"Avoiding Complacency: the U.S. Economic Outlook, and Financial Stability"

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Good evening. I would like to thank the National Institute of Economic and Social Research for hosting this event. Given the economic and financial shocks that have buffeted the global economy in recent years, I think it is particularly important to share perspectives across the Atlantic – on the economic outlook, but also on the risks to both the outlook and financial stability.

I am honored to be sharing the stage with Adam Posen. I have long admired Adam's academic work and policy perspectives, and I am looking forward to discussions with Adam and his colleagues at the Bank of England over the next several days.

Of course, I would like to note that the views I express today are my own, not necessarily those of my colleagues on the Federal Reserve's Board of Governors or the Federal Open Market Committee (the FOMC).

Today I would like to begin with a discussion of emerging economic trends in the United States, and then move into a discussion about opportunities to bolster stability in our financial infrastructure. My theme throughout is the need to avoid complacency.

Recently released statistics are consistent with improved financial market conditions and continued – albeit painfully slow – progress in labor markets. At the same time, the *spending* data have been very weak. How should we reconcile these differences?

Focusing only on financial and labor market conditions, one might conclude that the recovery is undeniably gaining traction – and that spending will improve as higher personal income and wealth contribute to a reinforcing cycle that propels us toward full employment in the U.S. Alternatively, focusing only on the weak spending data might lead one to conclude that the improvements in labor markets and financial conditions are going to prove temporary, because the recent improvements are probably unsustainable if the U.S. economy continues to grow at only a 2 percent rate.

It may take several quarters before we know which of these two perspectives is actually better reflective of the U.S. economy today.

Beyond discussing the economic outlook in the United States, I would like to make a few observations on financial markets. I'll state my firm view that the actions taken by central banks around the world – for example, engaging in foreign exchange swap line agreements and using less traditional monetary policy tools – have been both appropriate and necessary.

However, many of these actions were ultimately necessary because supervisory and regulatory frameworks were not sufficiently macro-prudential. By macro-prudential I am referring to a focus on risks, vulnerabilities, or dependencies that potentially could affect the financial system as a whole –

versus just the safety and soundness of individual institutions. Ideally, central banks should not need to take actions to support continued financial intermediation, because financial institutions should be sufficiently resilient to ensure that even unusual financial-market stress would not impair effective intermediation. Recent events have highlighted that we remain far from achieving that goal.

The U.S. Economic Outlook

With that preview, let me begin with some thoughts on the U.S. economic outlook.

There have been positive trends in some recent economic data. U.S. financial market conditions are clearly improving. Some of the recent improvements reflect the moderation or removal of some significant, imminent, downside "tail" risks. At least for now, Europe seems to have avoided the risk of a so-called "Lehman moment" – a risk that had seriously concerned investors.

The S&P 500 has risen roughly 9 percent since the beginning of the year, as shown in **Figure 1**. Risk gauges, such as spreads on bonds and credit default swaps (CDSs), have improved. Bond issuance has been strong. U.S. financial markets have gathered steam and reflect increased optimism about likely economic outcomes.

However, my enthusiasm is tempered by the challenges still facing Europe.

Forward-looking financial markets seem to be pricing in improved economic outcomes, and there are some brightening signs, to be sure. Figure 1 shows that auto sales in the United States have rebounded nicely, and consumer sentiment has improved significantly since last August. In addition, payroll employment in the U.S. has been growing at a rate of 245,000 jobs a month over the past three months. This should mean more disposable income, which coupled with increasing household wealth (fueled by stock market gains), should be consistent with an improved outlook for spending.

However, when we focus solely on the incoming spending data, the outlook appears less robust. Since the start of the recovery, what we call real final sales – that is, domestically produced

goods and services (net of inventories, which can swing significantly from quarter to quarter) – have been growing at only 1.7 percent, as shown in **Figure 2**. Furthermore, my forecast for the first quarter of this year would be for real final sales to grow at roughly 2 percent, only slightly better than the average during the U.S. recovery to date.

Figure 3 highlights two distinctive features of this recovery – unusually weak residential investment, despite very low interest rates; and an extended decline in state and local government spending.

The health of the U.S. housing market has been hampered by significant declines in housing prices, very elevated foreclosures, and a large inventory of vacant homes. As a result, residential investment – which normally grows quite rapidly during a recovery – has not provided its customary overall boost to the economic recovery. While some tentative signs of an improving housing sector have emerged, for the reasons I just mentioned it is likely to be subdued relative to historical experience.

Also, state and local government spending has been unusually weak during this recovery. The severity of the recession, combined with the fall in home values that are the basis for many local government tax revenues, have forced substantial cuts in state and local spending. It is worth noting that in the U.S., state and local government spending accounts for a larger share of GDP than does federal government spending: 11.7 percent of GDP, compared to 8.0 percent for federal spending.

State and local budgets will remain under stress as governments face increasing demands on their resources, such as addressing significant shortfalls in certain areas (for example employee pensions). At the same time, federal government spending is expected to be cut significantly, making government spending as a component of GDP a challenging aspect of the economic outlook in the United States.

So, despite some good production data and the optimism seen in financial markets, the spending data are consistent with real U.S. GDP growth over the course of 2012 of only 2.5 percent – which unfortunately is only fast enough to make modest headway at reducing the unemployment in our labor market.

Given the very modest recovery to date, it is surprising that the unemployment rate, depicted in the recent downward trend in the line in **Figure 4,** has shown as much improvement as it has. The current unemployment rate of 8.3 percent represents a decline from 9.1 percent over the past six months, despite only modest growth in spending.

However, while the unemployment rate has declined, there has not been much improvement in the important ratio of employment to population, shown in **Figure 5**.

Of course aggregate employment-to-population ratios are impacted by demographic changes – for example the aging of the "baby boom" generation in the U.S. To explore the role that recent demographic changes *might* have played on the movement of the employment-to-population series, **Figure 6** shows the same concept for particular age cohorts that are less likely to be impacted by demographics over the short term. The employment-to-population ratio in age groups where the attachment to working should *not* have changed shows a pattern very similar to that of the ratio as a whole.

So part of the decline in the unemployment rate is resulting from workers leaving the labor force. Furthermore, only in recent months has the employment-to-population ratio improved and the payroll employment growth clearly exceeded the normal growth rate of the labor force. So the U.S. remains well below the employment levels that would be viewed as consistent with the maximum sustainable employment aspect of the Federal Reserve's so-called dual mandate.

The other element of the Federal Reserve's dual mandate is inflation. **Figure 7** charts two primary measures of inflation – *total* personal consumption expenditure inflation, and *core* personal

consumption expenditure inflation (which excludes the volatile food and energy categories). *Core* PCE inflation – again excluding food and energy – has remained below the Federal Reserve target of 2 percent throughout the recovery. *Total* PCE inflation, including food and energy, is slightly above 2 percent, but has diverged from core prices when commodity prices such as oil have spiked up or declined substantially. As the figure shows, however, the more volatile total measure tends over time to revert to the level of core inflation.

With the recent spike in oil prices, it is likely that total PCE inflation will rise further, but this increase is likely to be temporary, reflecting volatile oil price movements. For 2013 my own forecast is for both total PCE and core PCE inflation to be below 2 percent, although this forecast assumes that Middle East tensions do not result in another sharp spike in oil prices.

Another potential inflationary concern has been raised by the swelling of the Federal Reserve's balance sheet that occurred as we purchased assets to advance monetary policy goals. But **Figure 8** shows that commercial real estate lending is still declining – and while commercial and industrial lending has increased, it has yet to return to its level at the beginning of the recession. What this means it that by and large, the expansion of the Fed's balance sheet has not turned into a significant increase in the supply of money, because banks have not been lending out their holdings of excess reserves. So the expansion of reserves that occurred in 2008 as the Fed expanded its balance sheet has *not* been inflationary, given the subdued bank lending environment.

Indeed, bank lending has been quite modest despite a relatively rapid improvement in bank capital ratios in the United States. This should give some European analysts pause, as the experience in the U.S. (as well as the earlier Japanese experience) suggests that the constraints on bank lending due to the recent financial problems in Europe may be more long-lasting than some are expecting.

In summary, while recent financial-market and labor-market data in the U.S. have been encouraging, spending data remain disappointing. Like many forecasters, I expect higher real GDP

growth as the year progresses. But I would caution that I and many others held a similar view at the beginning of 2010 and 2011.

If real GDP does not grow more rapidly and unemployment remains at its current unacceptably high level, monetary policy may need to be more accommodative. The U.S. unemployment rate remains well above a level that could be considered full employment, while we are likely to undershoot our inflation targets. Together these factors provide room for flexibility in the response of monetary policy as we receive additional information on current economic conditions.

Challenges in Bank Funding

Despite the improvements we are seeing in the U.S. economy, a number of significant risks and challenges remain. One involves geo-political risks, which have already caused oil prices to rise more than most non-energy commodity prices. Any further significant increase in energy prices would be an additional impediment to faster growth. Another involves the unsustainable budget deficits that many countries, including the United States, currently have. The challenge, I believe, is that greater fiscal responsibility must be implemented in a way that does not threaten tentative economic recoveries. A third risk is the continued fragility in our financial infrastructure – a situation that can substantially amplify other economic problems. It is this third risk that I would like to touch upon today.

The economic slowdown that began in the United States several years ago went from being a mild event led by housing-related problems to being a much more severe and long-lasting economic downturn. This was, in part, because of the architecture of the financial sector.[1] Today I would like to highlight one particular potential structural flaw in the financial architecture – the dependence on short-term funding.

This past financial crisis was a primer on vulnerabilities to short-term funding. Specifically, wholesale funding utilized by large global banks dried up during the financial crisis. As large banks sought to reduce their exposure to counterparties of concern, the term of loans made in the marketplace decreased, and the cost of short-term credit spiked.

And many of the problems were occurring outside of traditional depository institutions. Bear Stearns and Lehman Brothers were investment banks, not commercial banks. As counterparties dramatically reduced both unsecured and secured lending to these two entities, funding was no longer available and the firms failed.

Similarly, money market mutual funds with exposures to investment banks in many cases required support from parent or sponsoring entities. And one fund without parental support – the Reserve Primary Fund – sustained a credit loss that would ultimately lead to its liquidation. This led to a run on prime funds, which in turn further impaired short-term credit markets.

As **Figure 9** shows, the money market mutual fund industry held $3.5 trillion in assets under management in mid September 2008. Prime funds, which hold a mix of Treasury and agency securities and other short-term debt instruments (including commercial paper and large certificates of deposit), held nearly 60 percent of industry assets, or $2.1 trillion.

When the Reserve Primary Fund "broke the buck," outflows from prime funds totaled roughly $500 billion over a four-week period. Although much of the outflow went into government money market mutual funds (which hold only Treasury and agency securities, and repurchase agreements backed by such securities), these inflows did little to ease the strains being felt in the corporate funding markets resulting from the exit from prime funds.[2]

U.S. money market funds are thought of and marketed as highly liquid, low-risk investments with many of the same characteristics as traditional bank deposits. As a result, money market fund investors and money market fund managers should be highly sensitive to changes in underlying risks.

The crisis in autumn of 2008 taught us that safeguarding against runs on financial entities like money market funds – entities that do not have a large, stable, core deposit base and do not have ordinary access to the central bank's "lender of last resort" function – was and is important, unfinished work if we are to have a more stable financial system.

A number of significant reforms are being contemplated by the U.S. Securities and Exchange Commission (SEC) to reduce the risks surrounding money market funds. But even with significant reforms such as these – reforms, by the way, that I am highly supportive of and will say more about at a conference in Atlanta in two weeks – money market funds will continue to be a potentially unstable source of U.S. dollar funding. From a financial stability perspective, we need to recognize the possibility of a deterioration in the ability or willingness of the money market funds to keep providing a dependable source of funds to counterparties (for example, the issuers of commercial paper that the funds purchase). This could occur as a result of a change in the risk profile of those counterparties.

Wholesale funding issues also played an important role in recent European banking problems. Some European banks were too dependent on wholesale funding, particularly funding coming from U.S. money market funds.

Figure 10 shows the European exposure of U.S. prime money market funds over the past year. Given the changes in the risk profile of some banks, as a result of increases in sovereign debt risk, money market funds have sought to reduce what was their large risk exposure to European financial institutions. Most money market funds in the beginning of 2011 had already dramatically reduced exposure to peripheral financial institutions. Over the second half of last year there was a very significant decline in exposure to euro-zone financial institutions. (In addition, remaining exposure was shortened in tenor, meaning time to maturity). Figure 10 highlights the declines across Europe and **Figure 11** shows the decline over the course of 2011 more specifically by certain countries.

Because U.S. money market funds had been a significant source of short-term funds for European institutions, money funds' move away from short-term European debt resulted in a significant shortage of dollar funds available to these institutions. I will show you some market indicators of these shortages in a moment.

No money market fund encountered a problem meeting investor redemptions during the European sovereign debt crisis[3]. But even without such a problem, money market funds still had an impact on the availability of credit to financial institutions for which the perception of risk had changed.

Problems with financial stability do not require a failure to create a significant disruption in the flow of credit. In light of the incentives facing money market funds, financial institutions that rely heavily on them for funding put themselves in a position where a short-term change in perceived risk can create significant funding problems. And as we have seen repeatedly over the past several years, funding problems at one institution can quickly spread to the financial system as a whole.

Figure 12 highlights that funding challenges for European banks were developing as money market funds reduced their European exposures. The rise in the LIBOR to OIS spread[4] indicates that financial institutions became more concerned about lending to each other as money market funding declined. Similarly, the sharp rise in the rates on the 3-month euro-dollar foreign exchange swap indicates the pressure exerted by reduced dollar funding from the money market funds on European financial institutions' funding.

In short, the rational reaction of money market funds to perceived changes in risk – reducing European exposure – led to various funding pressures. The issues eventually were addressed by central bank actions that significantly expanded liquidity, both through foreign exchange swaps and through European Central Bank (ECB) term lending to European institutions. While these actions have been very important for stabilizing financial markets, I believe we need to get to the point of

having a more resilient financial infrastructure that does not require central bank interventions during times of stress.

For financial institutions and supervisors this implies thinking more carefully about stress scenarios, and specifically about whether critical funding will evaporate when it is needed most. While Basel Capital Accord proposals will help in this respect, I would strongly suggest that stress-testing scenarios assess how well risk-sensitive sources of short-term funding will hold up in an environment of heightened risk. This liquidity-focused assessment would be an important complement to current stress testing, and a prudent aspect of risk management.

Concluding Observations

In summary and conclusion, I would re-emphasize that financial-market and economic conditions have been improving since the start of the year. Central banks have played an important role in encouraging more economic growth. In the United States, accommodative monetary policy has been essential to improving financial conditions, but growth remains disappointingly slow to date, and significant downside risks remain. Should growth slow down more than is expected, more policy accommodation could be advisable.

Even if growth should improve more than expected in the U.S., the country will likely remain far from what anyone would consider full employment – so in my view policy accommodation should only be removed once it is clear that the Fed's dual mandate can be achieved within a reasonable period of time.

As with monetary policy, work remains to be done to improve financial stability. Today I have highlighted one area that deserves more attention – ensuring that we reduce the risk of disruptions to credit flows that result from wholesale short-term funding problems, and that require central bank intervention.

Thank you again for inviting me to speak with you today.

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[1] For more information see prior speeches including "Global Financial Intermediaries: Lessons and Continuing Challenges", "Towards Greater Financial Stability in Short-Term Credit Markets", and "Defining Financial Stability, and Some Policy Implications of Applying the Definition" [available at:

- http://www.bostonfed.org/news/speeches/rosengren/2011/101911/index.htm,
- http://www.bostonfed.org/news/speeches/rosengren/2011/092911/index.htm, and
- http://www.bostonfed.org/news/speeches/rosengren/2011/060311/index.htm, respectively].

[2] For more information on this aspect of the financial crisis, see a forthcoming article in *The Journal of Finance* entitled "How Effective Were the Federal Reserve Emergency Liquidity Facilities? Evidence from the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility", by Burcu Duygan-Bump, Patrick M. Parkinson, Eric S. Rosengren, Gustavo A. Suarez, and Paul S. Willen; and the related working paper of the same title and authorship, available at http://www.bostonfed.org/bankinfo/qau/wp/2010/qau1003.pdf.

[3] MMMF investors are shareholders, not depositors.

[4] LIBOR refers to the London Interbank Offered Rate, and OIS to Overnight Index Swap rate.

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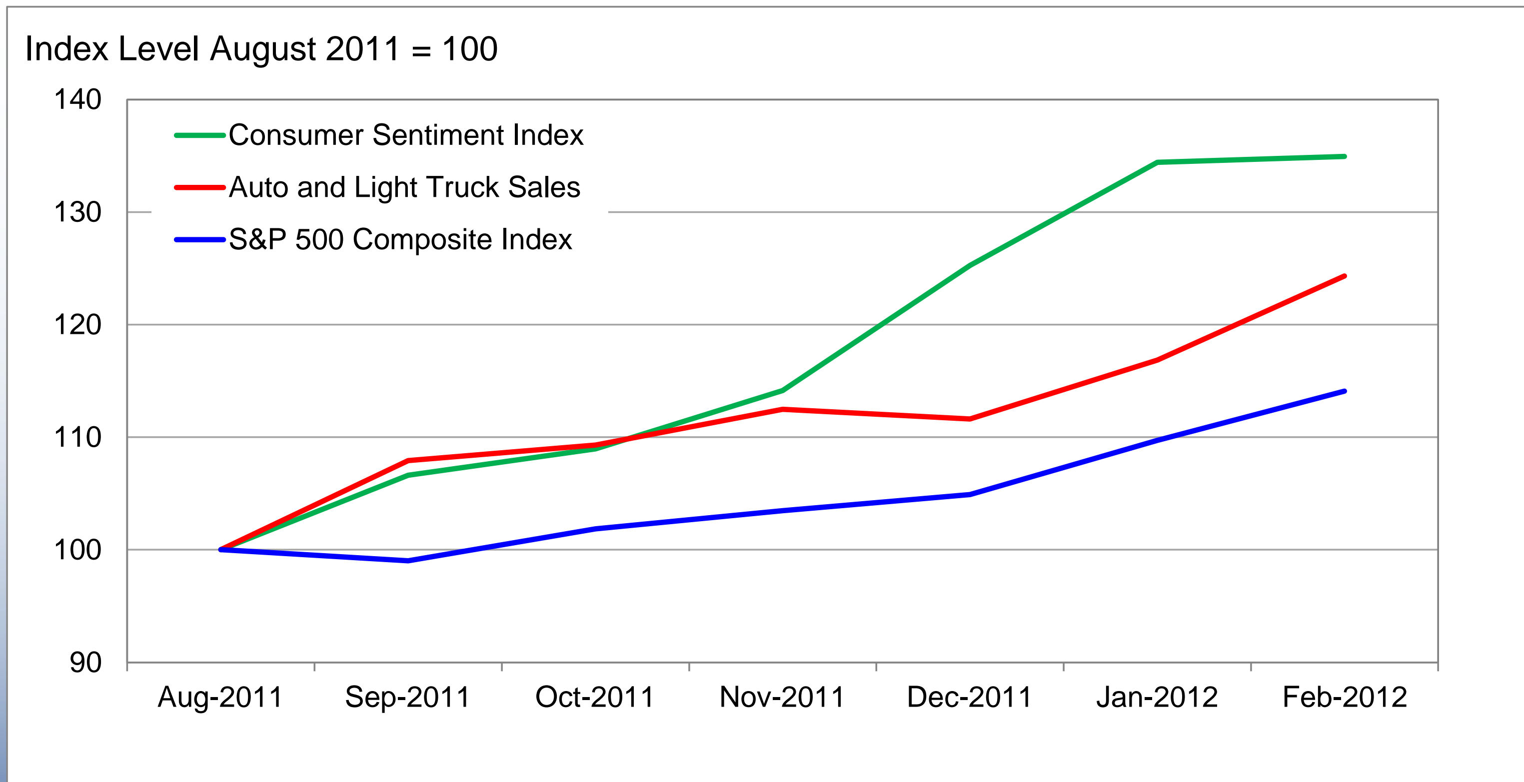
Figure 1
U.S. Auto Sales, Consumer Sentiment, and Stock Market Indexes

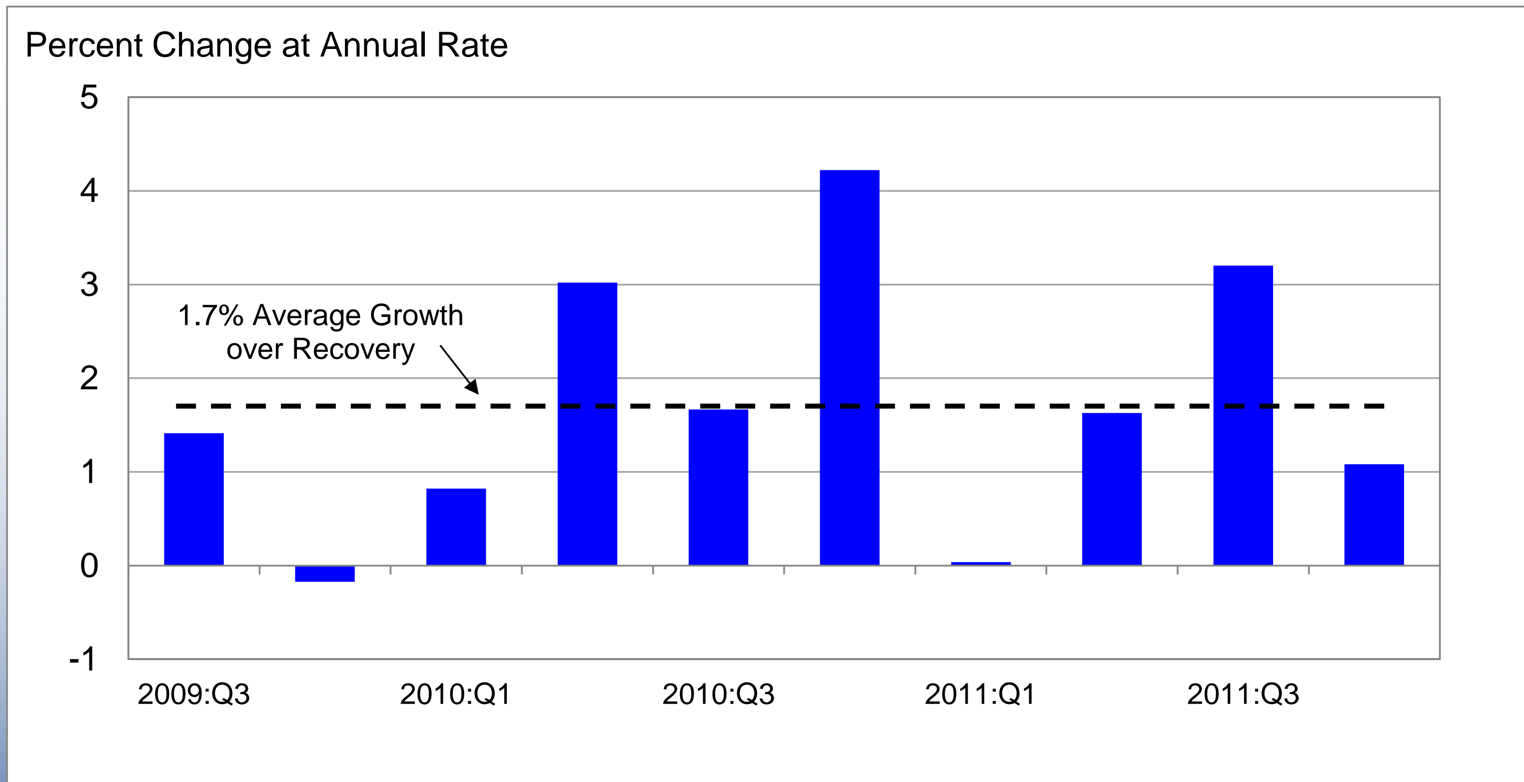
August 2011 - February 2012



Source: University of Michigan, Bureau of Economic Analysis, Wall Street Journal / Haver Analytics

Figure 2
Growth in Real Final Sales Following Most Recent Recession

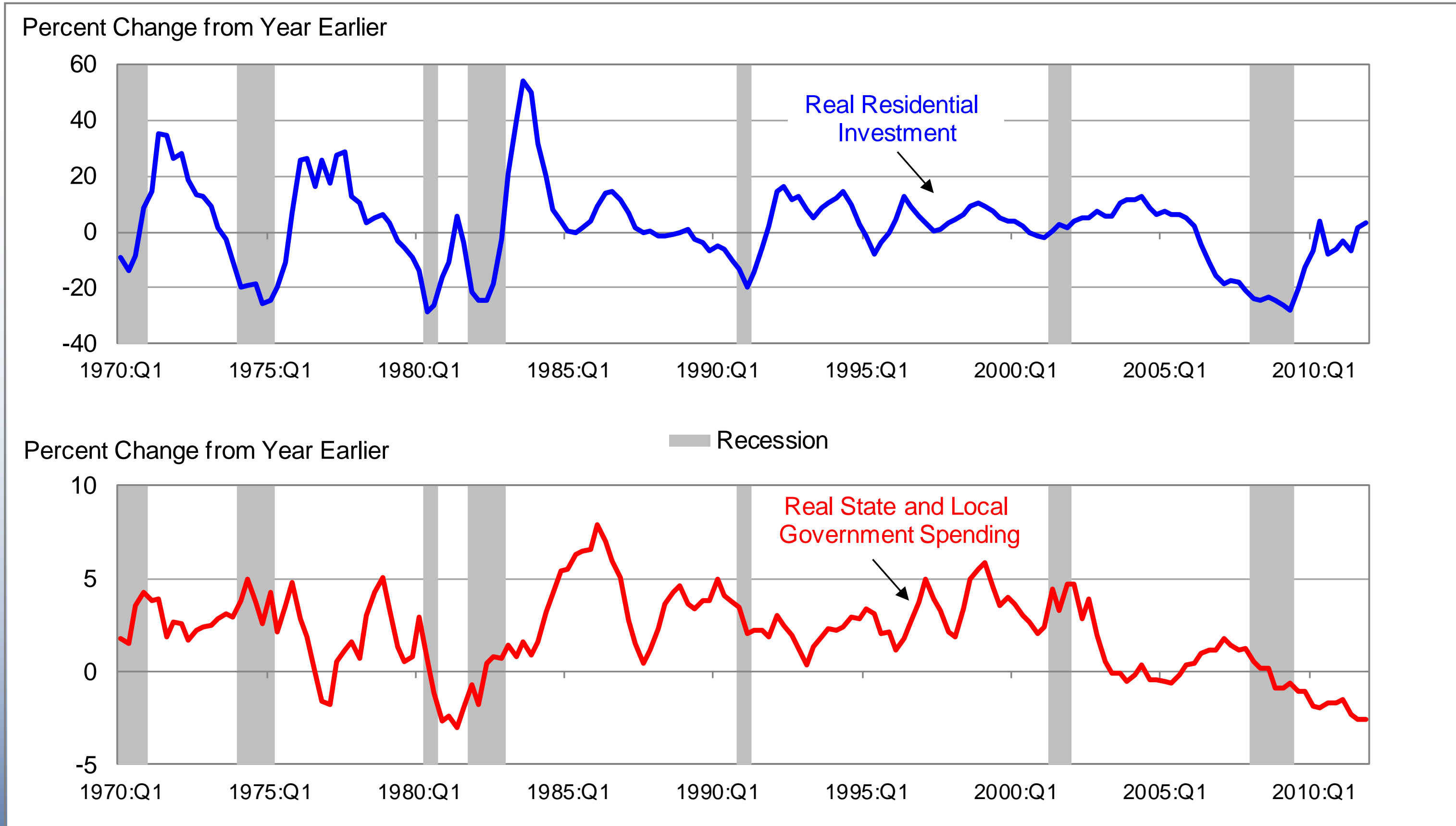
2009:Q3 - 2011:Q4



Source: Bureau of Economic Analysis, National Bureau of Economic Research / Haver Analytics

Figure 3
Growth in Real Residential Investment and State and Local Government Spending

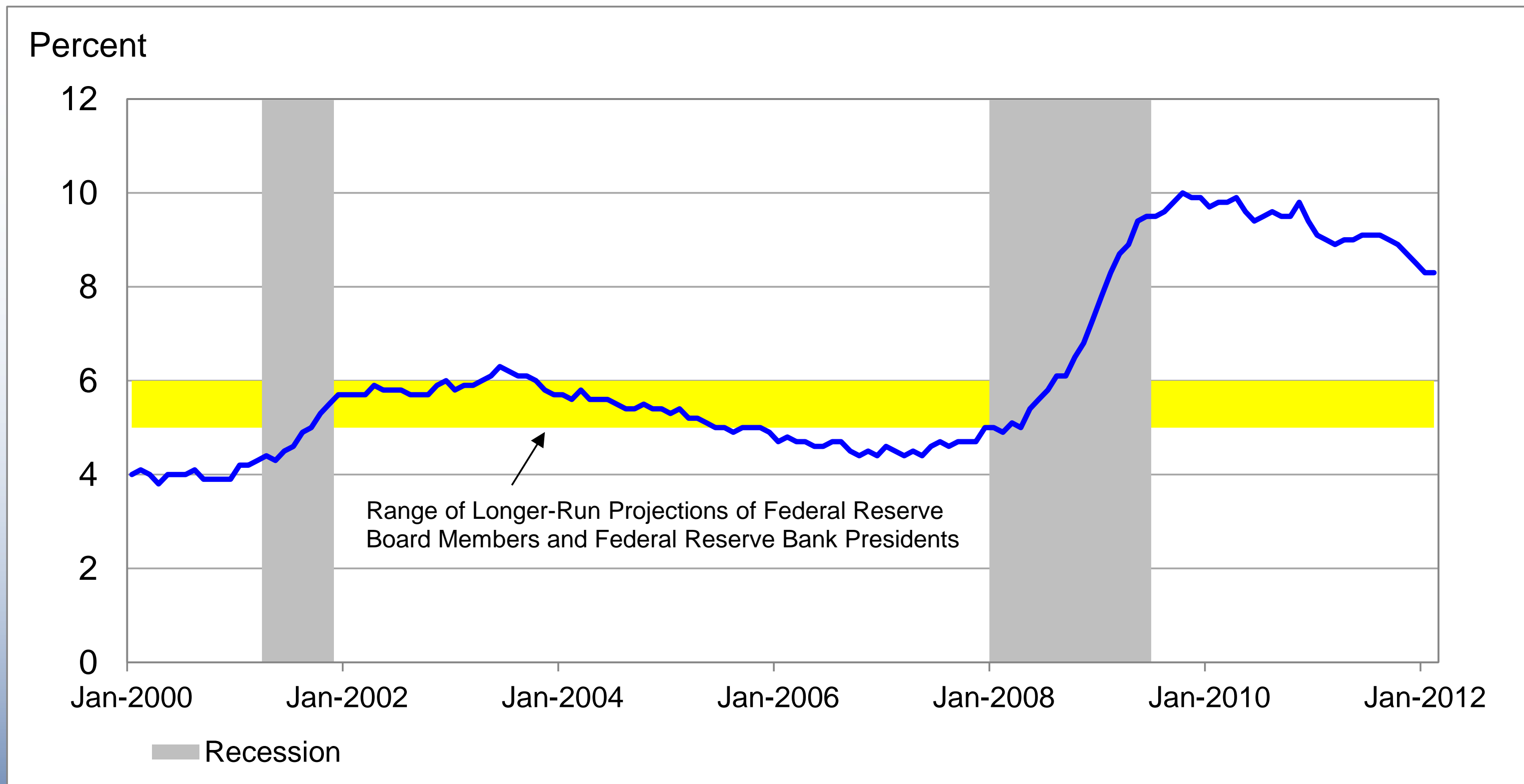
1970:Q1 - 2011:Q4



Source: Bureau of Economic Analysis, National Bureau of Economic Research / Haver Analytics

Figure 4
Civilian Unemployment Rate

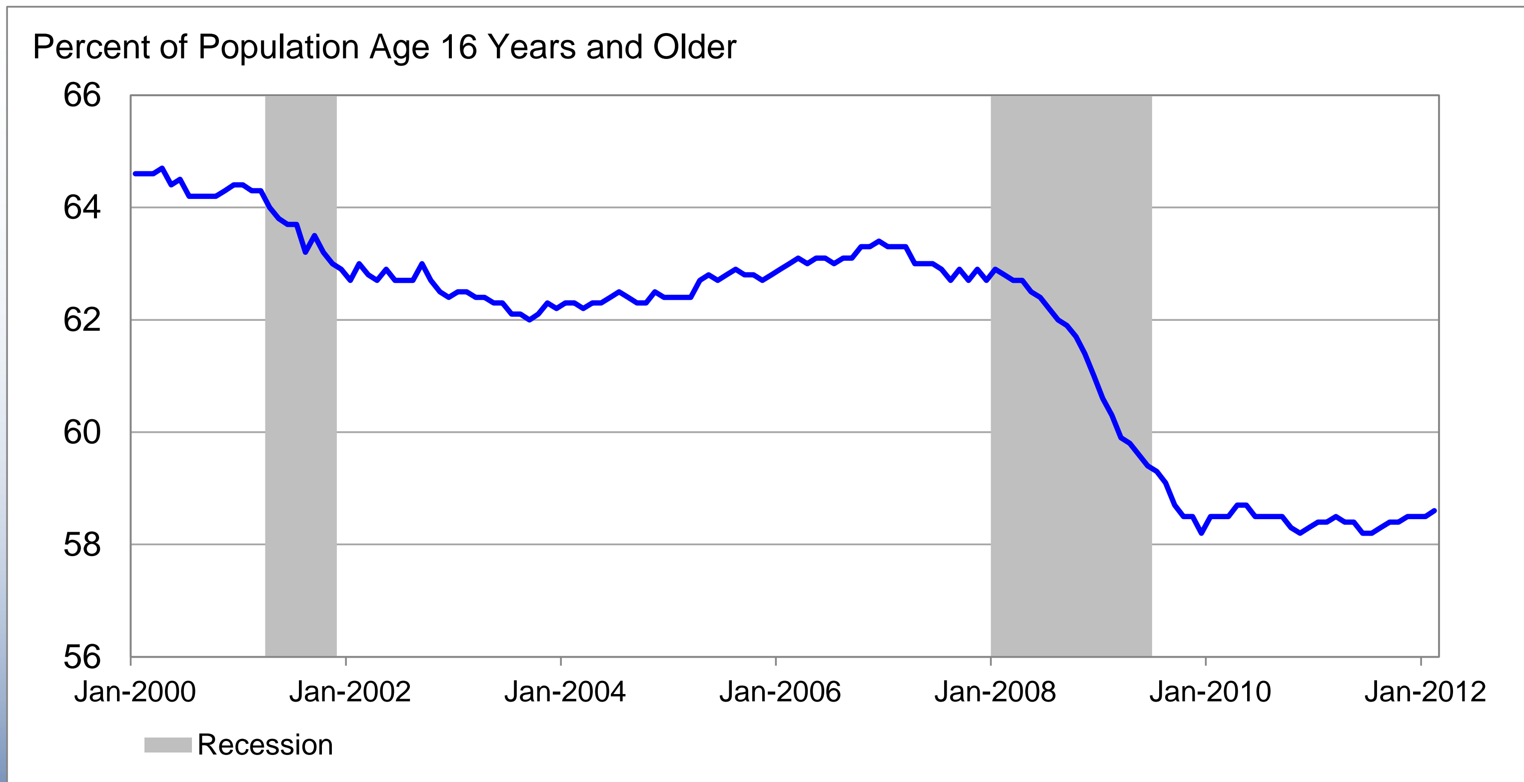
January 2000 - February 2012



Source: Bureau of Labor Statistics, Federal Reserve Board / Haver Analytics

Figure 5
Employment-to-Population Ratio

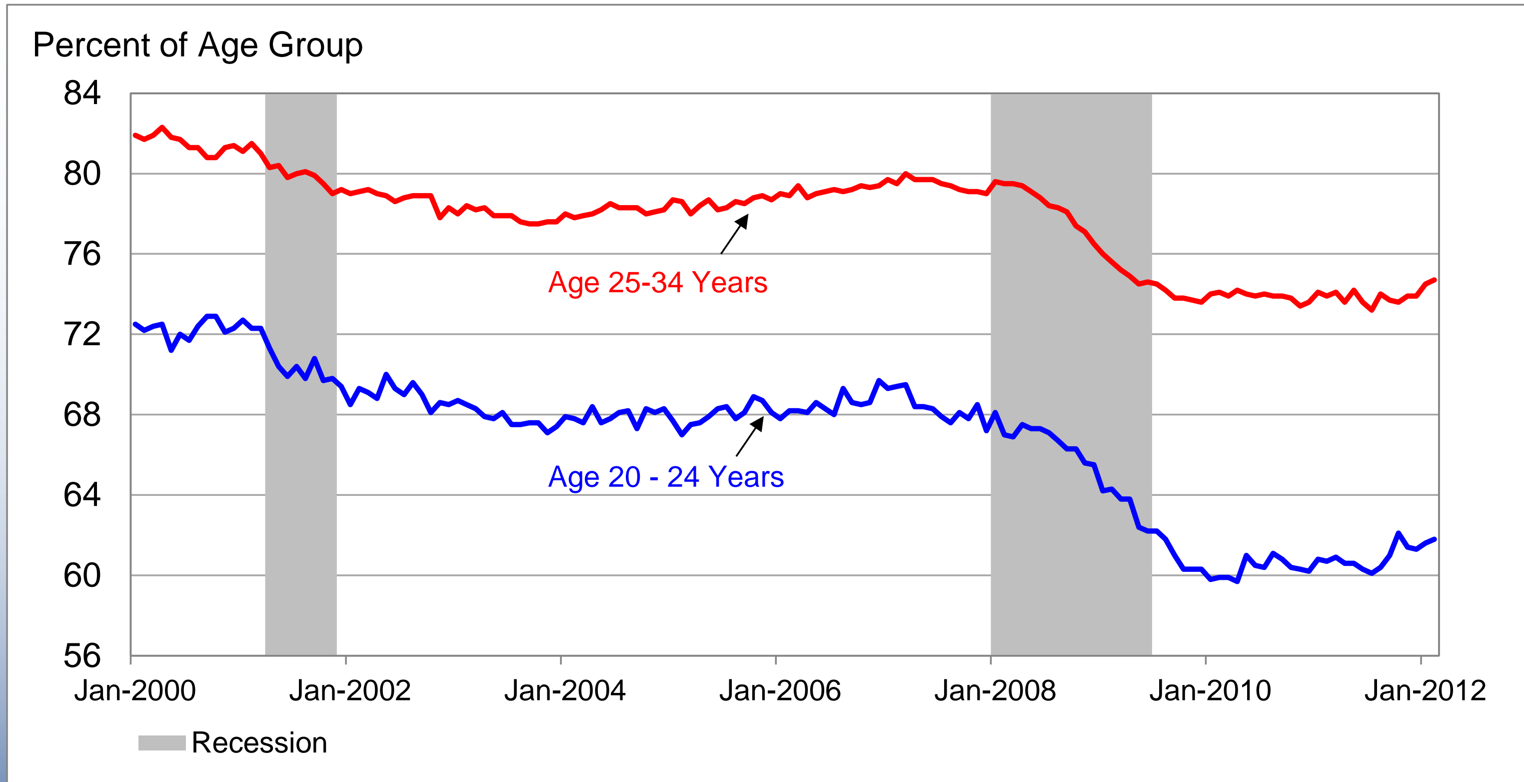
January 2000 - February 2012



Source: Bureau of Labor Statistics, National Bureau of Economic Research / Haver Analytics

Figure 6
Employment-to-Population Ratio for Selected Age Groups

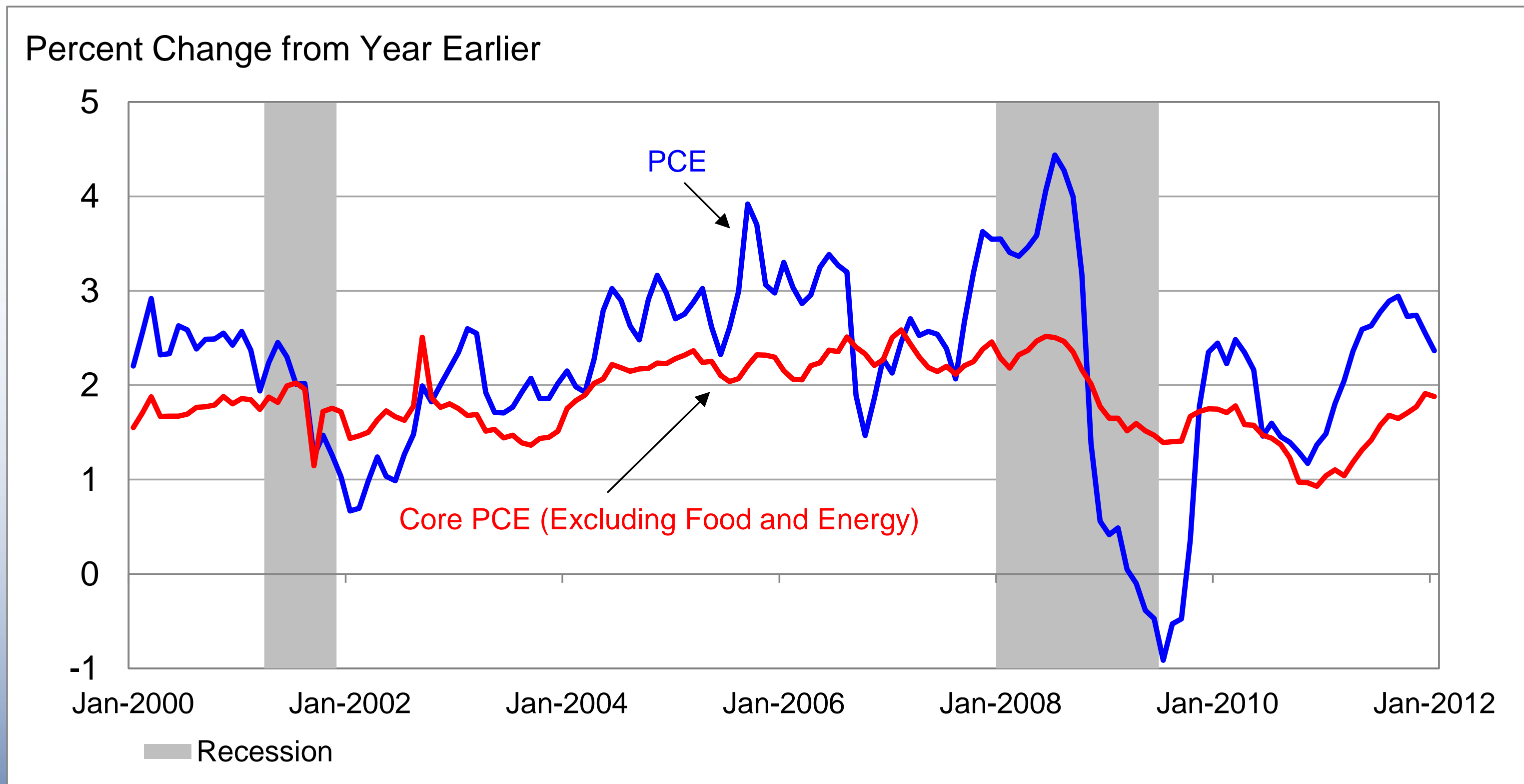
January 2000 - February 2012



Source: Bureau of Labor Statistics, National Bureau of Economic Research / Haver Analytics

Figure 7
Inflation Rate: Change in Total and Core Personal Consumption Expenditure (PCE) Price Indexes

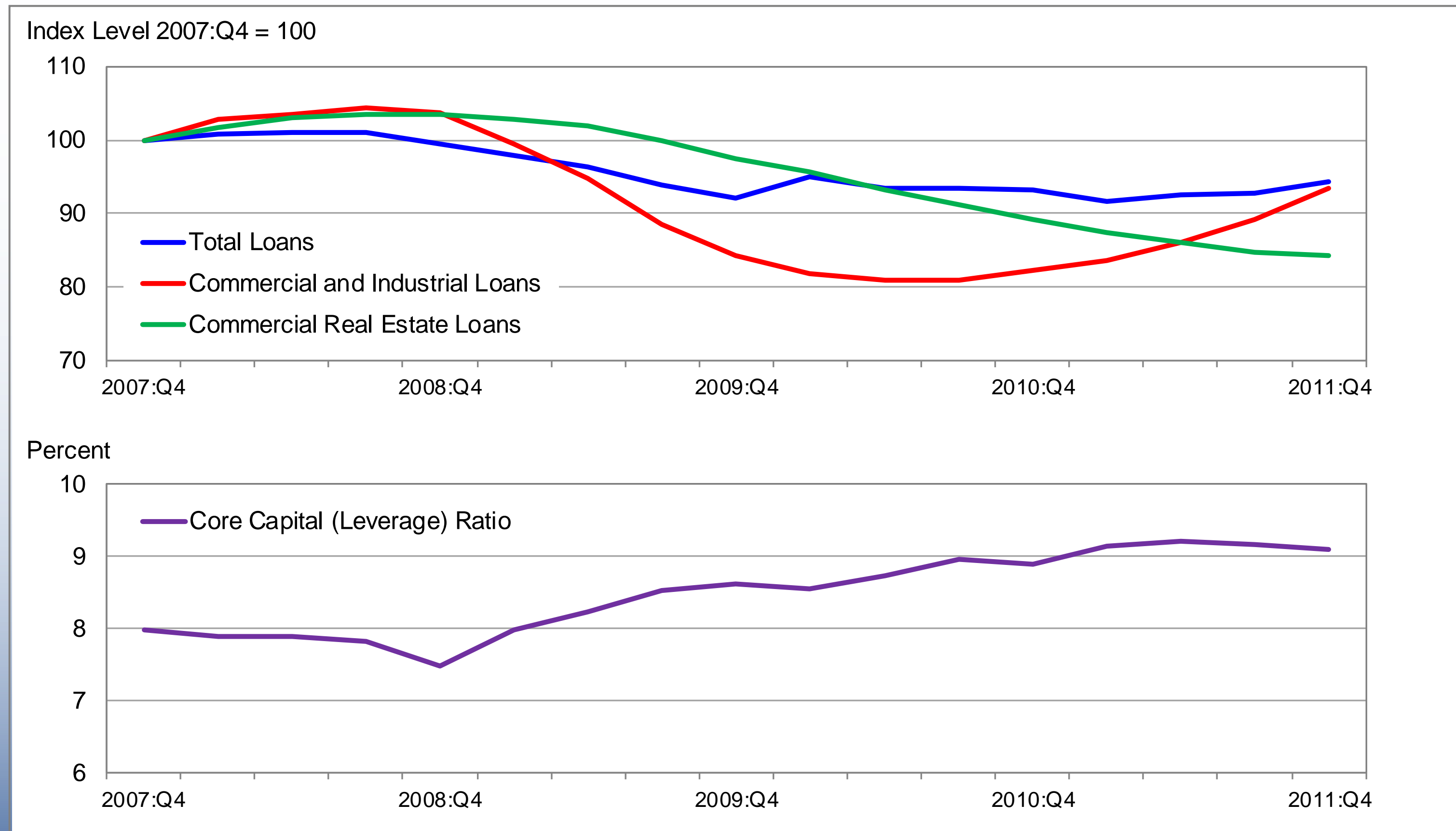
January 2000 - January 2012



Source: Bureau of Economic Analysis, National Bureau of Economic Research / Haver Analytics

Figure 8
Bank Lending and Capital Ratios at U.S. Commercial Banks and Savings Institutions

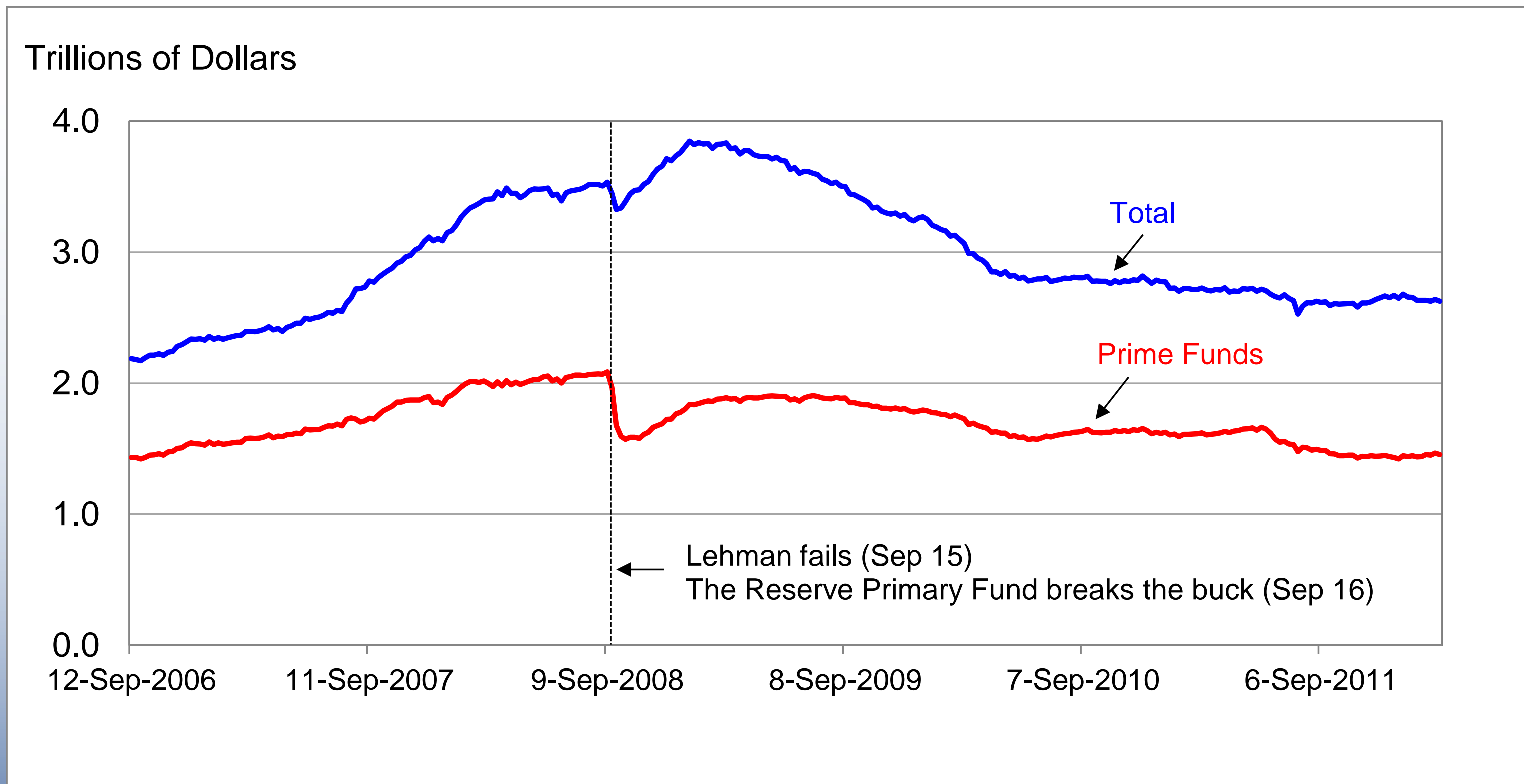
2007:Q4 - 2011:Q4



Source: Federal Deposit Insurance Corporation (FDIC) / Haver Analytics

Figure 9
U.S. Money Market Mutual Fund Assets Under Management

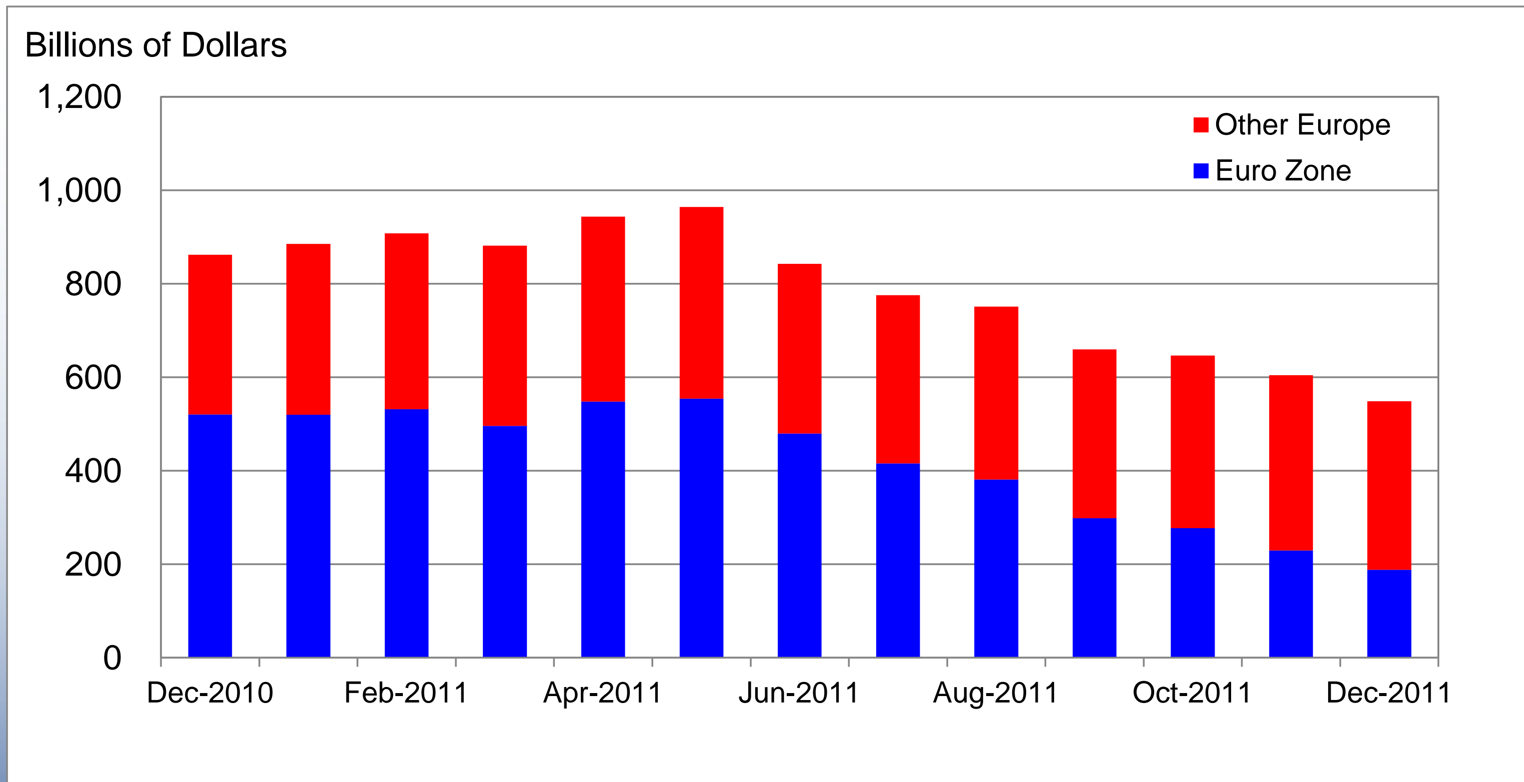
September 12, 2006 - March 6, 2012



Source: iMoneyNet

Figure 10
European Exposure of U.S. Prime Money Market Mutual Funds

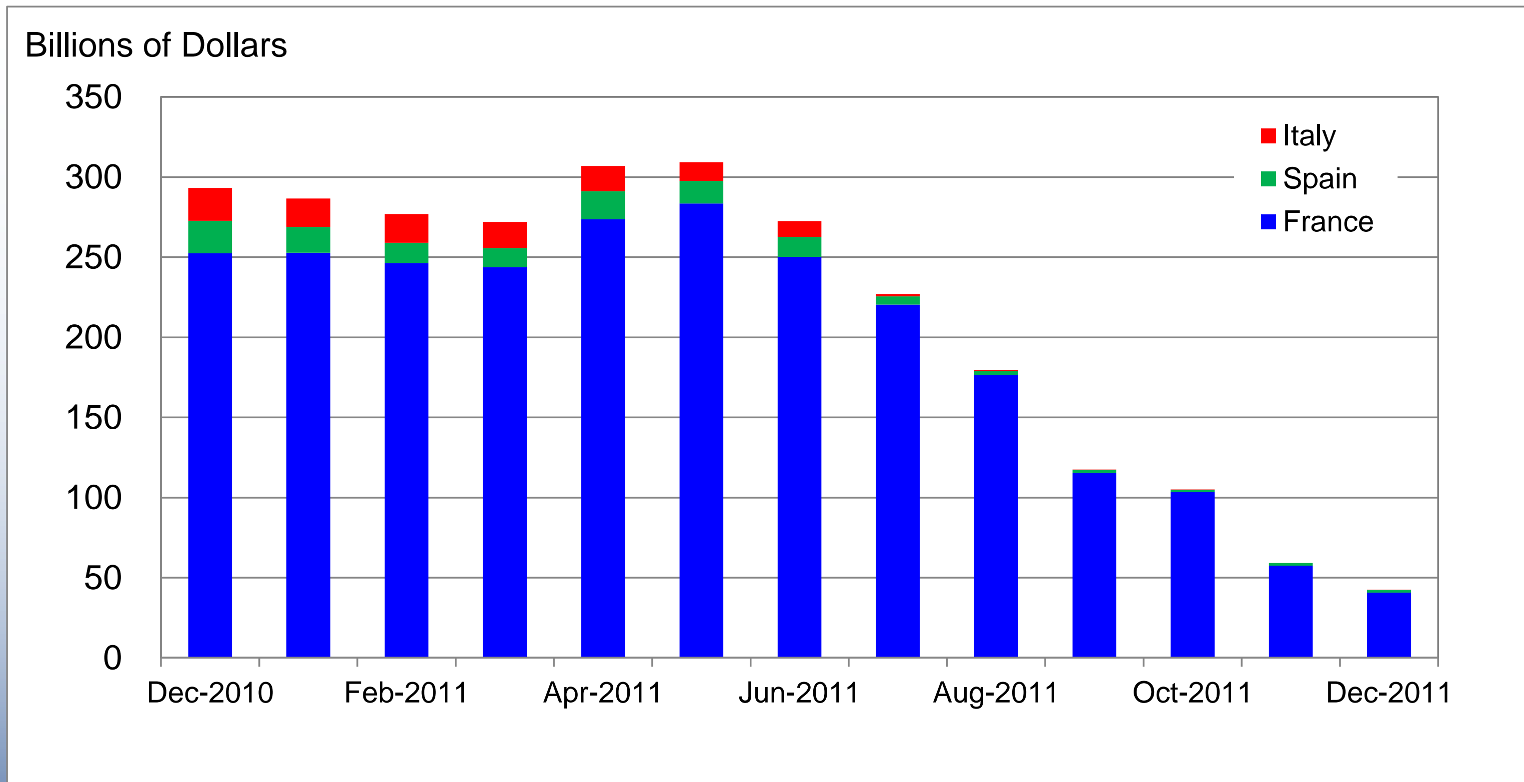
December 2010 - December 2011



Source: SEC Form N-MFP, Federal Reserve Board Staff

Figure 11
Selected Country Exposure of U.S. Prime Money Market Mutual Funds

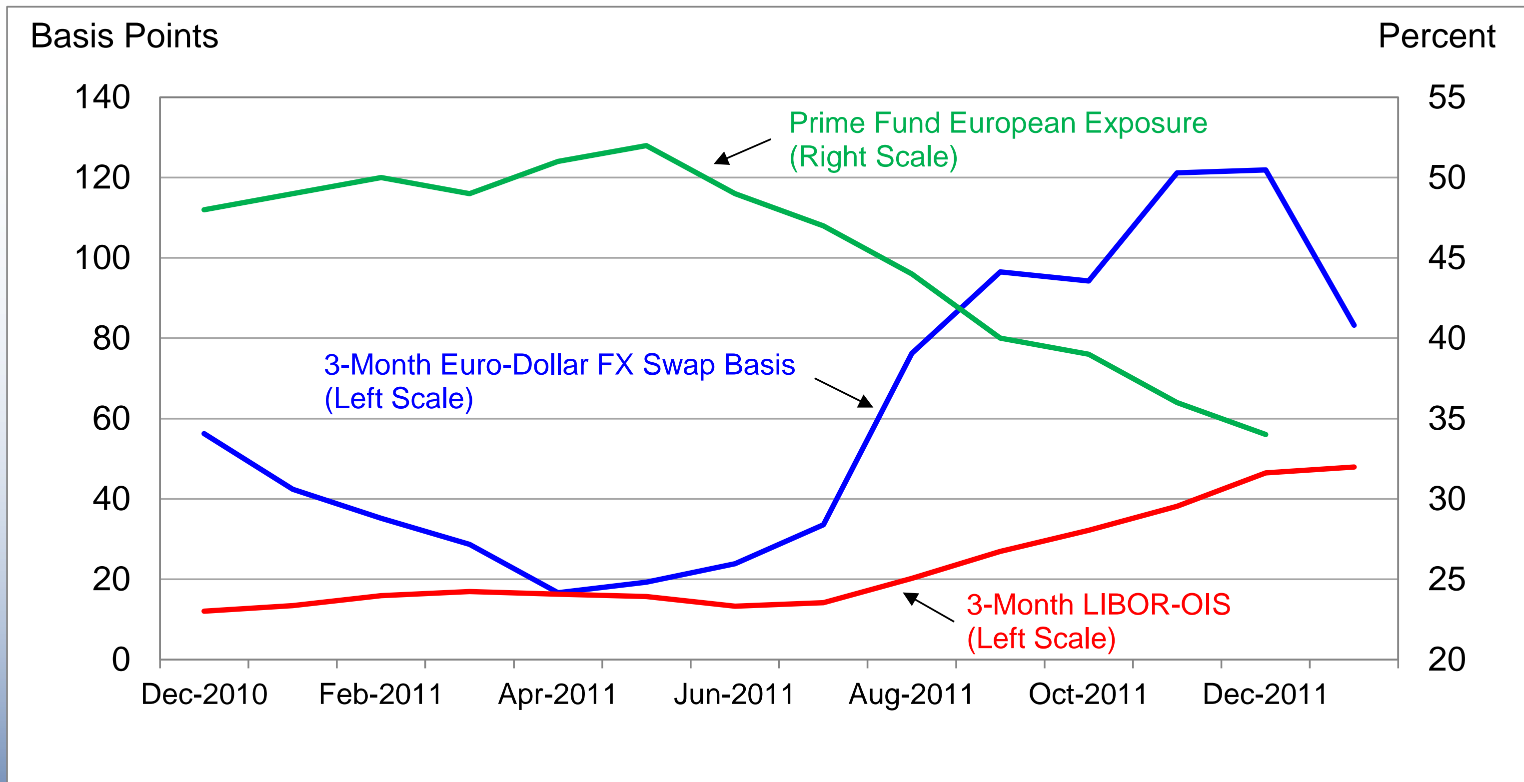
December 2010 - December 2011



Source: SEC Form N-MFP, Federal Reserve Board Staff

Figure 12
European Exposure of U.S. Prime Money Market Mutual Funds and Dollar Funding Pressures

December 2010 - January 2012



Source: SEC Form N-MFP, Federal Reserve Board Staff, British Bankers' Association, Deutsche Bundesbank, Financial Times, Bloomberg / Haver Analytics