is to be expected, since the unemployment rate is a lagging indicator of the state of the economy.

I am also concerned that some forecasters and policymakers may be placing too great a reliance on flawed measures of potential output and output gaps to predict that inflation will

¹¹ See the joint statement issued by the Treasury and the Federal Reserve, March 23, 2009.

remain subdued for many years even in the face of extraordinary monetary accommodation. The consequence could be substantially higher inflation rates in the intermediate term unless the monetary accommodation is removed sooner and faster than many anticipate. It is always best not to repeat the mistakes of the past, whether it be those made in the Great Depression or the Great Inflation.

Finally, we must be careful to ensure that, in responding to the crisis, we do not undercut the role and independence of the Federal Reserve in a way that could undermine the Fed's ability to achieve its dual mandate for price stability and maximum sustainable economic growth. To help ensure sound policy and anchor inflation expectations, the Fed should announce an inflation target. To help preserve the Fed's independence as well as to ensure transparency and sound monetary policy, the Fed and the Treasury should agree to a new "accord" that clearly delineates the responsibilities of each institution, assigning credit policies to the Treasury and the independent conduct of monetary policy to the Federal Reserve.