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# An Update on the Tapering Debate

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15 August 2013

Louisville, Kentucky

# Introduction

## This talk

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- In June, the FOMC authorized Chairman Bernanke to present a roadmap for a possible reduction in the pace of asset purchases by the Fed.
  - This is often referred to as “tapering” asset purchases.
- The Chairman emphasized an approach that depends on economic conditions, but that could begin in the fall of this year.
- What types of arguments might be made for or against tapering?
- In this talk, I will provide some of my own views on the debate without pre-judging its conclusion.

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# Recent Developments

## The components of current policy

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- Current U.S. monetary policy has three components: The policy rate, forward guidance, and asset purchases.
- The policy rate itself has been near zero since December 2008 and remains there today.
- There are two “unconventional” aspects to policy:
  - Forward guidance is a promise to keep the policy rate near zero at least until unemployment falls below 6.5 percent or inflation rises above 2.5 percent.
  - Asset purchases of Treasuries and MBS are continuing at \$85 billion per month until there is substantial improvement in the labor market.

## A separation principle

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- The Chairman has emphasized that any decision on the asset purchase program is conceptually separate from any decision concerning the policy rate.
- In particular, a decision to reduce the pace of asset purchases does not change the nature of the Committee's commitment to keep the policy rate near zero.

## The June FOMC meeting

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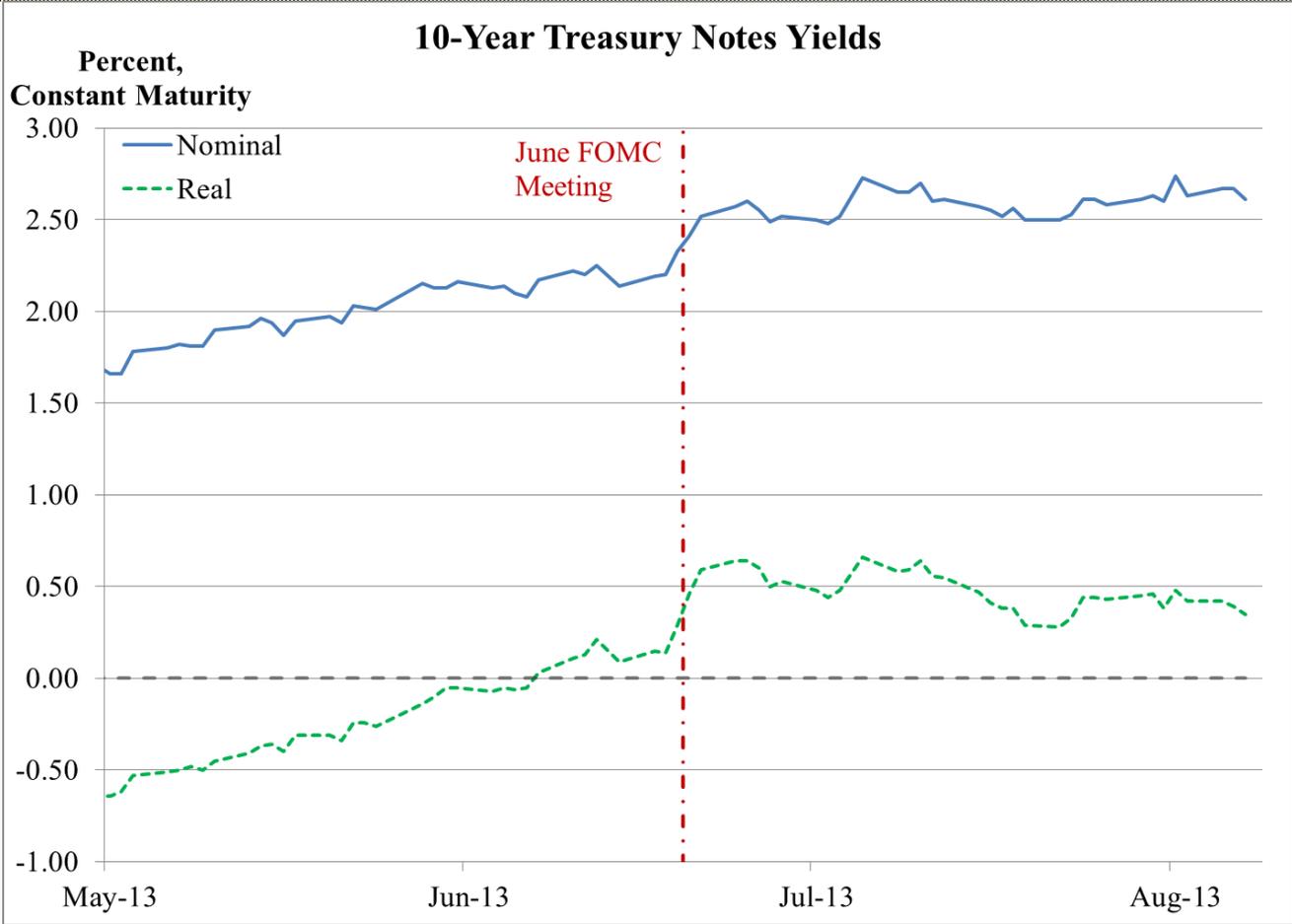
- At the June press conference, Chairman Bernanke discussed possible plans for reducing the pace of asset purchases.
- The financial market reaction was substantial, even though the Committee did not actually change any policy settings at that point or at its recently-concluded July meeting.
- The next few slides characterize some of the market reaction.

## Interest rates rose ...

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- Both nominal and real interest rates have increased since the beginning of May ....

# Nominal and real yields

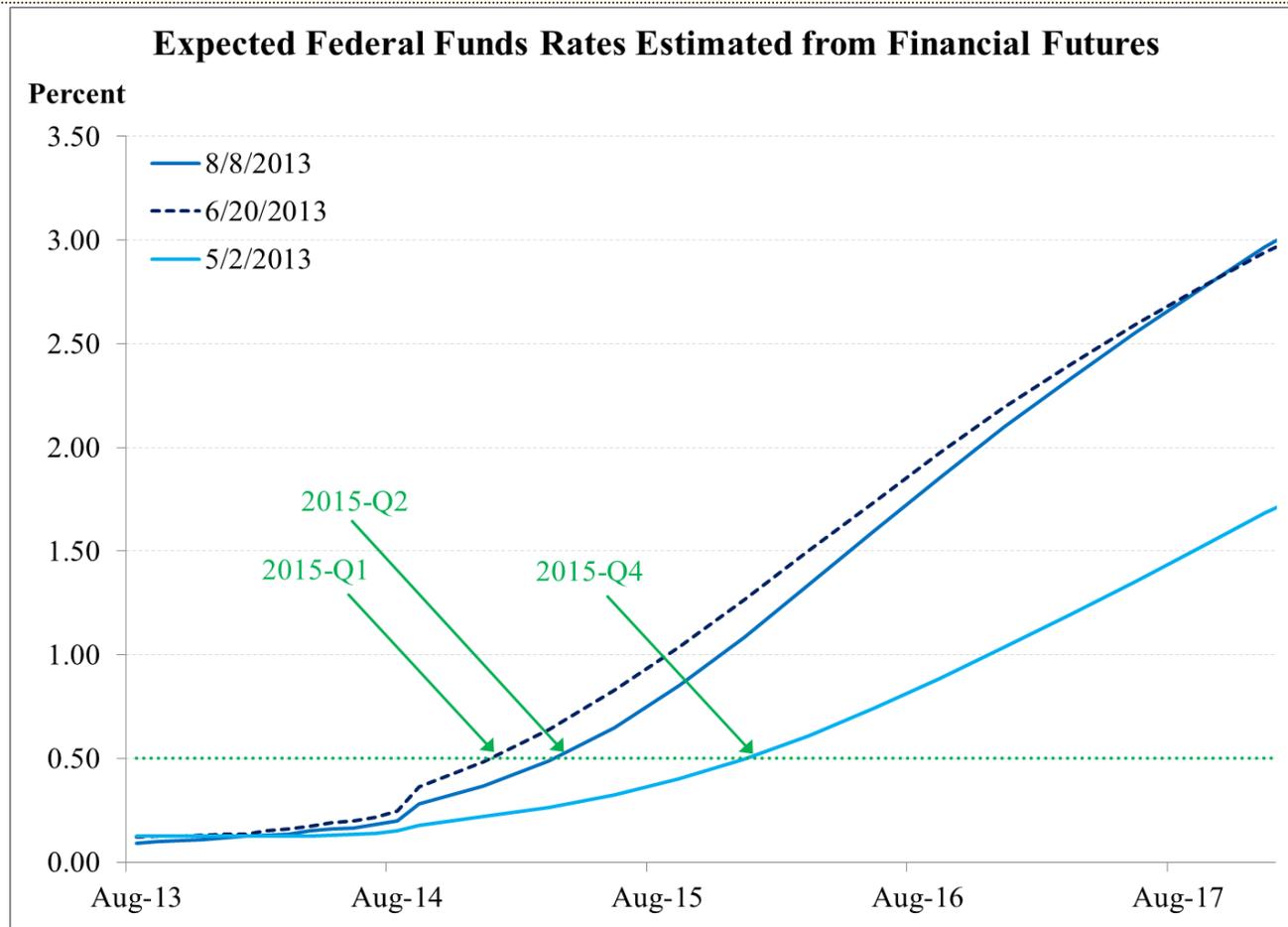


## The expected policy rate rose ...

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- The expected path of the policy rate increased, meaning that the date of expected liftoff is earlier than it was in May.
- This suggests that any tapering decision is difficult to separate from Committee promises on the expected path of the policy rate.

# The expected policy rate path

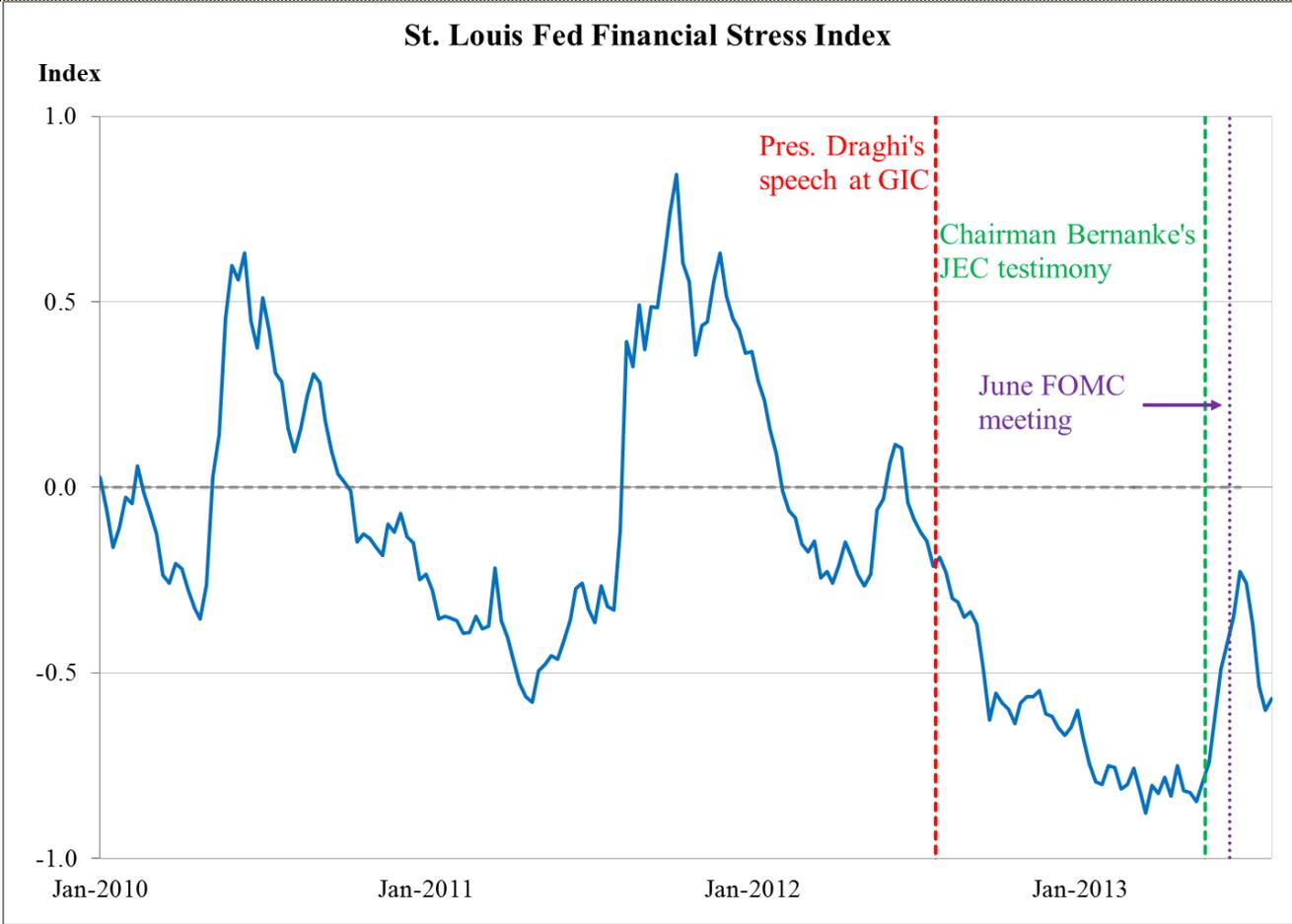


## Financial stress measures increased ...

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- The St. Louis Fed Financial Stress Index increased, but from relatively low levels ....

# St. Louis Fed Financial Stress Index



## Tapering: Pros and cons

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- In this talk, I will provide some of my views on how four areas of macroeconomic performance might be interpreted with respect to tapering:
  - Labor market performance
  - Growth
  - The large balance sheet of the Fed
  - Inflation
- I will conclude by suggesting that the Committee still needs to see more data on macroeconomic performance for the second half of 2013 before making a judgment on this matter.

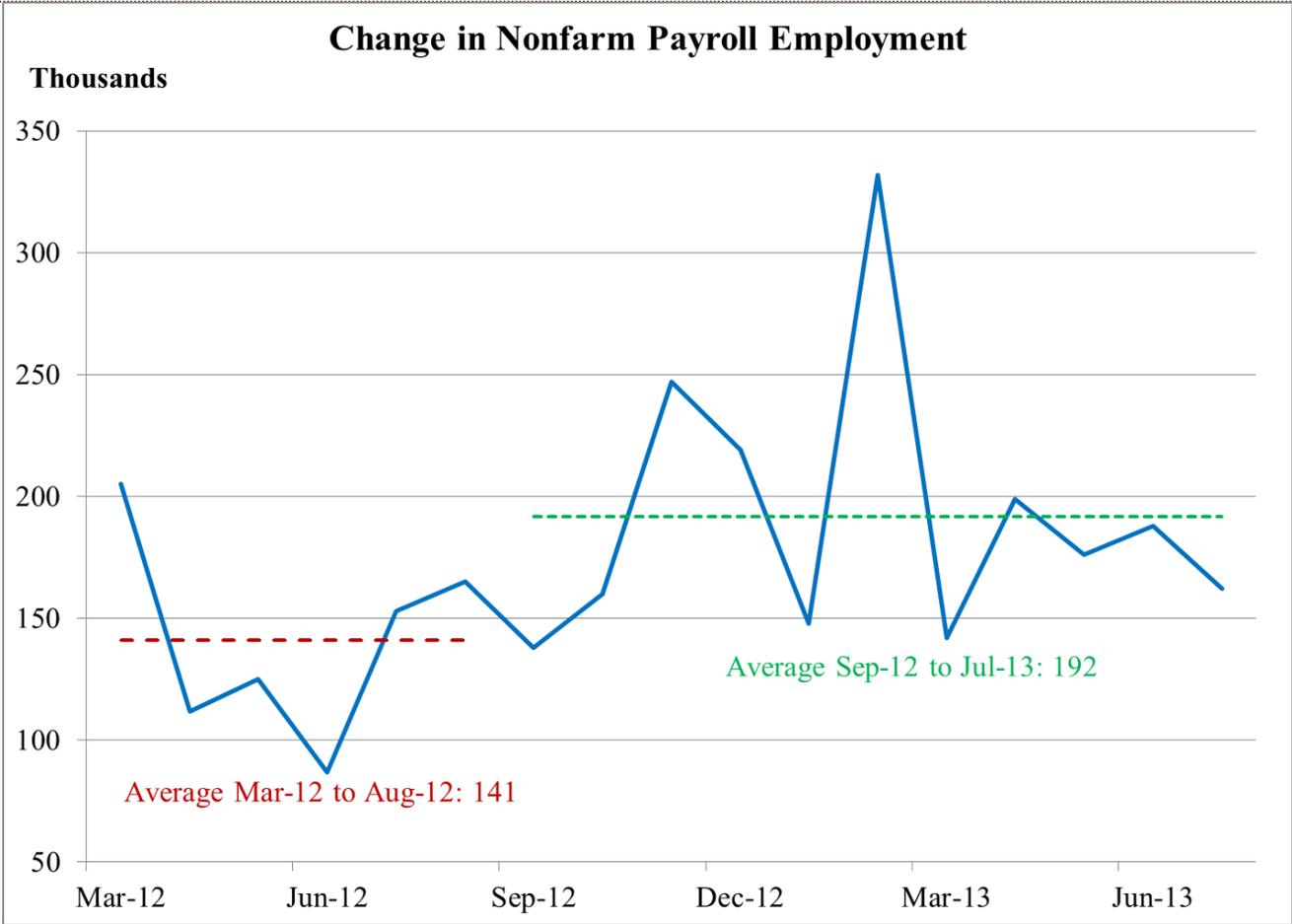
# Labor Market Performance

## Labor market performance

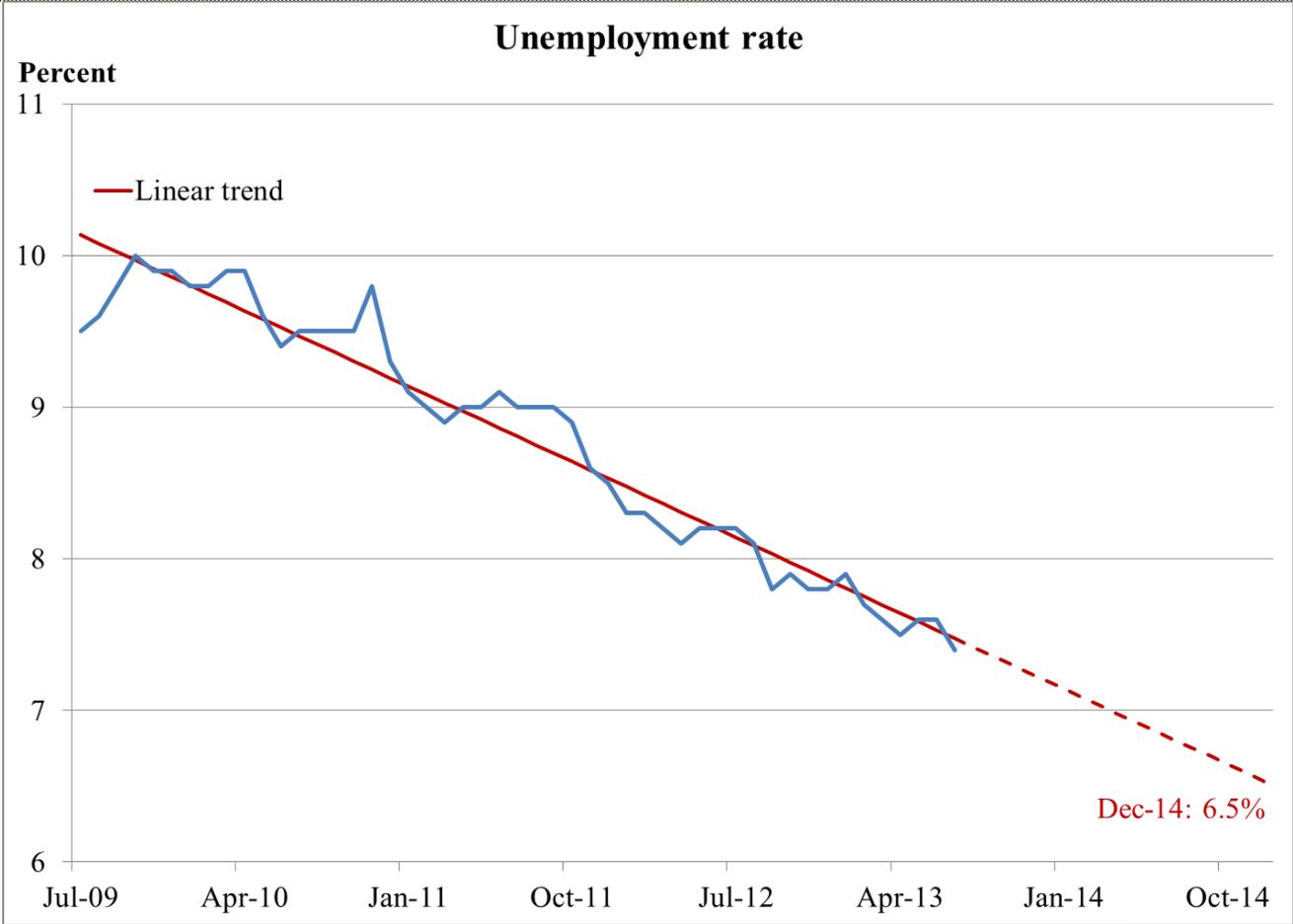
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- When the Committee adopted QE3 last September, the stated criterion for the program was substantial improvement in labor market performance.
- By some key measures, labor markets have indeed improved since last September.
  - Unemployment is lower.
  - Payroll employment growth has generally been strong.
- But other labor market measures have not improved.

# Nonfarm payroll employment



# Unemployment rate

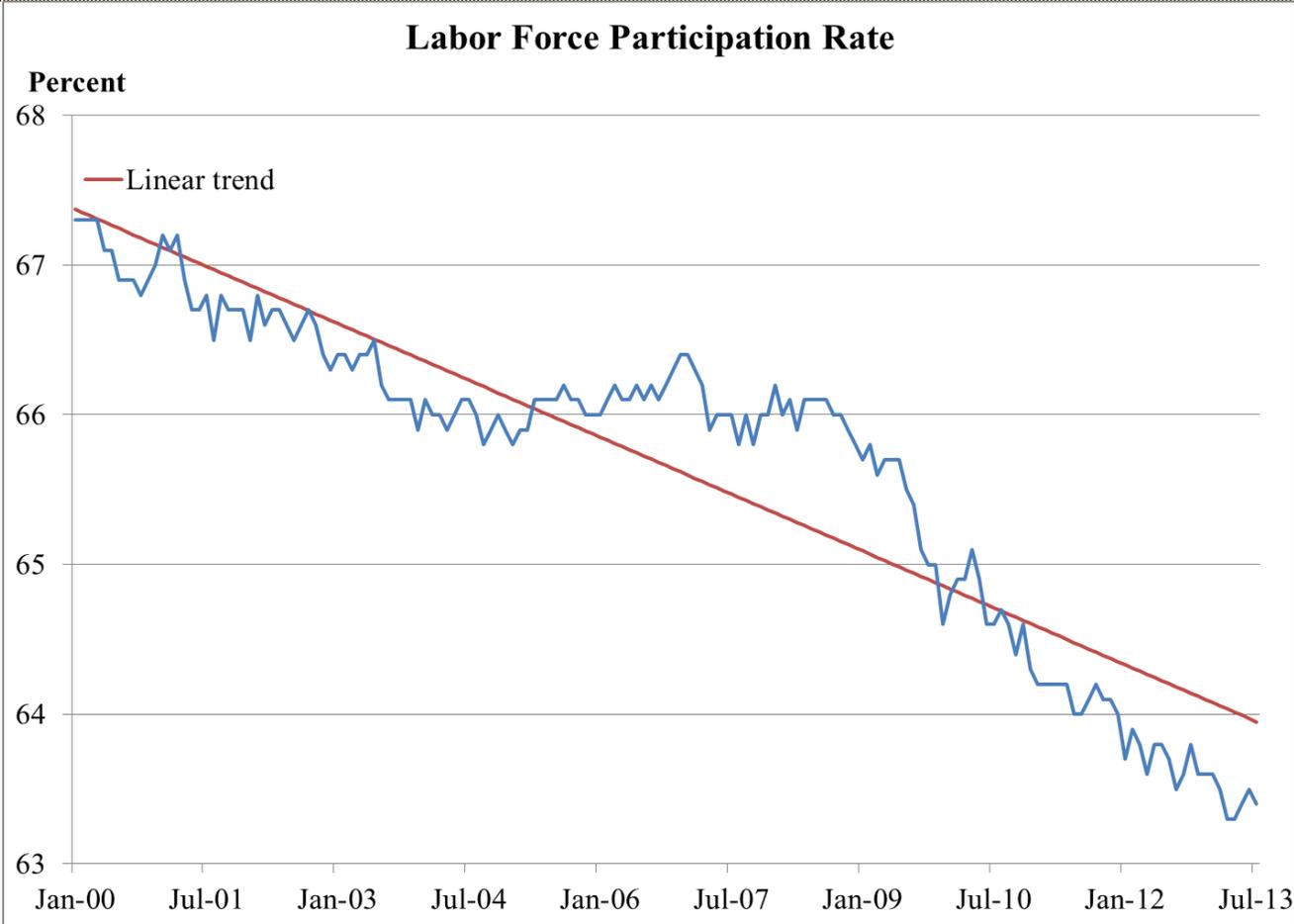


## Alternative labor market measures

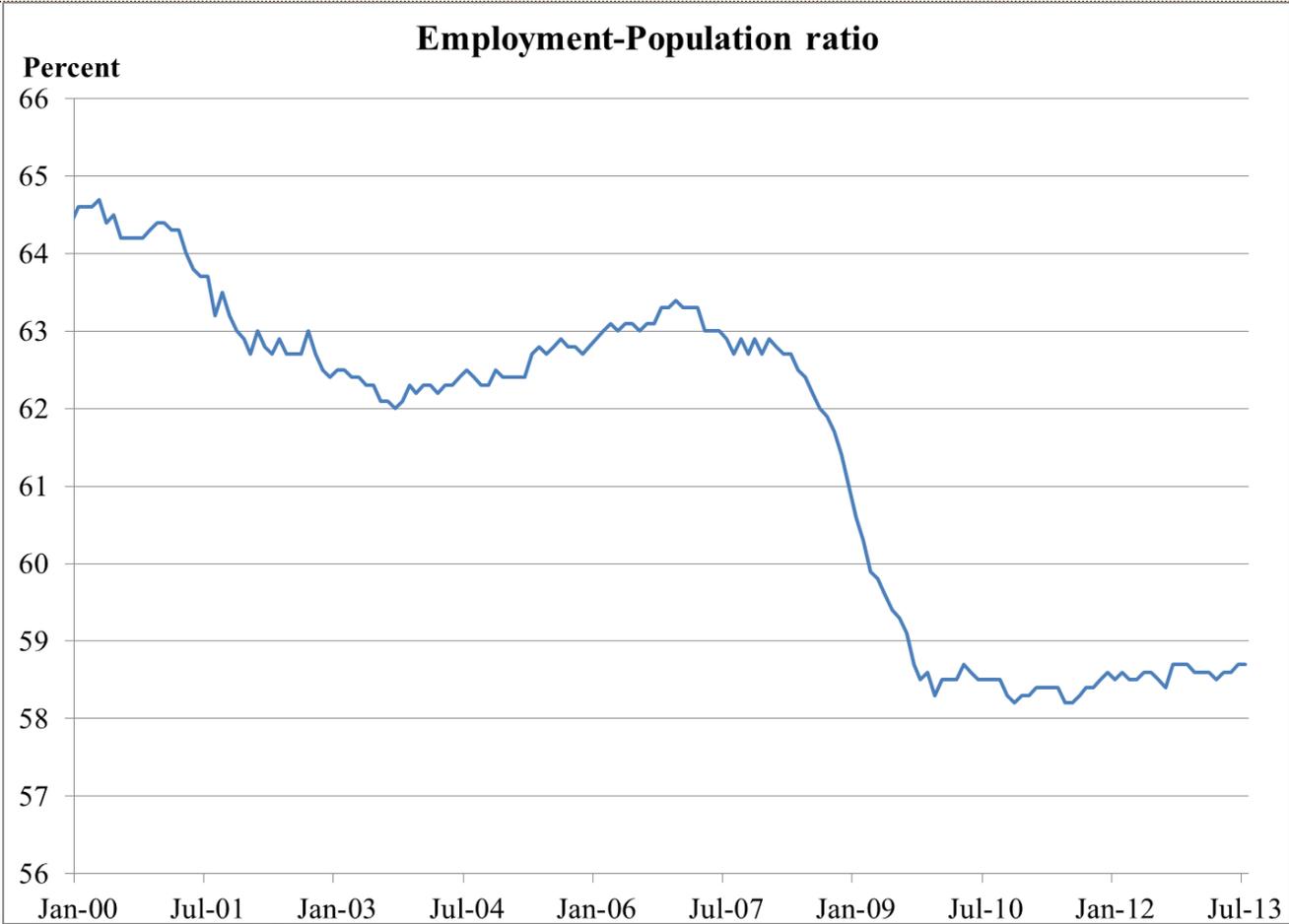
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- However, according to some alternative measures, labor market performance remains weak:
  - Labor force participation remains on a downward trend.
  - The employment-to-population ratio remains low.
  - The growth in hours worked is slower than it was as of last September.

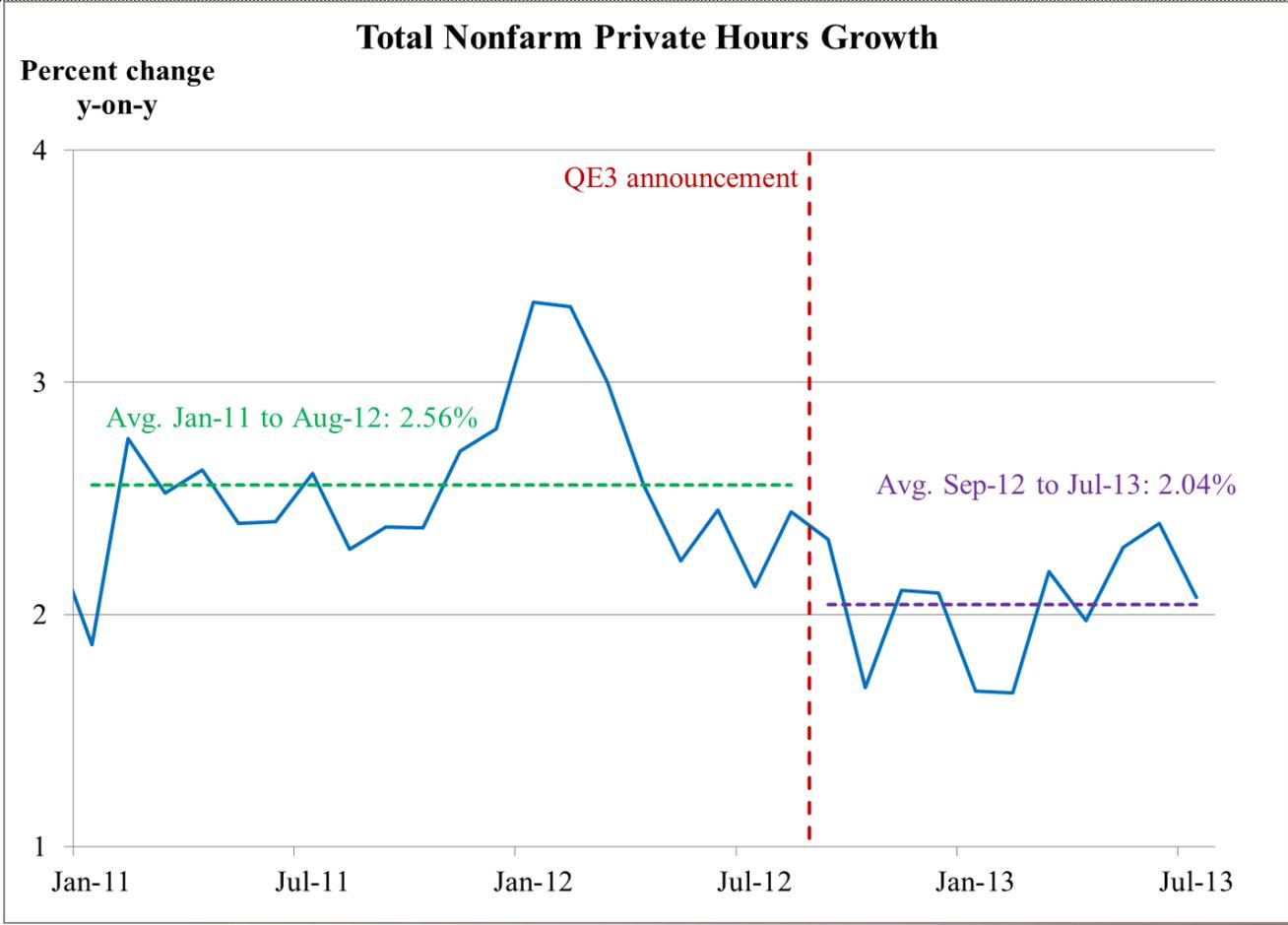
# Labor force participation rate



# Employment-population ratio



# Growth in total nonfarm private hours



## A key labor market issue for the tapering debate

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- Should the Committee focus attention primarily on nonfarm payrolls and unemployment, or should the Committee consider a wider range of labor market indicators?
  - If the former, then labor markets have clearly improved since September 2012.
  - If the latter, then labor markets may be judged to remain weak, but the criterion for labor market improvement would be considerably muddied.

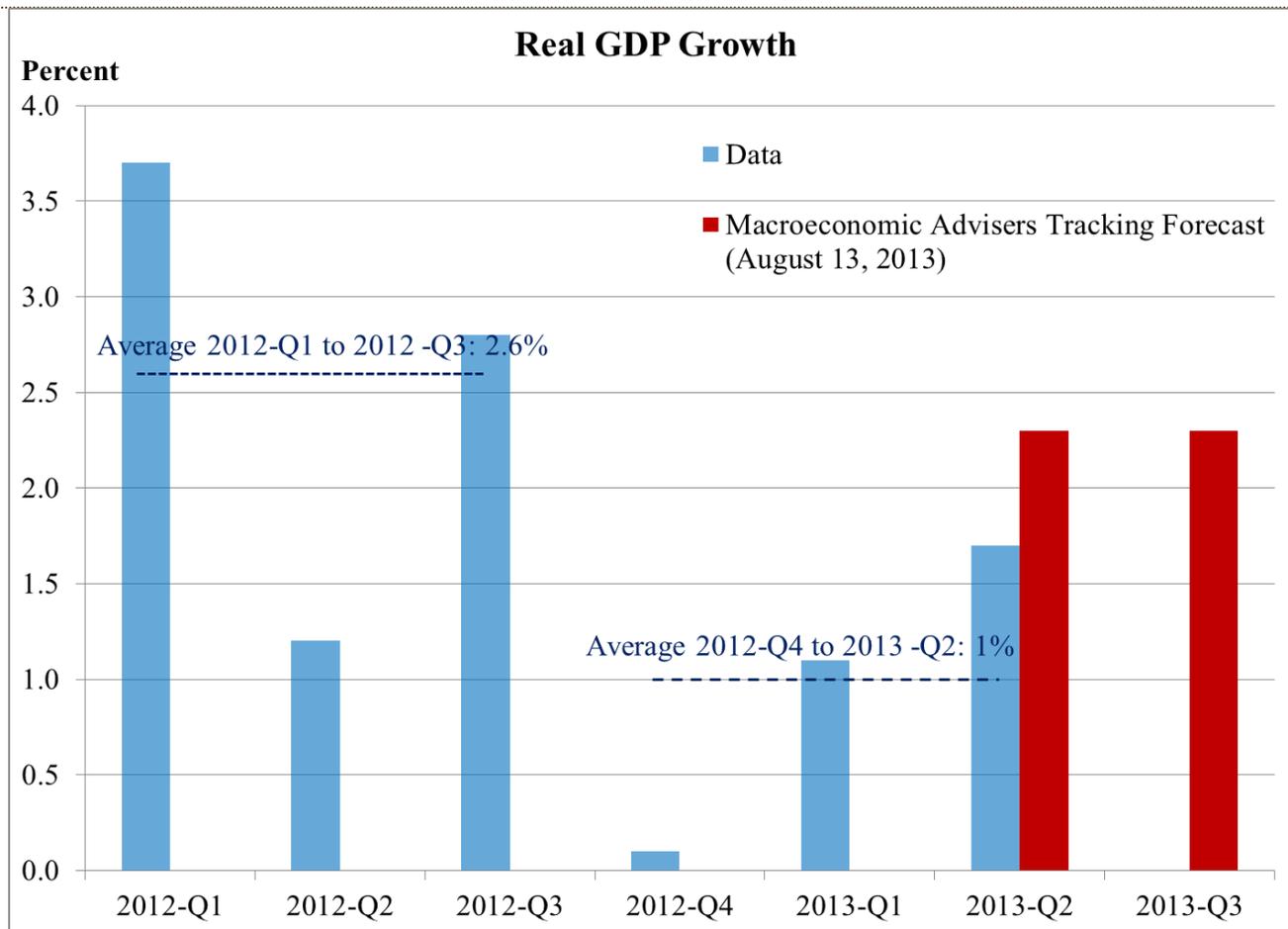
# Growth in Real GDP

## Growth in real GDP

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- A standard variable for the assessment of U.S. macroeconomic performance is growth in real GDP.
- Normally, the Committee would not remove accommodation if real GDP growth was viewed as weak.
- Recent real GDP growth has been weak.
  - But, the most recent data suggests a stronger Q2 than previously expected.

# Real GDP growth



## Growth in real GDP

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- Even if current GDP growth is viewed as quite slow, future growth may be better.
- We can call this “optimism.”
- The Committee may wish to remove accommodation if future growth is expected to be strong.

# The case for optimism

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- The case for an optimistic view of future U.S. macroeconomic performance is simple.
- In a nutshell, many, but not all, of the factors slowing the U.S. economy down are waning.
  - Real estate markets are improving, equity markets have rallied, the European sovereign debt crisis remains subdued for now, U.S. fiscal brinksmanship has been less of a problem, and household deleveraging is further along.

## The problem with optimism

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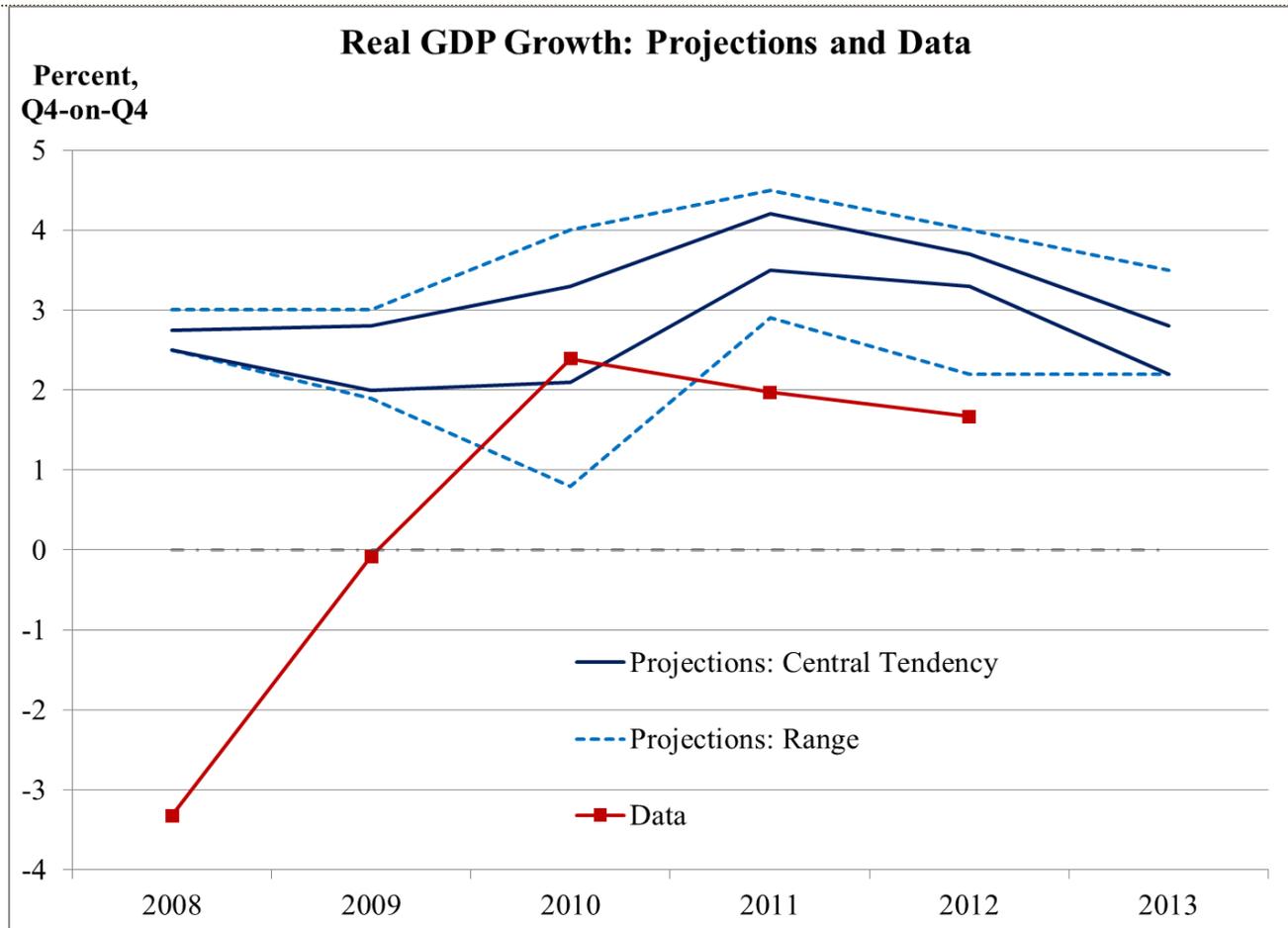
- I have been optimistic in my own forecasts for the U.S. economy over the last several years.
- In part, this is because empirical models suggest that, with the current configuration of data and policy settings, rapid growth lies just ahead.
- I have tempered these forecasts with an explicit recognition that economies tend to grow more slowly following a financial crisis.
- Still, I have generally been too optimistic.
- Given this experience, I think caution is warranted in taking policy action based on forecasts alone.

## FOMC forecasts

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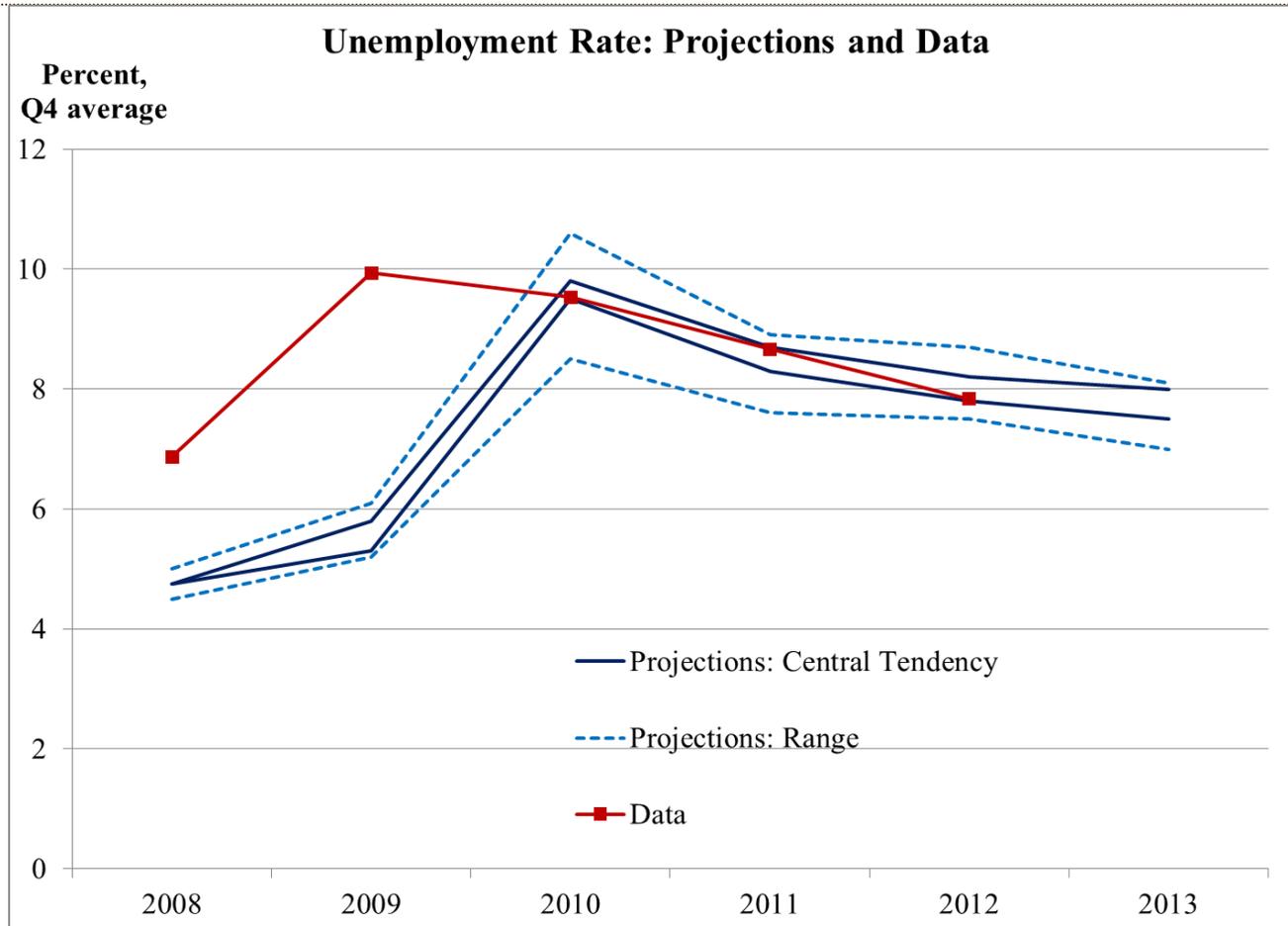
- It is not just me: FOMC forecasts (and many private sector forecasts as well) have tended to be too optimistic over the last several years.
- The following charts show the mid-year forecast of the next year's outcome for key macroeconomic variables.
- The real GDP forecasts, in particular, have generally been too high.

# Forecast errors: real GDP growth



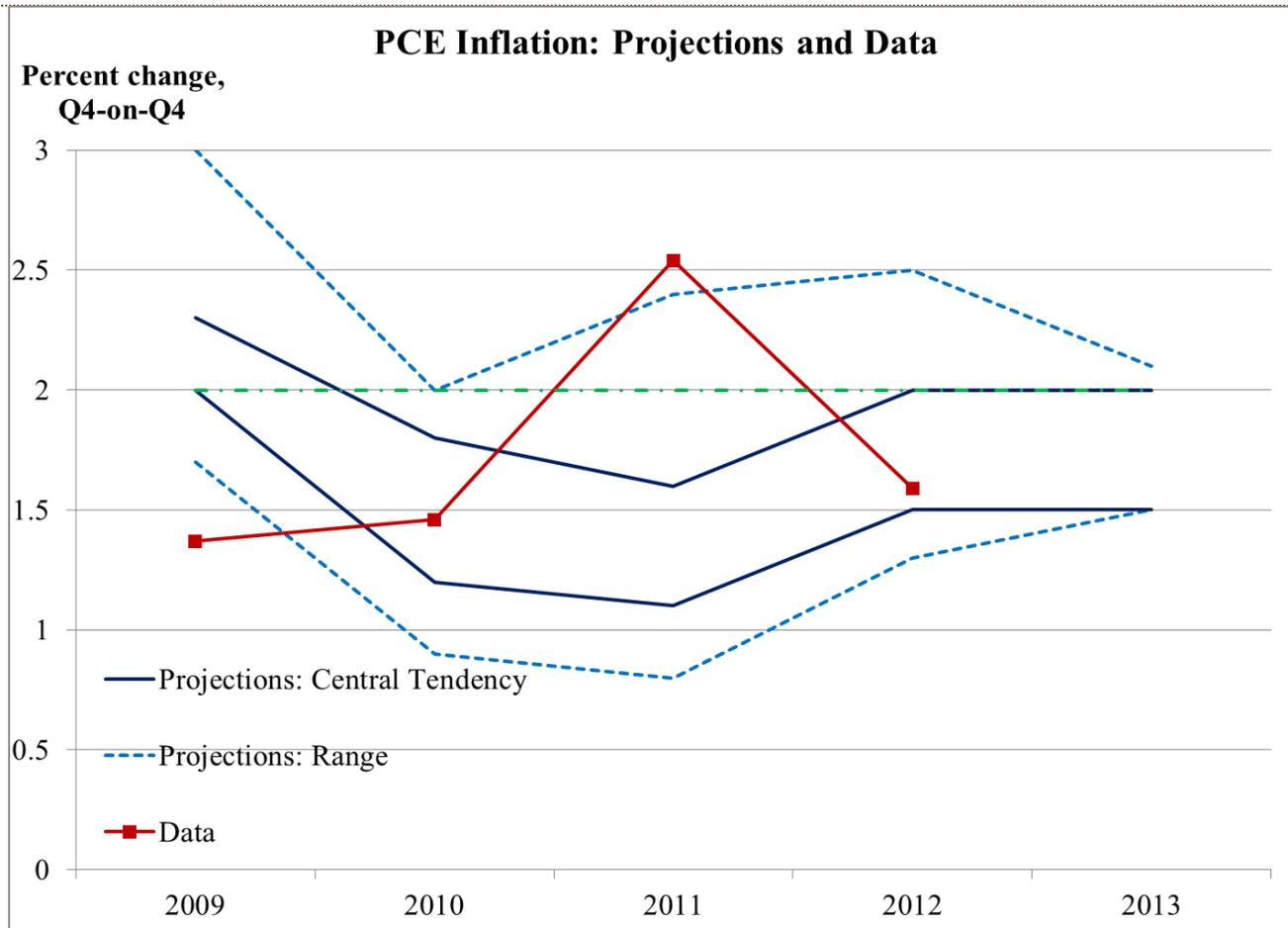
Source: Federal Reserve Board. Economic projections of Federal Reserve Governors and Reserve Bank presidents in the Monetary Policy Report to the Congress from the previous July.

# Forecast errors: unemployment



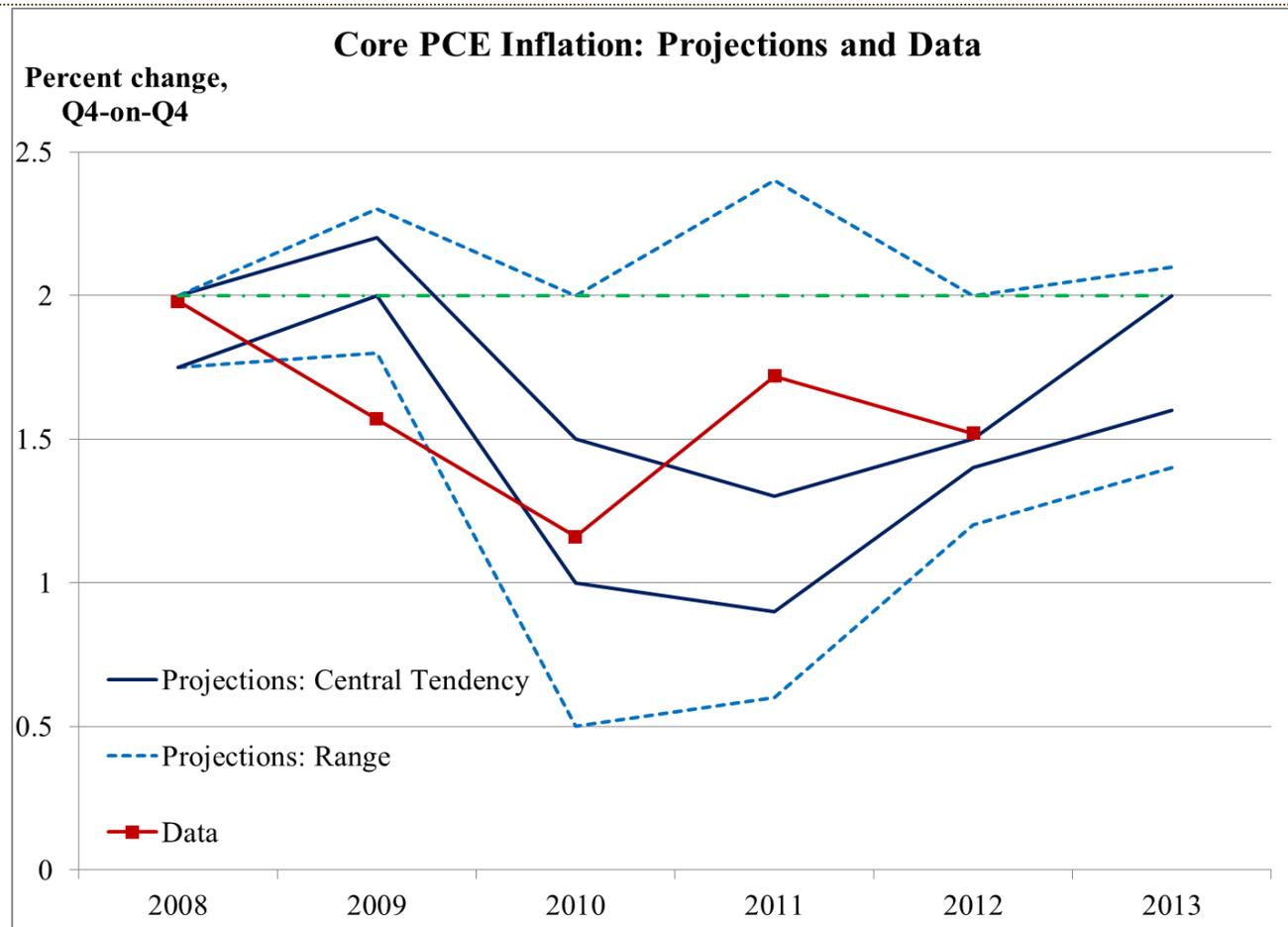
Source: Federal Reserve Board. Economic projections of Federal Reserve Governors and Reserve Bank presidents in the Monetary Policy Report to the Congress from the previous July.

# Forecast errors: PCE inflation



Source: Federal Reserve Board. Economic projections of Federal Reserve Governors and Reserve Bank presidents in the Monetary Policy Report to the Congress from the previous July.

# Forecast errors: core PCE inflation



Source: Federal Reserve Board. Economic projections of Federal Reserve Governors and Reserve Bank presidents in the Monetary Policy Report to the Congress from the previous July.

## A key growth issue for the tapering debate

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- Should the Committee focus attention primarily on recent growth performance, or on future projected growth?
  - If the former, then growth has been weak in recent quarters, although it now appears the second quarter may have been stronger than previously thought.
  - If the latter, then growth may be judged to be improving, but forecasting performance for real GDP has been poor over the last several years.

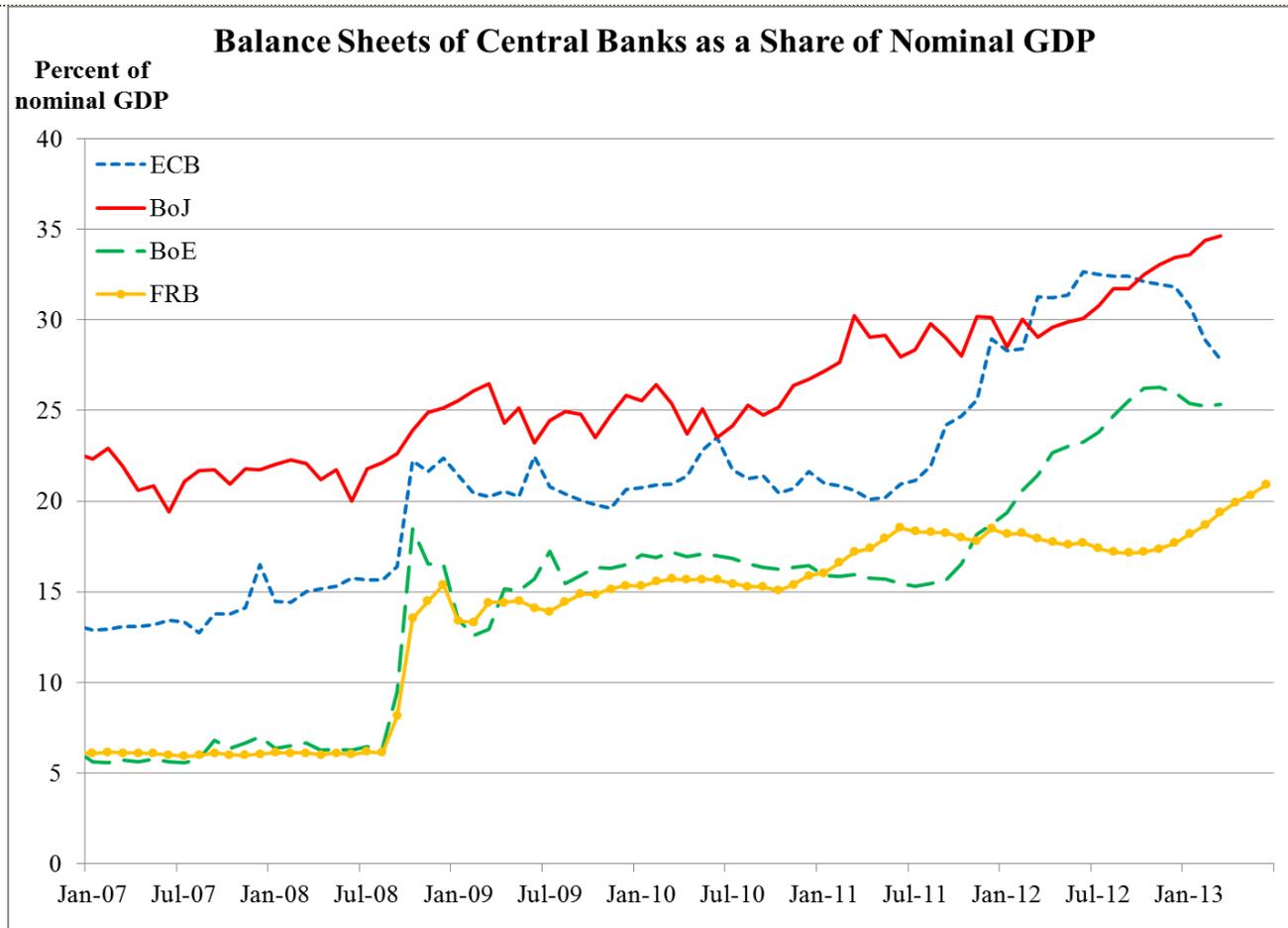
# The Size of the Fed's Balance Sheet

## The size of the Fed's balance sheet

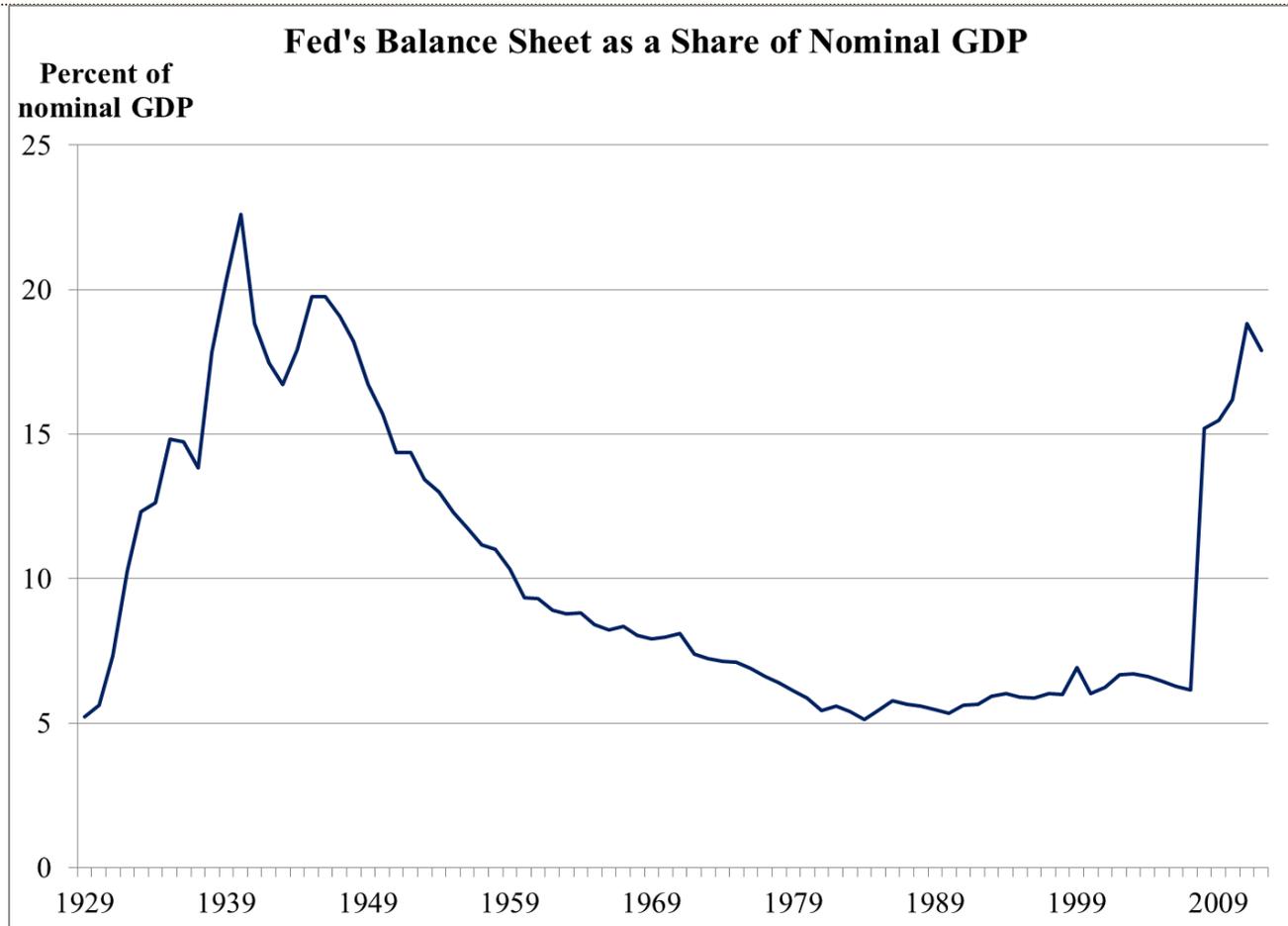
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- The Fed's balance sheet is large by the standards of the last several decades.
- The large balance sheet has been viewed as posing risks to the Committee's exit from unconventional policy.
- However, the balance sheet is not particularly large when scaled by GDP and compared to other major central banks, or when compared to historical data on the Fed's balance sheet.

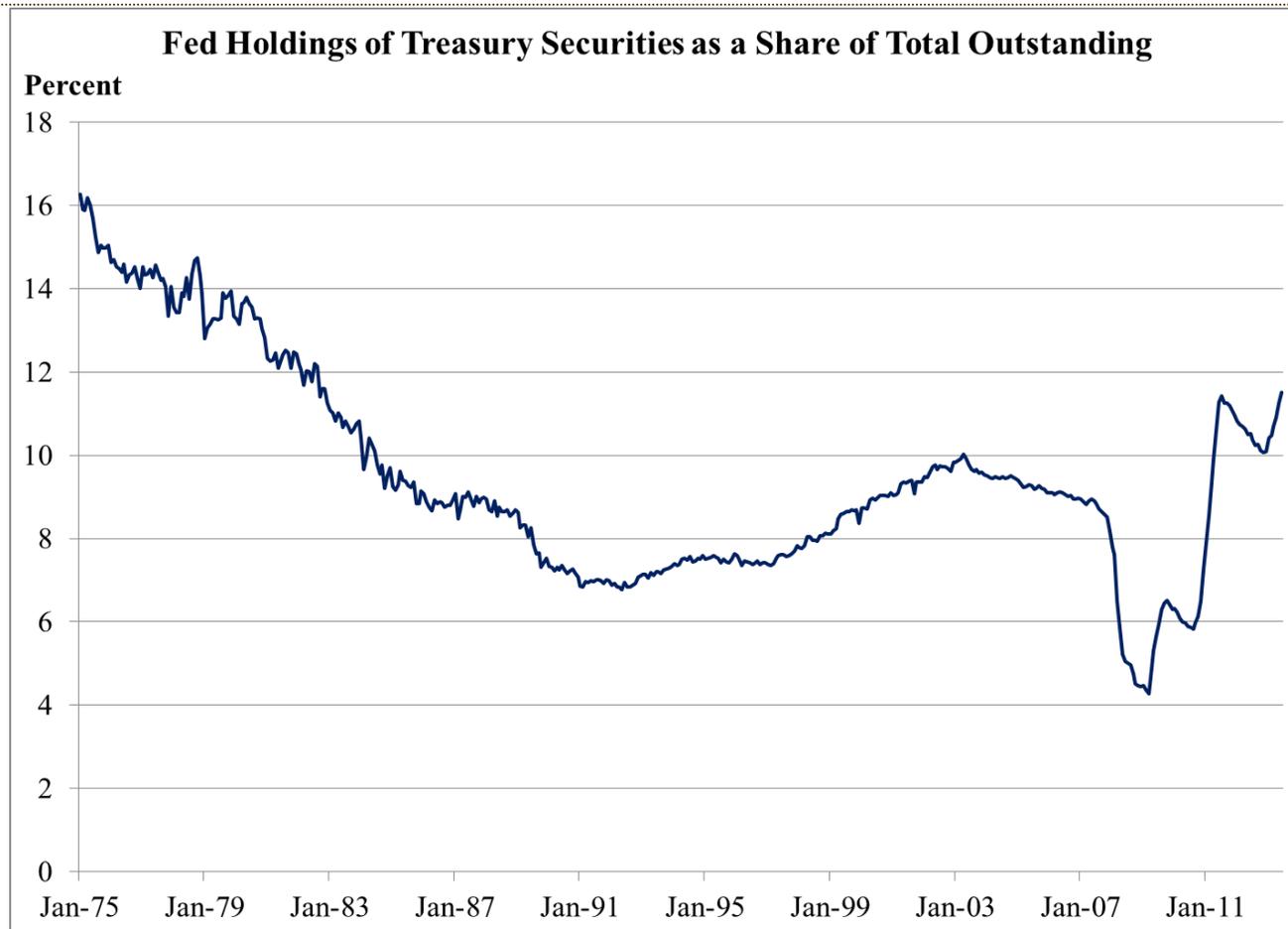
## Balance sheets: Fed and other major central banks



## Fed's balance sheet relative to GDP



# Fed holdings of Treasury securities



## A key balance sheet issue for tapering

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- Should the Committee be more concerned about its exit strategy when the size of the balance sheet relative to GDP is 30 percent versus 20 percent?
  - If yes, then balance sheet size may be judged a constraint at some point in the future.
  - If no, then exit is equally difficult if the balance sheet is 30 percent or 20 percent of GDP, and the Committee need not view balance sheet size as a constraint going forward.

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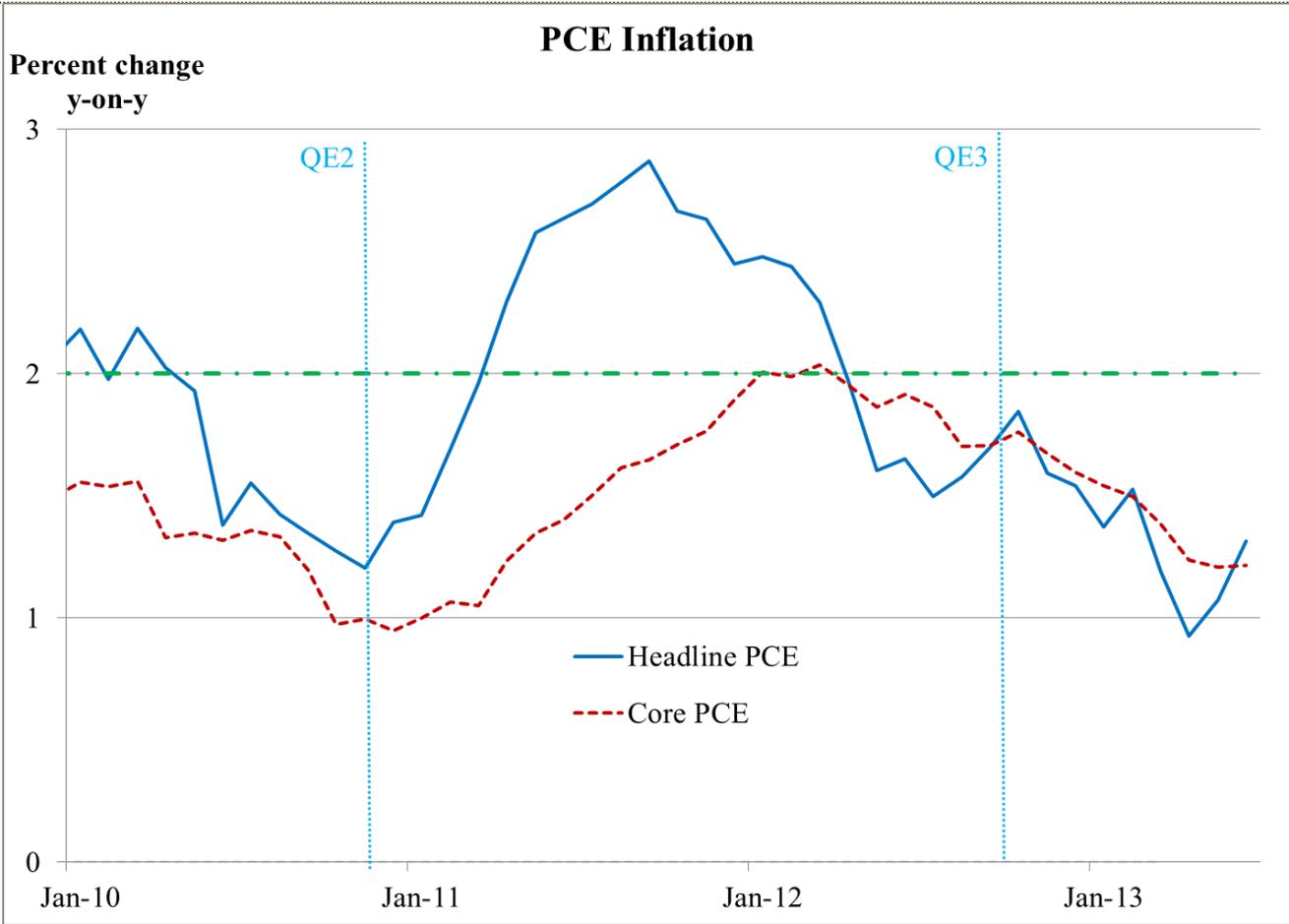
# Inflation

## Recent inflation developments

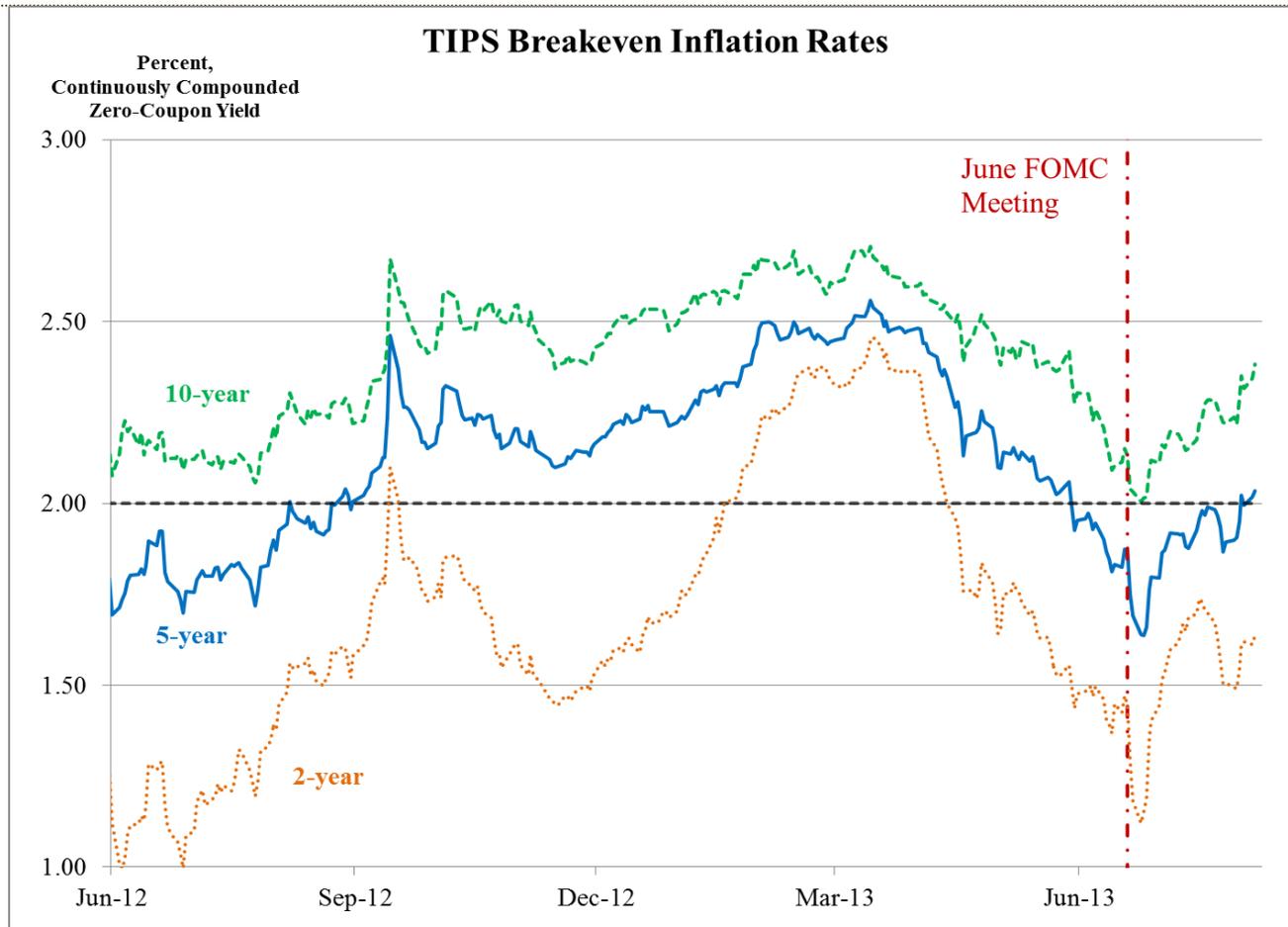
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- The Committee would not normally remove policy accommodation in an environment where inflation is below target and is projected to remain there.
- Current inflation is low.
- On balance, inflation expectations have declined since March, although they have increased from recent lows.

# PCE inflation



# Inflation expectations have declined since March



## Why has inflation been low?

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- We do not have a good explanation, so we should be careful.
- One sketch of a theory:
  - Commodity prices globally have been soft over the last year.
  - This may be due in part to the recession in Europe, coupled with slower-than-expected growth in China.
  - This may have fed through to core inflation in the U.S.
- Core PCE inflation near 1 percent measured from a year earlier is near the lower edge of acceptable outcomes.

## A key inflation issue for the tapering debate

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- Will current low levels of PCE inflation naturally move up toward 2 percent in the coming months and quarters?
  - If yes, then current low inflation readings are an aberration and the Committee can reduce the pace of asset purchases without worrying about pushing inflation even further below target.
  - If no, then inflation may be pushed even lower by a decision to taper and hence the risk of deflation may increase.

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# Conclusions

## A press conference at every meeting?

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- The tapering debate is currently centered on the September and December meetings of the FOMC.
- What about the October meeting?
- The October meeting does not have a press conference scheduled and so is thought to be an unlikely venue for important policy action.
- The FOMC should make all meetings *ex ante* identical so that key decisions can be made at any juncture.
- This would allow the Committee to better align appropriate decisions with incoming macroeconomic data.

## Conclusions

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- I have suggested some key questions for the tapering debate in the following areas: Labor market performance, growth, balance sheet size, and inflation.
- The resolution of the tapering debate will depend on additional macroeconomic data from the second half of 2013.
- It is especially important to see if better macroeconomic growth materializes in the months and quarters ahead, and whether inflation naturally returns toward target.



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