



How Should Monetary Policy Respond to a Slow Recovery?

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Thank you for the opportunity to speak with you today at the Forecaster's Club.*

Working at the Fed over the last 25 years has given me a healthy regard for the challenges you face every day as you attempt to divine the future path of the economy. Even during the best of times it is not easy, but this has been a particularly challenging time in forecasting. It has proven to be very difficult to incorporate the effects of the *financial* system into models of the economy – in part because the financial sector may have a significant impact on economic forecasts only during the rare occasions when the sector is badly disrupted.

While financial markets and financial institutions are now in far better shape than two years ago, the collateral damage on the economy from the financial shocks has been severe.

* *Of course, the views I express today are my own, not necessarily those of my colleagues on the Board of Governors or the Federal Open Market Committee (the FOMC).*

The damage has, unfortunately, followed the pattern established in the aftermath of previous significant financial disruptions, which tend to cause an extended period of subpar economic growth.¹

These days, as in past recoveries, it is not uncommon to hear some observers say that there is little that policymakers can or should do. This is not my perspective, and I want to use this opportunity to share some of the analytical and empirical underpinnings for my views.

While these topics are getting a lot of attention of late – understandably – many of us have been researching them for some time. And I would just like to reiterate that I take an empirical, data-driven approach to policymaking responsibilities – a fact I believe my talk today will demonstrate.

While certainly the economic problems we are facing are daunting, I do not see them as insurmountable. In fact, although the economy is far from where we would like it to be, we are in a far better place than we were two years ago, when financial markets and economic activity were in the process of “seizing up.” The stock market is well off its lows, interest spreads have narrowed, and the economy has had four quarters of positive, if anemic, growth.

And it was policy – monetary policy and fiscal policy, and to some degree supervisory policy – that played a critical role in the improvements we have seen over the past two years. We have a long way to go, but it would have been much longer but for a number of parties making difficult but appropriate policy decisions.

However, while we have seen positive growth over the past year, it has been slow. We have seen some increases in employment, but there has not been any significant reduction in the high percentage of workers who are unemployed. And, while financial market

conditions have improved dramatically, credit availability remains an issue for many individuals and businesses. In short, policymaking has been effective at *stabilizing* the economy, but the recovery remains far too weak to restore what we consider full employment with the speed I would like to see.

Today I would like to touch on a number of issues, including some of the recently hypothesized impediments to a more robust recovery. I would also like to explore some of the options for generating a more robust recovery – options that policymakers need to consider and debate, thoughtfully and analytically, as we go forward.

Allow me to preview my punch line. I’ve called this talk “How Should Monetary Policy Respond to a Slow Recovery?” My answer to that question is: vigorously, creatively, thoughtfully, and persistently, as long as we have options at our disposal. And we *do* have options, despite having pushed short-term rates to the zero lower bound.

Dislocations in the Labor Market?

Some hypothesize that a more robust recovery is impeded by dislocations in the labor market. Indeed, history shows that even with a relatively mild recession there can be significant dislocations. The 2001 recession provides a good example. As **Figure 1** shows, information technology and manufacturing were two industries that saw significant declines in employment in that downturn. The end of the “dot-com” euphoria and structural shifts in the manufacturing sector caused those two industries to be disproportionately affected, while we had only modest declines in the cyclical construction industry, and *increases* in employment in several industries. Similarly, the 1990 recession had a decline in employment

of more than 5 percent in only the construction industry, when overbuilding in several regions of the country led to a significant readjustment in construction-industry employment.

In fact, in each of the three previous recessions there was a decline of 5 percent or more in no more than two industry categories – as the figure shows – with many industries experiencing little or no net job loss over the course of the recession. Structural shifts across industries are not uncommon in recessions – and also, some structural dislocation seems inevitable as it will always take some time for capital and labor to flow to those industries with the greatest opportunities.

In rather stark contrast, the most recent recession is far less a reflection of dislocation in a few industries but rather reflects a general decline in *almost all* industries. As the chart on the far right shows, in this recession there has been a peak to trough loss of employment of 5 percent or greater in construction, manufacturing, retail trade, wholesale trade, transportation, information technology, financial activities, and professional and business services. To me, this does not suggest that the driver is structural change in the economy increasing job mismatches – although no doubt some of that exists – but instead I see here a widespread decline in demand across most industries.

Not surprisingly, given this far-reaching decline in labor demand, job vacancies are remarkably low. Not only are they low, but they are also well below the experience in most recent recessions, making small movements in job-vacancy rates particularly difficult to interpret. For example, economists and forecasters are estimating Beveridge curves (plotting the relationship between job vacancies and unemployment)² well outside historical experience, making it difficult to draw strong conclusions about recent movements.

Figure 2 highlights that job mismatches are *not* the primary problem. The bottom chart shows that the percentage of small businesses with one or more hard-to-fill jobs open is near the low point for the series over nearly 25 years. According to survey data, businesses are having no problem finding skilled workers for what were considered hard-to-fill vacancies. This is consistent with my ongoing discussions with representatives of businesses, who generally report no difficulty finding qualified workers even for quite specialized positions.

However, as the top chart on the figure shows, most small businesses are not expecting to increase employment. When I talk with representatives of businesses, the primary reason they give for this is they are not seeing sufficient demand for their products. If they were confident that demand would pick up, they would – and easily could – hire additional workers.

Balance Sheet Adjustments?

Another impediment to a more robust recovery could well be balance sheet adjustments by financial and nonfinancial firms, and households. To explore this, let's examine this cycle in some more detail. **Figure 3** splits the time since the onset of the recession into three periods:

- The first period runs from the beginning of the recession in December 2007 through August 2008. Up to that point, the recession looked quite similar in depth and duration to previous recessions. The only sector with a very substantial decline in employment was the construction industry.

- The second period is from August 2008 through June 2009. After the large financial shocks that occurred in September and October of 2008, there were large and widespread declines in employment across a wide variety of industries. Both the disruption of credit and concerns that we could see an extremely severe contraction caused most businesses to become far more cautious.
- The final period, from June 2009 to the present, encompasses the recovery to date. This recovery has been quite slow, with continued sharp declines in construction activity. In fact, the first year of the recovery has an employment pattern similar to shallow recessions, indicating just how weak the recovery has been so far.

Most forecasts of employment and unemployment during this period did not anticipate the severe turn of events. **Figure 4** provides the Blue Chip forecast for unemployment at the beginning of the first two periods in the charts we just saw – and the actual unemployment experience. In December 2007, few saw cause for great alarm. The expectation was that unemployment would remain stable near 5 percent, when in fact what actually happened was a marked increase in the unemployment rate.

In part, the forecasts were off because many of the financial disruptions that were already evident were not well captured in econometric models. Also, recessions are notoriously difficult to predict, and most models struggle to capture turning points.

The second chart on Figure 4 shows that even in August 2008, many forecasts did not predict great difficulties. For the most part, the unemployment rate was expected to remain near 6 percent, when in reality it rose to over 9 percent. Thus, one month before the worst of the financial crisis emerged, there was little expectation of a significant financial shock or the major impact that it would have on the overall economy.

Fortunately, the Federal Reserve had already begun to ease – and continued to ease quite dramatically – despite most forecasts predicting a more benign outcome. We had already reduced the federal funds rate very substantially by August, and as a result of the financial crisis eventually pushed the federal funds rate essentially to its lower bound of zero. Thus, during much of this period monetary policy was quite proactive. While it could not offset the effects of the severe problems emerging in the economy, the policy stance was more responsive than if it had been in synch with most private forecasts at the time. This policymaking was key to avoiding far worse outcomes.

Figure 5 looks at the forecasts for unemployment at the end of this year over the span of time I referred to as the *recovery* period. At the beginning of 2010, the unemployment rate was 9.7 percent. As the figure shows, there has been a consistent view that the recovery would be weak and make only limited progress on reducing unemployment. While through April the forecasts were getting more optimistic about labor market trends, since then forecasters have been *raising* their forecasts for unemployment. Regrettably, I have to concur with the view expressed in these forecasts – that the unemployment rate is likely to be very close to the very elevated level at the beginning of the year.

Figure 6 provides some context for that pessimism. While two of the past four quarters had growth (in blue) above estimates of potential, the expansion in what we call “final sales” (in red) has been below potential. Since by definition the difference between GDP and final sales reflects inventories, we need final sales to pick up – especially as temporary stimulus from inventories, and government, subsidies. Unfortunately, there is little evidence in the data of that happening, with growth in the second half of 2010 likely to be in the vicinity of 2 percent.

The bottom graph on Figure 6 shows the change in the employment-to-population ratio (in green). While there was employment growth in the first half of 2010, it has only resulted in a slight improvement in the employment-to-population ratio.

With that background, let me note that one challenge in getting the economy to grow faster has been the desire of households and businesses to essentially “rebuild” their balance sheets in the wake of this so-called “Great Recession.” **Figure 7** highlights that the personal savings rate has risen, and **Figure 8** shows that households have increased their holdings of cash and securities. While rebuilding wealth and remaining more liquid are natural reactions to recent conditions – and positive in a long-term sense – the fact is they portend rather modest increases in consumption in the near term, until consumers become more confident about their prospects.

Figure 9 highlight that businesses and banks have also been increasing their holdings of cash and securities. While this is natural, such behavior will likely keep growth in business fixed investment rather restrained.

The Policy Response

So how should monetary policy react to a very anemic recovery? The usual monetary policy response to slow growth in nominal GDP would be to continue reducing the federal funds rate, and during the past two slow recoveries that is what the Federal Reserve did. As I have already highlighted, by central bank standards we moved rather quickly to recognize the severity of the problem in this downturn, and responded with monetary accommodation. However, since the end of 2008 the federal funds rate has been bounded by zero, which has eliminated the ability to decrease short-term interest rates.

A simple Taylor Rule calculation, shown in **Figure 10**, relates movements in the federal funds rate to deviations in inflation and unemployment from their targets. The far right section of the chart highlights that given the very low level of inflation and the very high level of the unemployment rate, the Fed would have continued to reduce the funds rate over the past two years, but for the zero lower bound.

Constrained by the zero bound, the Federal Reserve utilized less conventional policies – as shown in **Figure 11**. Most of these approaches had never been tried in the United States prior to the crisis. New policies outside of historical experience necessarily involve some uncertainty about their impact. We were fortunate that Chairman Bernanke and the Federal Open Market Committee had the courage to undertake unconventional policies in the “teeth” of a crisis. It is easy – and I dare say commonplace – to underestimate the economic disruption that would likely have arisen if we at the Fed had stuck to our “comfort zone.”

It is easy with hindsight to see the financial meltdown as an historic economic crisis, one that galvanized officials to push out the boundaries of policymaking and take action. But in my view, current economic conditions – an unemployment rate near 10 percent, sluggish growth, and undesirably low inflation – together constitute a serious economic problem. While it’s clear to everyone why a high unemployment rate is a problem, one of the reasons we worry about a too-low rate of inflation is that the closer to zero the inflation rate gets, the greater the risk it could fall into a harmful deflation.

As I said earlier, we *do* have options, despite having pushed short-term rates to the zero lower bound. One of the challenges is that with unconventional policies, costs can be apparent but benefits more indirect, and harder to track.

The Federal Reserve's large-scale asset purchases – primarily purchases of mortgage-backed securities – arguably had multiple effects, including maintaining market function in the mortgage markets. But in my view their primary impact on the economy was achieved by reducing mortgage rates. Rates had been around 6 percent prior to the change in policy, and moved closer to 5 percent as our purchases began to accumulate, as shown in **Figure 12**. It also appears that by “removing duration” from the market, other long-term rates were also reduced in response to our purchases.

Of course, none of this is easy or without complications. There are concerns about things like creating distortions in credit allocation, complicating exit strategies when they become appropriate, and exposing the Federal Reserve to interest-rate risk. Those issues are important to recognize, and to work to mitigate. At the same time, we cannot take lightly how far off the mark unemployment and inflation seem to be.

Now I'd like to make a few observations on Fed purchases of *Treasury* securities.

First, the positives: Purchases of long-term Treasury securities are likely to push down long-term interest rates on Treasury bonds, but also are likely to reduce rates on other long-term securities. Some have argued that it would be difficult to reduce Treasury rates further, but **Figure 13** highlights, importantly, that U.S. Treasury rates are still well above the zero bound, roughly equivalent to rates in Germany, and well above long-term rates in Japan.

Now some concerns: While purchases of Treasury securities have the advantage of not directly “allocating credit” to a particular industry, they have the disadvantage of only indirectly affecting the *private* borrowing rates that more directly affect private investment spending. In addition, Treasury purchases raise for some a concern that the Fed intends to

monetize the federal debt, using monetary policy to accommodate the financing of fiscal policy. I can assure you that we have no desire or intention whatsoever to do so.

While lower long-term rates are likely the primary channel through which asset purchases would influence the economy, purchases of Treasury or mortgage-backed securities also expand the Federal Reserve's balance sheet and increase the amount of reserves in the financial system. This expansion of reserves might serve as an effective signal that highlights the determination of the Federal Reserve to reduce disinflationary pressures.

Certainly, views on securities purchases differ within the ranks of policymakers and all manner of observers. I would just reiterate that it is important to keep firmly in mind the goal of such purchases: to stimulate the economy by reducing long-term interest rates to a level that is more consistent with where they would be, were we able to further reduce the federal funds rate.

Concluding Observations

While the economy is growing, it is currently growing too slowly to significantly reduce the unemployment rate or stem disinflationary pressures created by the high degree of slack in the economy. While fiscal policies may be the most effective way to stimulate the economy when short-term interest rates approach the zero bound, unconventional *monetary* policies provide additional policy options. Of course, policymakers need to carefully weigh the benefits and costs of unconventional monetary policy – some of which I have tried to share with you today. Yet all in all, my firm view is that it is important that policymakers be open to implementing policies consistent with achieving full employment, and an appropriate level of inflation, within a reasonable time frame. Thank you.

NOTES:

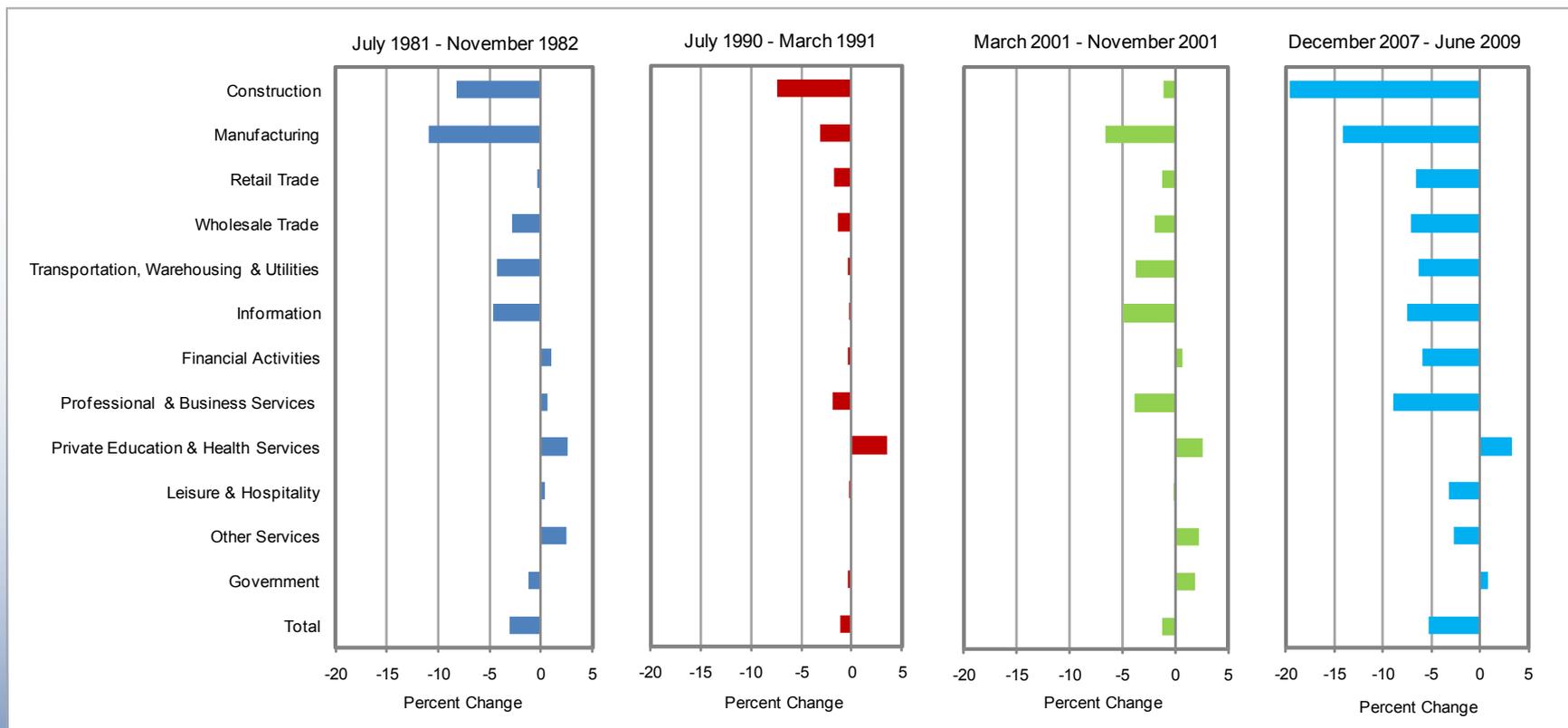
¹ See for example the work of Carmen M. Reinhart and Kenneth Rogoff, including *This Time Is Different: Eight Centuries of Financial Folly*

² See for example “Has the Beveridge Curve Shifted?” by Murat Tasci and John Lindner of the Cleveland Fed [<http://www.clevelandfed.org/research/trends/2010/0810/02labmar.cfm>]

Figure 1

Peak-to-Trough Employment Change by Industry

Last Four Recessions



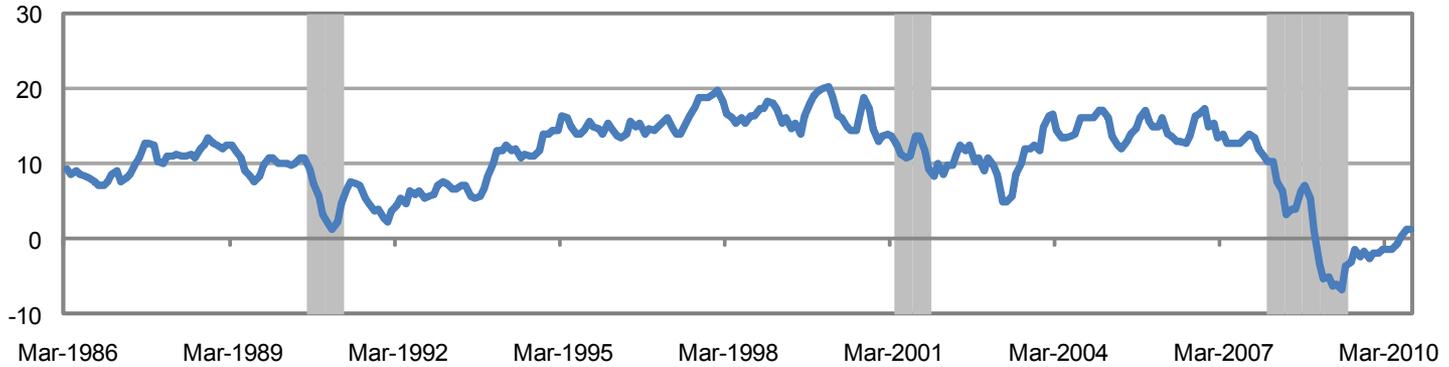
Source: BLS, NBER / Haver Analytics

Figure 2

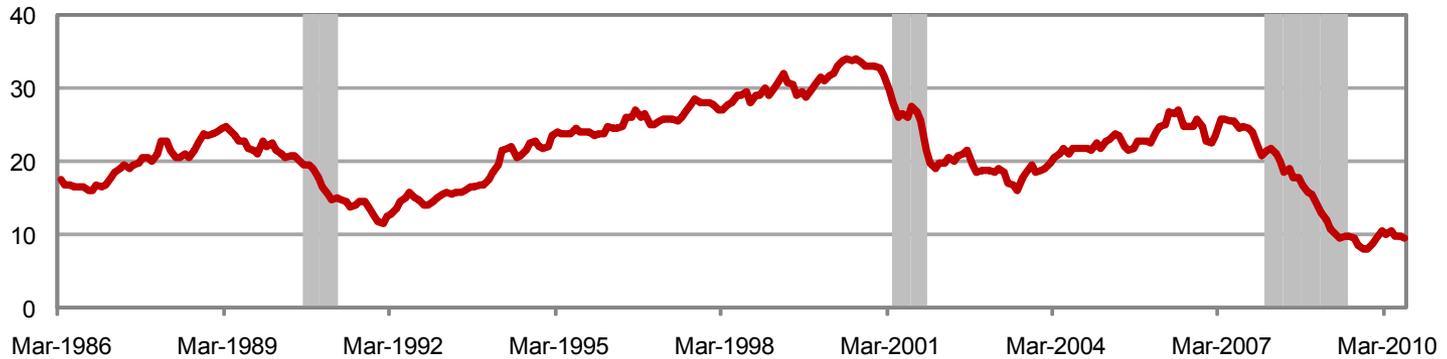
Small Business Hiring Plans and Hard-to-Fill Positions

March 1986 - August 2010

Net Percent of Small Businesses Planning an Increase in Employment



Percent of Small Businesses with One or More Hard-to-Fill Jobs Open



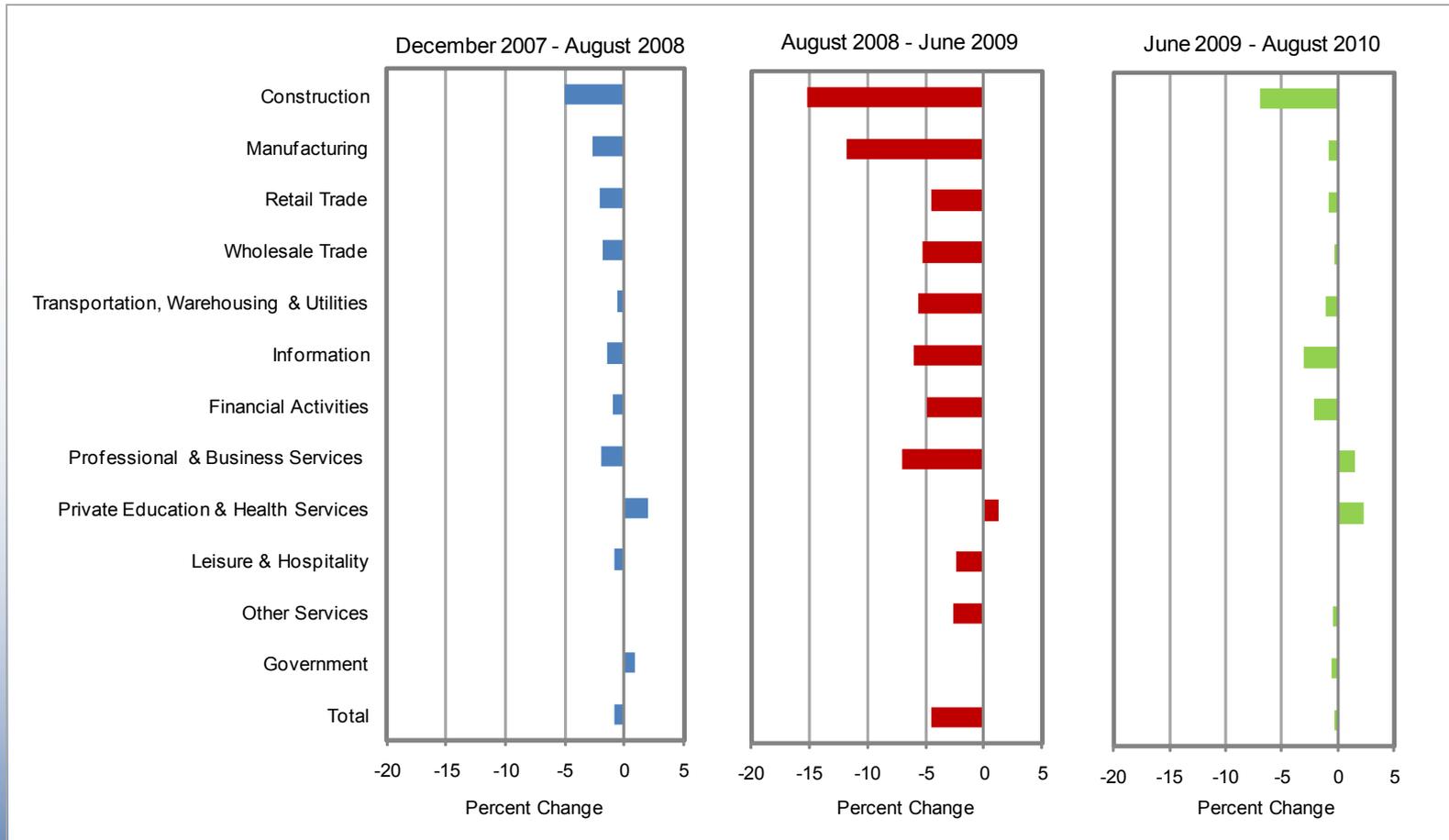
Note: Series are three-month moving averages

Source: National Federation of Independent Business, NBER / Haver Analytics

Figure 3

Employment Change by Industry

Three Periods from December 2007 to August 2010

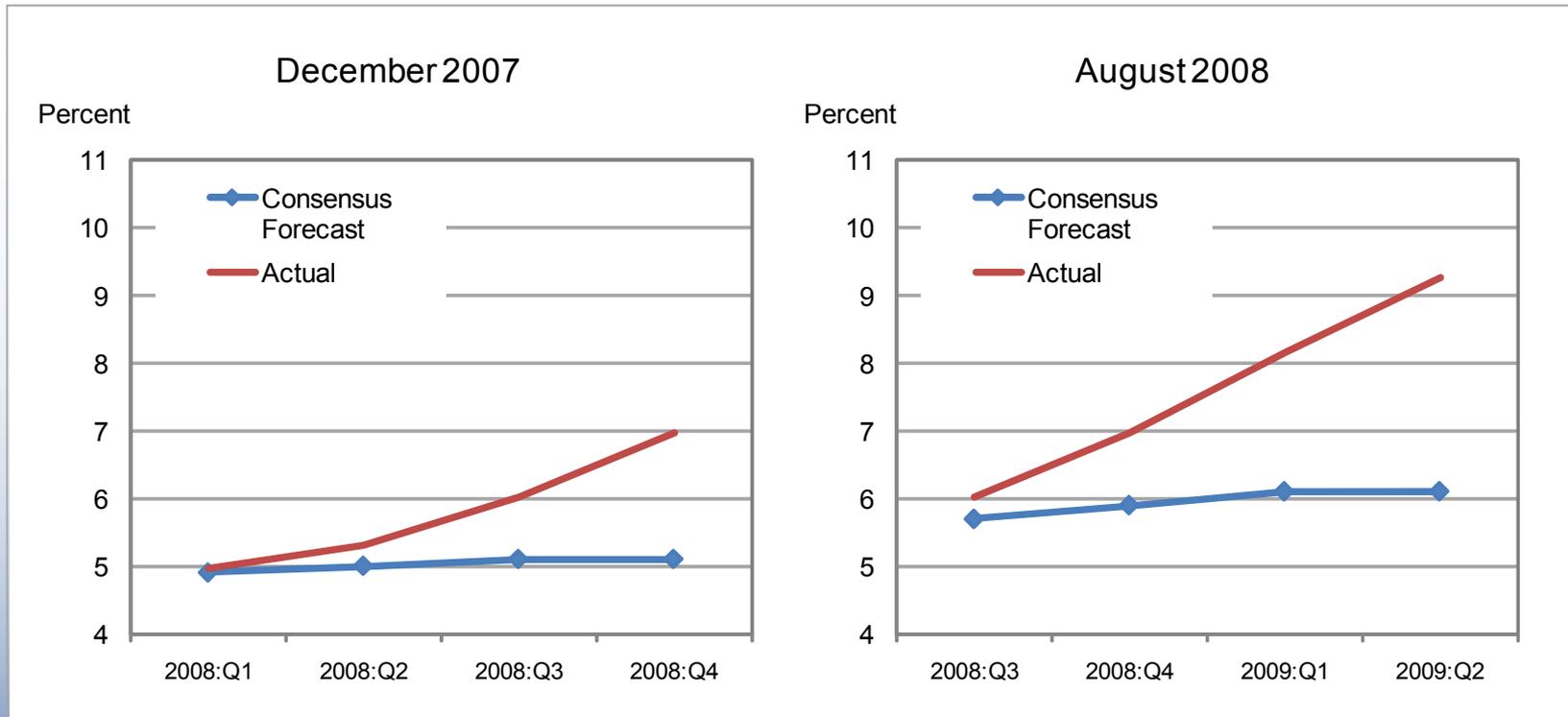


Source: BLS, NBER / Haver Analytics

Figure 4

Unemployment Rate: Blue Chip Forecast vs Actual

Forecasts as of December 2007 and August 2008

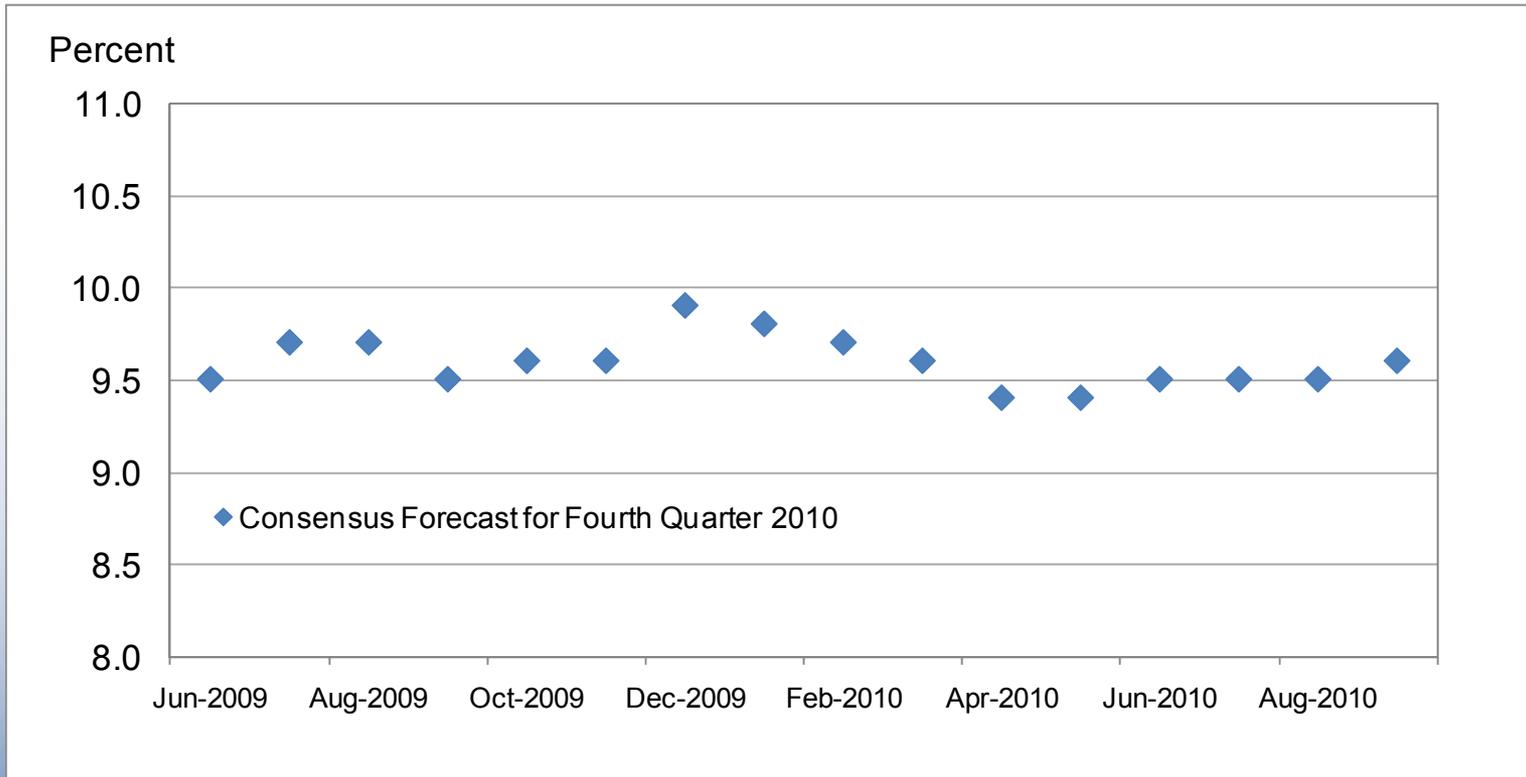


Source: Blue Chip Economic Indicators / Haver Analytics

Figure 5

Blue Chip Forecasts for Fourth Quarter 2010 Unemployment Rate

Monthly Forecasts, June 2009 - September 2010

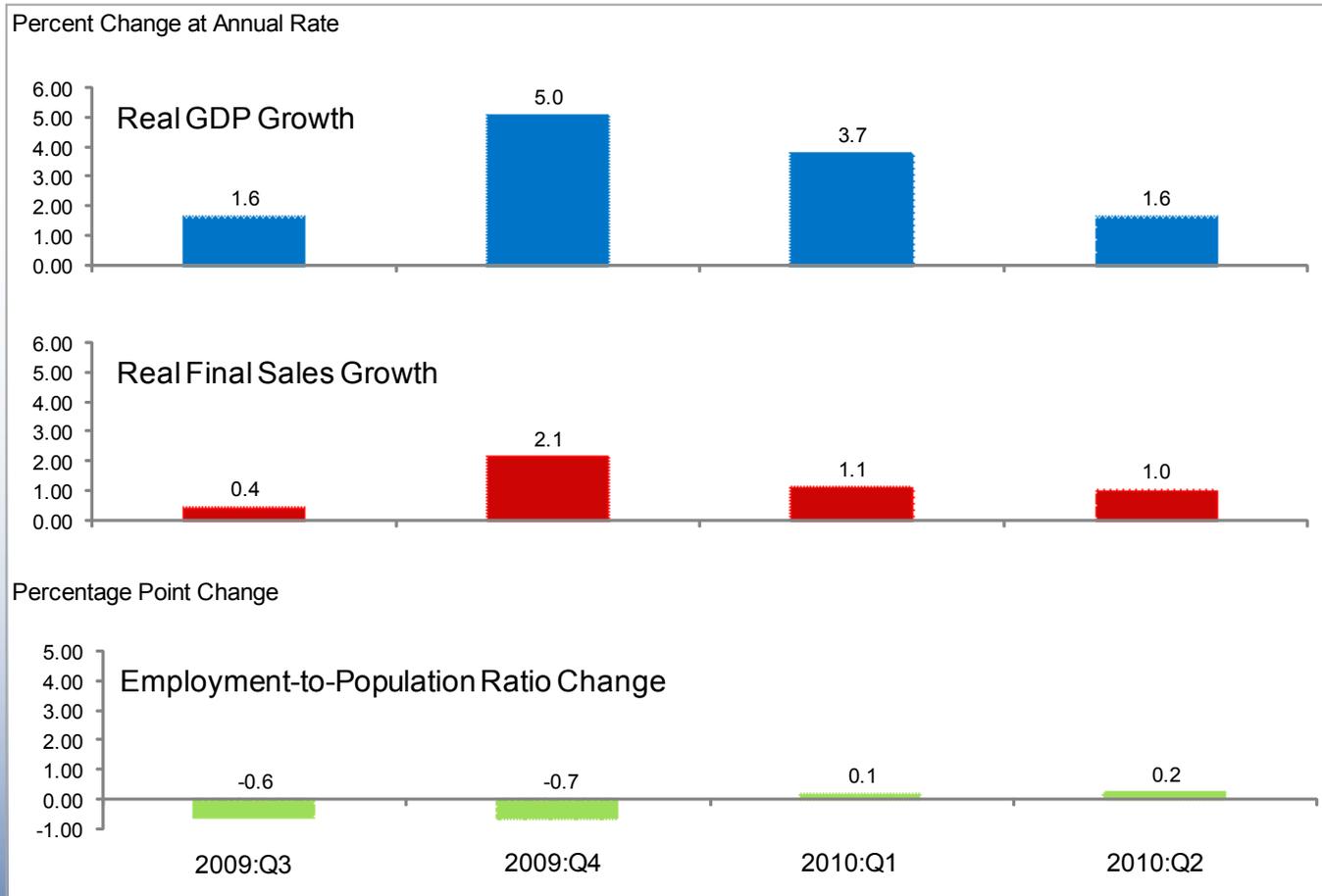


Source: Blue Chip Economic Indicators / Haver Analytics

Figure 6

Recent Changes in Key Indicators

2009:Q3 - 2010:Q2

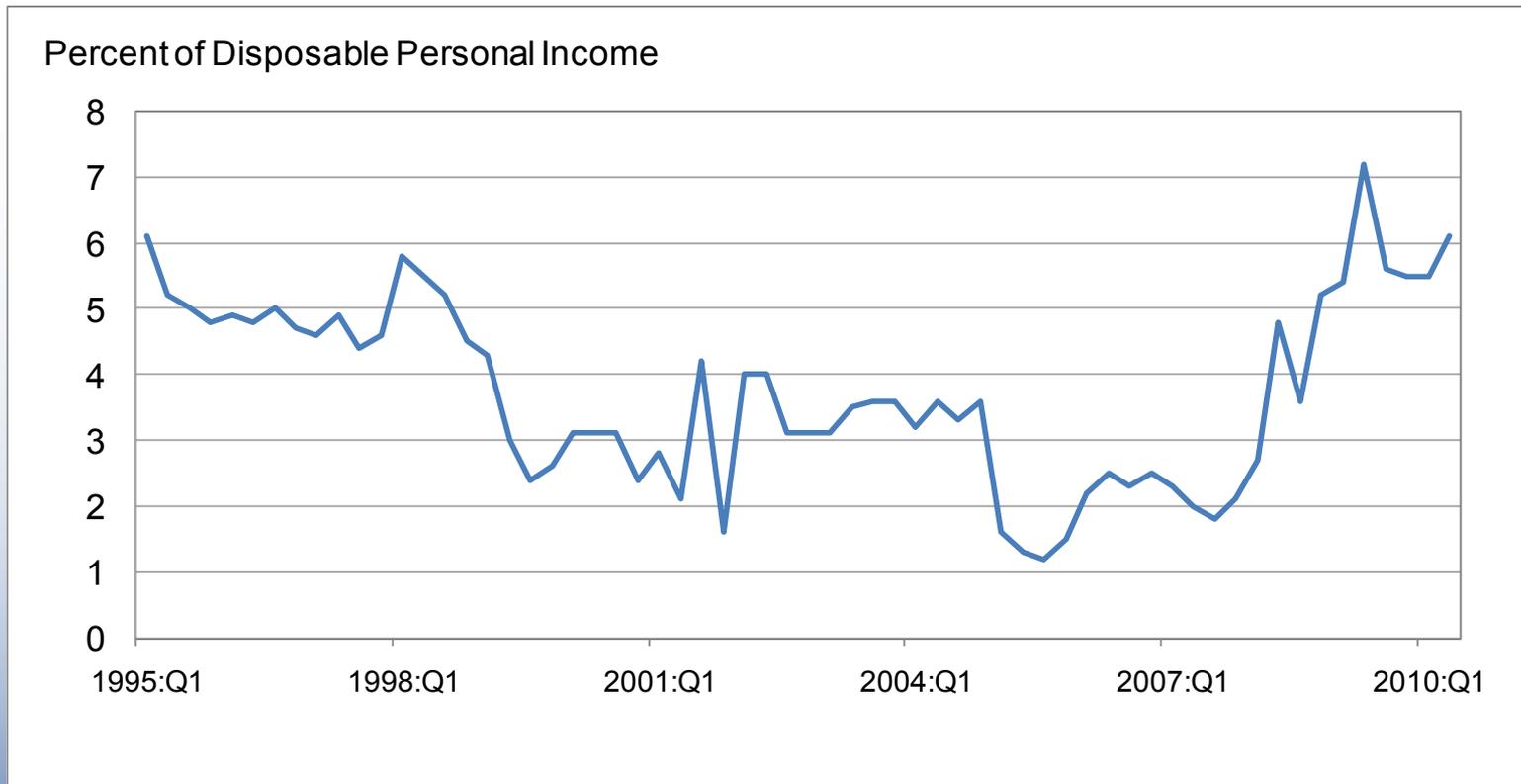


Source: BEA, BLS / Haver Analytics

Figure 7

Personal Saving Rate

1995:Q1 - 2010:Q2

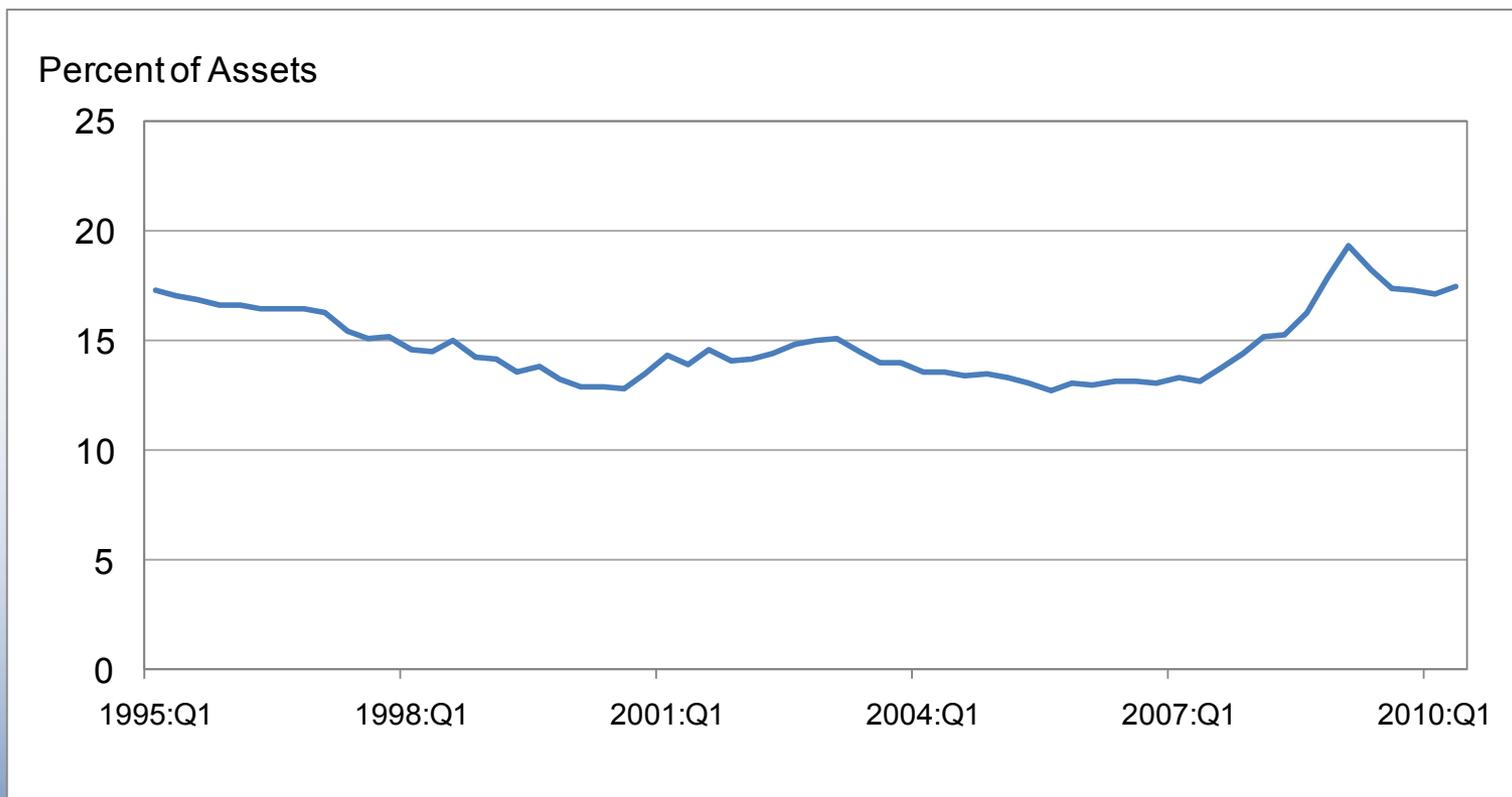


Source:

Figure 8

Cash and Securities as a Share of Assets at Households and Nonprofit Organizations

1995:Q1 - 2010:Q2

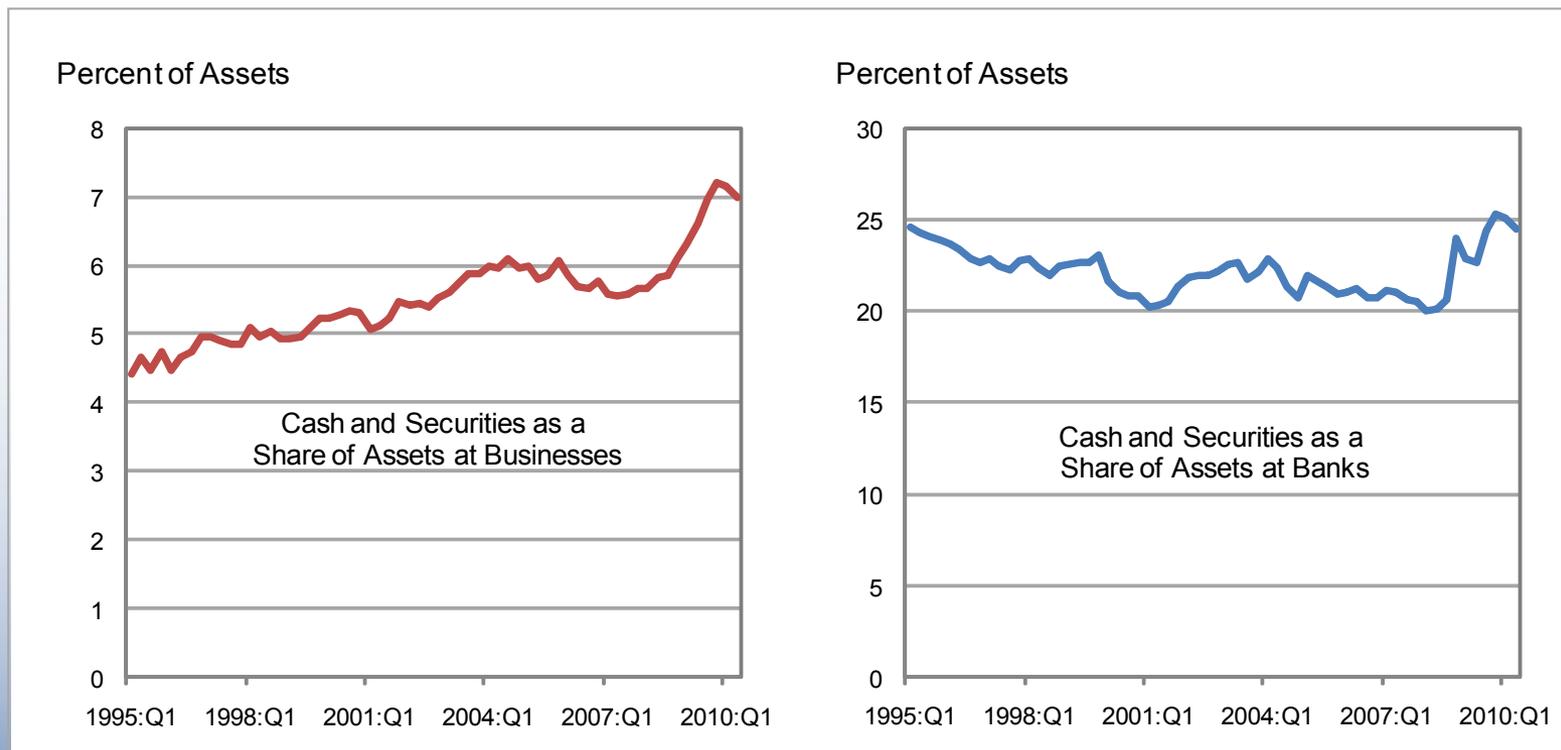


Source: Federal Reserve Board / Haver Analytics

Figure 9

Cash and Securities as a Share of Assets at Businesses and Banks

1995:Q1 - 2010:Q2

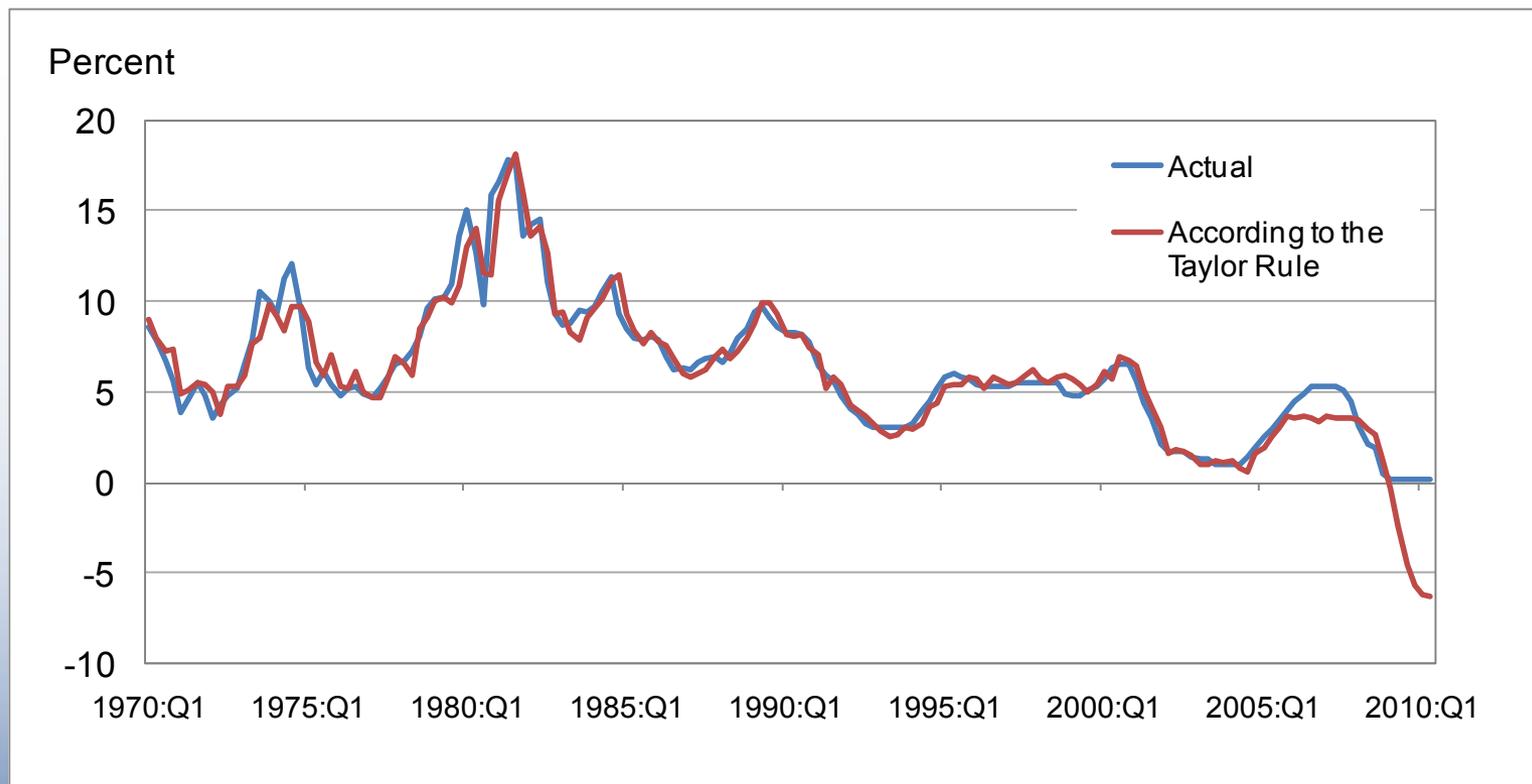


Source: Federal Reserve Board / Haver Analytics

Figure 10

Federal Funds Effective Rate: Actual and According to the Taylor Rule

1970:Q1 - 2010:Q2

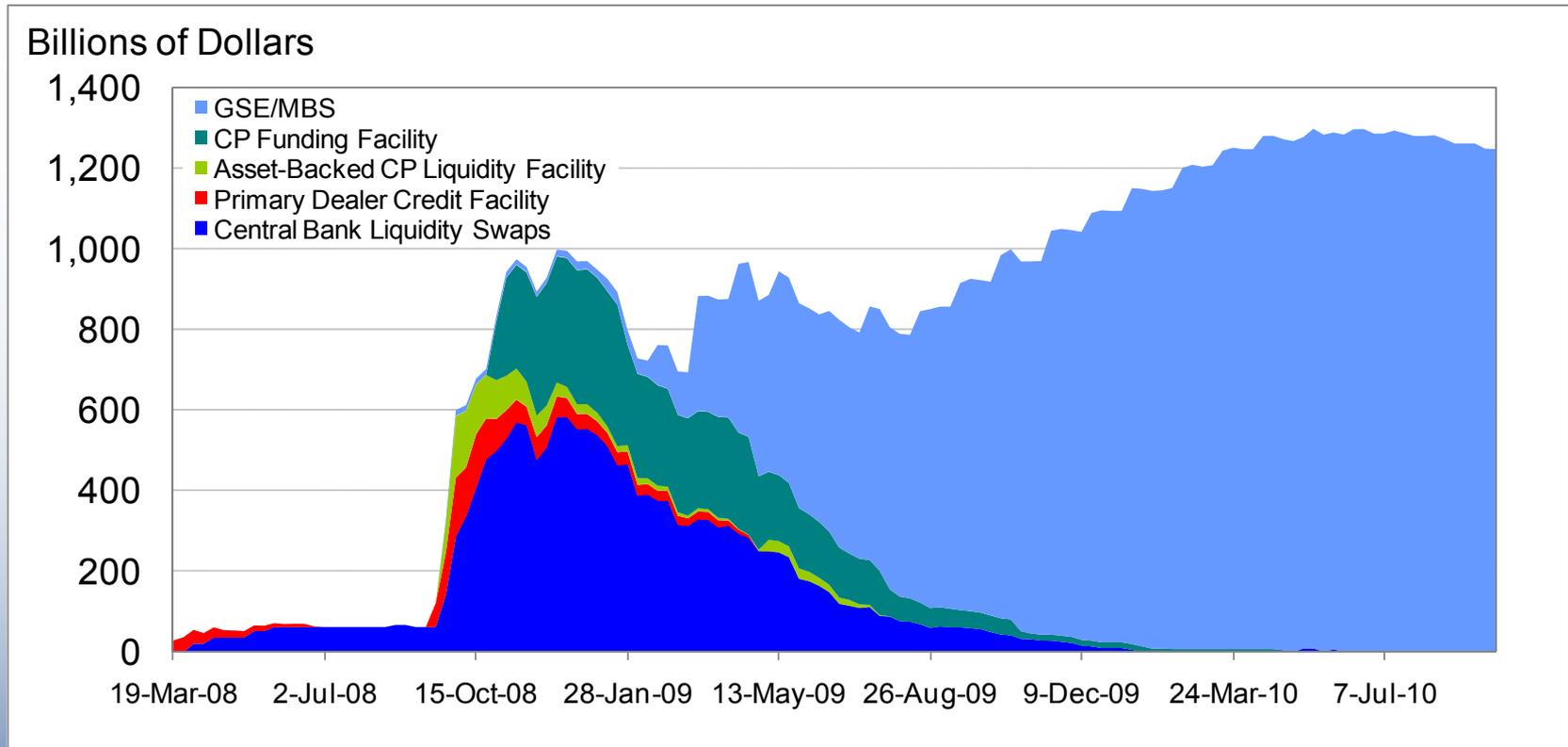


Source: Federal Reserve Board, Federal Reserve Bank of Boston / Haver Analytics

Figure 11

Federal Reserve System Assets: Selected Temporary Operations

March 19, 2008 - September 22, 2010

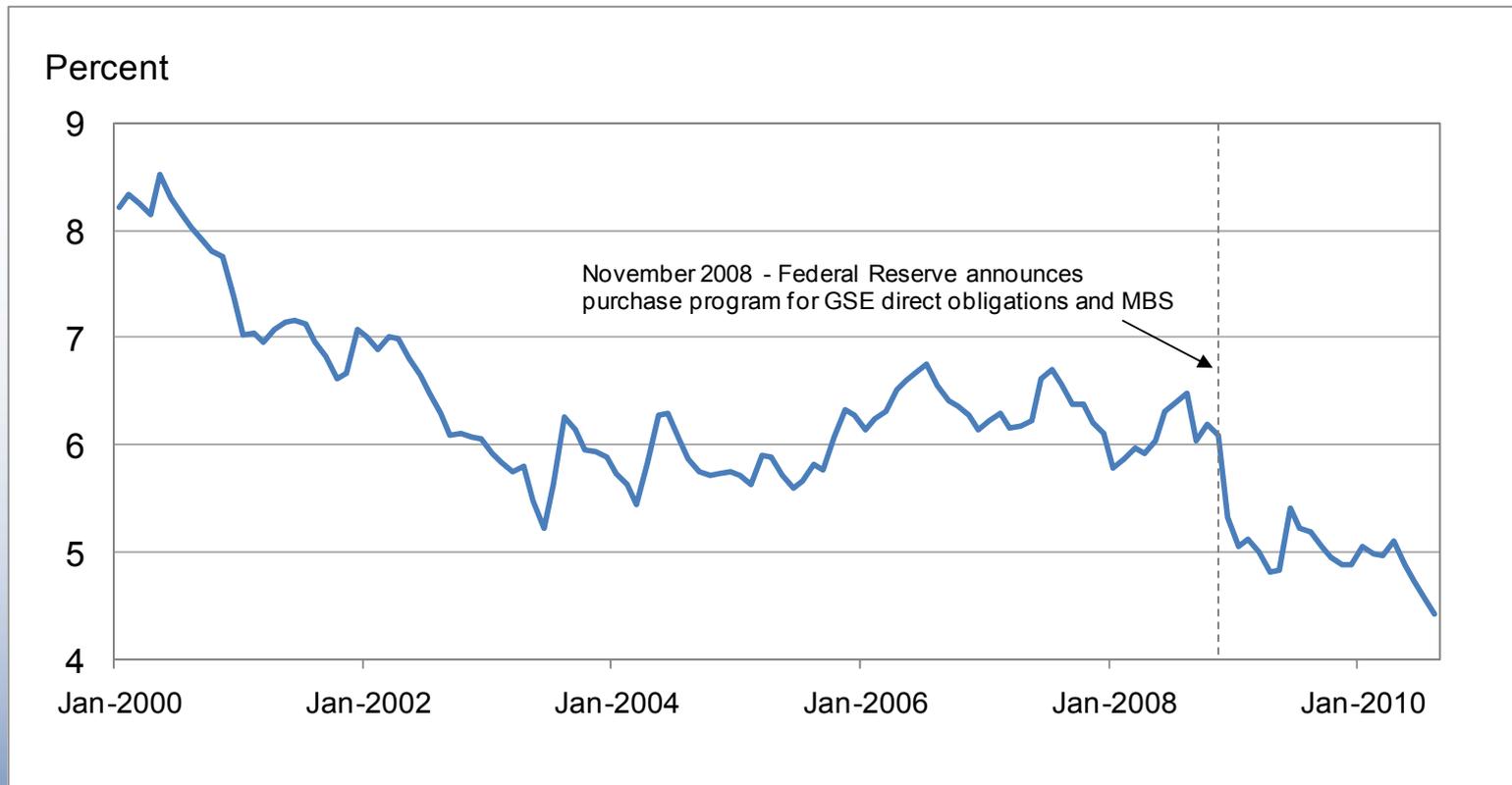


Source: Federal Reserve Statistical Release H.4.1

Figure 12

Rate on 30-Year Fixed-Rate Conventional Mortgage

January 2000 - August 2010

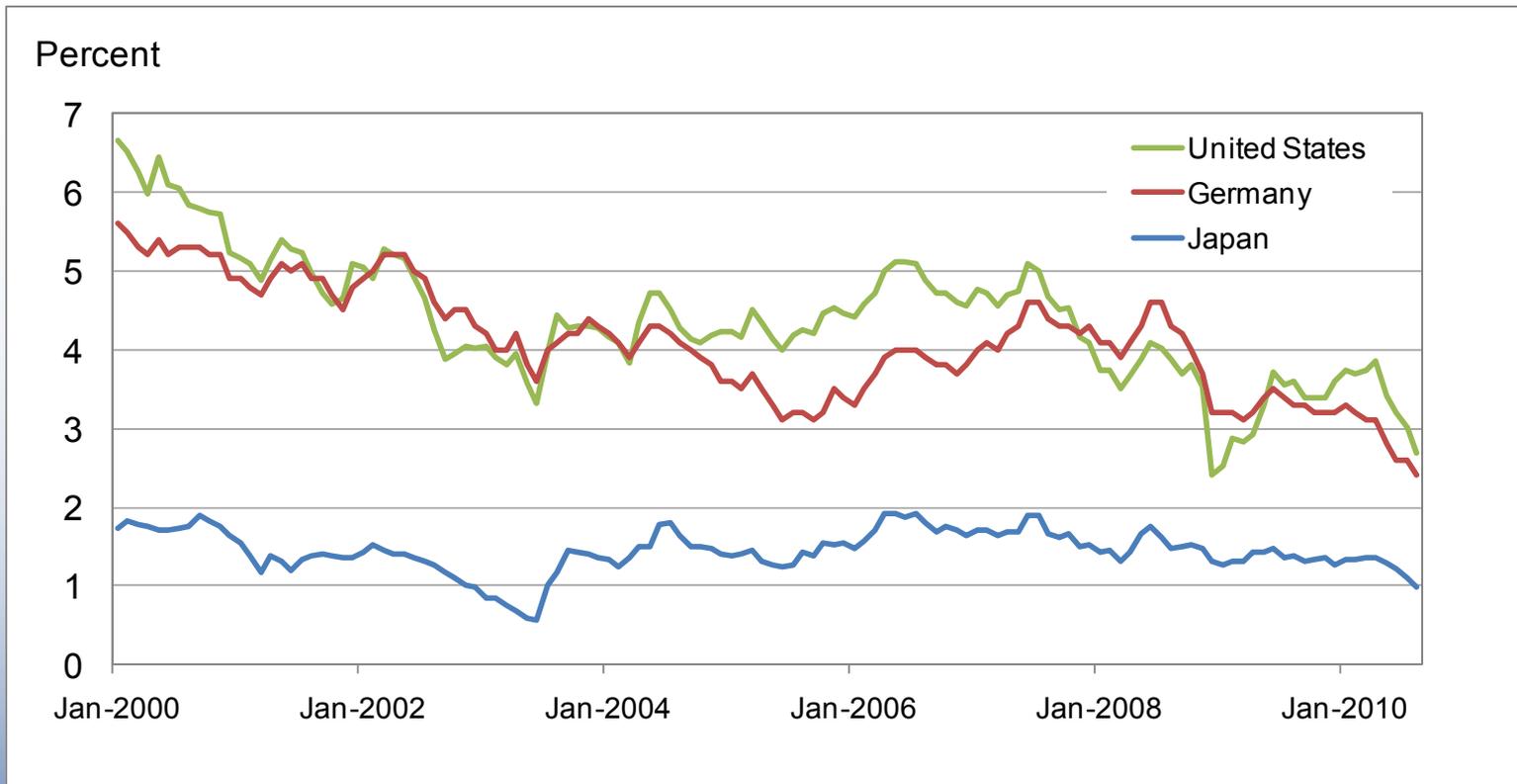


Source: Federal Home Loan Mortgage Corporation / Haver Analytics

Figure 13

Yields on 10-Year Government Bonds in Germany, Japan, and the United States

January 2000 - August 2010



Source: Deutsche Bundesbank, Financial Times, United States Treasury / Haver Analytics