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Perspectives on the Current Stance of Monetary Policy

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21 February 2013

New York, N.Y.

Any opinions expressed here are my own and do not necessarily reflect those of others on the Federal Open Market Committee.

This talk

- The stance of monetary policy is easier in 2013 compared to 2012.
- I will give several perspectives on this view.

Easier Monetary Policy in 2013

Two aspects of current U.S. monetary policy

- Nominal interest rate policy
 - The policy rate has been near zero since December 2008.
 - The Federal Open Market Committee (FOMC) has promised to maintain the near-zero rate into the future, so-called “forward guidance.”
 - The Committee has replaced fixed-date forward guidance with a “threshold” approach.
- Balance sheet policy
 - The Committee has promised to maintain an aggressive asset purchase program.

Why is monetary policy easier today than in 2012?

- On interest rate policy:
 - The threshold approach has disposed of the “pessimistic signal” that was a side effect of the date-based forward guidance.
 - This should make the forward guidance more effective.

- On balance sheet policy:
 - The Committee’s outright asset purchases replaced the “Operation Twist” program.
 - The twist program may not have been as effective as hoped.
 - Open-ended outright purchases are a more potent tool.

Bottom line on easier policy

- In sum:
 - 2012 policy was characterized by a relatively weak “Operation Twist” program combined with somewhat counterproductive date-based forward guidance.
 - 2013 is characterized by a relatively potent open-ended outright asset purchase program combined with more effective threshold-based forward guidance.
 - End result: Considerably easier U.S. monetary policy.

A Shadow Interest Rate

A shadow rate

- The level of nominal short-term interest rates is conventionally taken to indicate the stance of policy.
 - Lower values are described as “easier” policy.
- The FOMC’s policy rate has been effectively pegged near zero since December of 2008.
- How should the monetary policy stance be described given this development?
 - A math-finance answer: Construct a “shadow rate.”

The value of the shadow rate

- Krippner calculates a shadow short-term rate.*
 - This rate can be understood as a metric for the stance of monetary policy in a zero lower bound environment.
 - The current value is about -5.0 percent.
 - This value is considerably more negative than values recommended by common monetary policy rules.
- Bottom line: The current policy stance looks very easy according to this analysis.

Interest rates as options

- Nominal interest rates cannot fall materially below zero.
 - This is because cash provides a risk-free investment at a zero nominal rate.
 - Holding cash will therefore be more attractive than accepting a negative nominal rate on a security.
- Black (1995) provided a way to calculate the value of the call option to hold cash at the zero lower bound.*
 - The value of this option can then be subtracted from observed nominal yields.
 - This leaves a shadow nominal yield curve that would exist in the absence of the cash option.

Recommended U.S. monetary policy

- To see how this could work, consider a comparison to “ordinary” policy.
- One possible monetary policy rule is often called the Taylor (1999) rule:^{*}

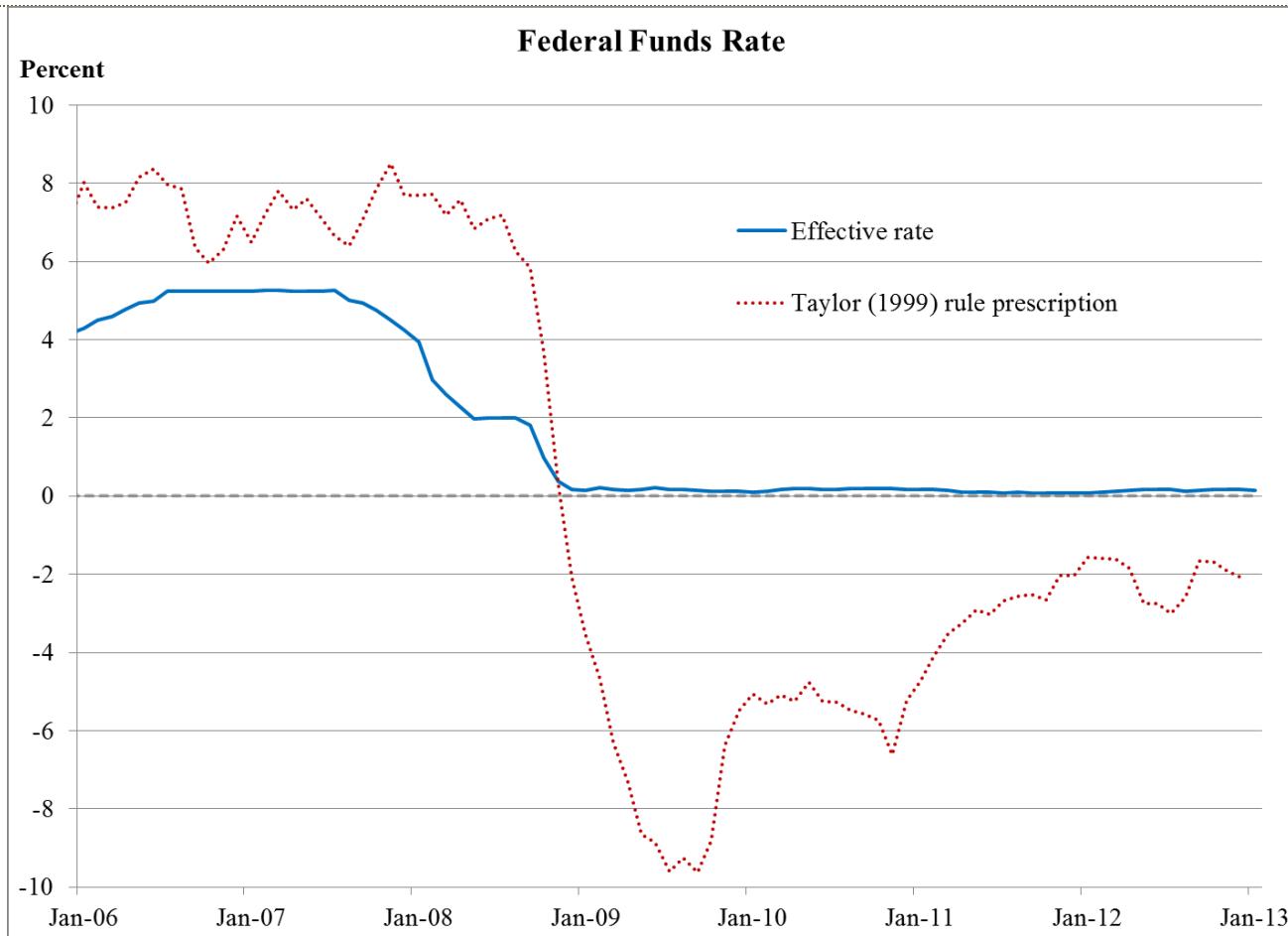
$$R_t = 2 + \pi_t + 0.5 (\pi_t - 2) + 1.0 Y_t$$

- π_t : headline PCE inflation (year-over-year)
- $Y_t = 2.3 (5.6 - U_t)$: output gap
- U_t : unemployment rate

- Fed officials have sometimes used this rule to describe monetary policy.

* See J.B. Taylor, 1999, “A Historical Analysis of Monetary Policy Rules,” in J.B. Taylor, ed., *Monetary Policy Rules*, Chicago: University of Chicago Press.

Plot of the Taylor (1999) policy recommendation

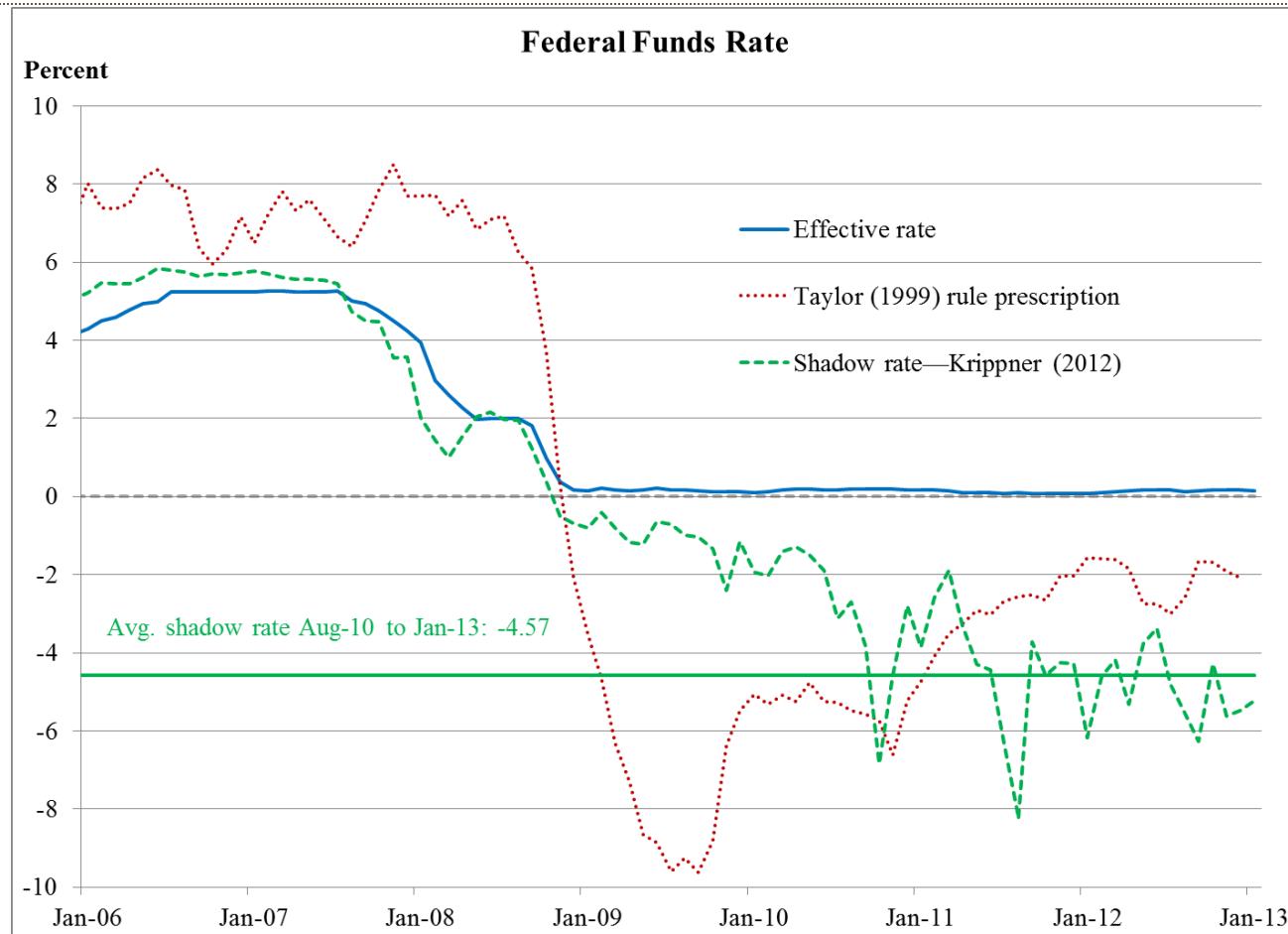


Source: Federal Reserve Board, Bureau of Economic Analysis, Bureau of Labor Statistics and author's calculations.
Last observation: January, 2013; December 2012.

Application of Krippner

- In some ways this plot does not make sense, since the recommended short-term rate is negative, which cannot occur.
 - One interpretation is that other, unconventional policies have been needed to try to achieve the recommended policy rate.
 - But, how do we know if those unconventional policies are working, since the observed policy rate remains near zero?
- The Krippner calculation of a shadow short-term nominal interest rate allows us to compare a measure of actual policy against the recommended policy from a standard policy rule.

Recommended policy versus actual policy



Source: Federal Reserve Board, Bureau of Economic Analysis, Bureau of Labor Statistics and author's calculations; the estimated shadow rate was kindly provided by Leo Krippner. Last observation: January, 2013; December 2012.

Current policy may be easier than often perceived

- According to these estimates, the shadow policy rate is currently about 250 basis points lower than the rate recommended by the Taylor (1999) rule.
- This suggests that actual U.S. monetary policy may currently be easier than the recommendations from that particular rule.
- Krippner's analysis is experimental, but I think promising.

Thresholds and the Policy Rate

Thresholds

- The Committee previously used a given date to indicate when the first increase in the policy rate will likely occur.
 - This approach has some problems.
- In December the Committee instead adopted “thresholds,” values for inflation (2.5 percent) and unemployment (6.5 percent) that give an indication that the time for a policy rate increase may have arrived.
- This is a more state-contingent policy.
 - “State-contingent” means “dependent on economic conditions.”

The pessimism problem

- The Committee previously stated that the policy rate will likely remain near zero until “mid-2015.”

- This created a “pessimism problem” for the Committee.
 - The date could be interpreted as a statement that the U.S. economy is likely to perform poorly until that time.
 - I have called this an “unwarranted pessimistic signal.”
 - Michael Woodford of Columbia University has called it potentially counterproductive.
 - The Committee did not intend to send such a signal.

Fixing the pessimism problem

- The Committee has now switched to a description of economic conditions at the time of the first rate increase.
- Now, as data arrive on U.S. economic performance, private sector expectations concerning the timing of the first rate increase can automatically adjust.
 - Vice Chair Yellen has called this an “automatic stabilizer.”
- The Committee is no longer sending the pessimistic signal, because the threshold conditions can be met at any time.

Thresholds have some challenging aspects

- The use of thresholds is not a panacea.
- I have described elsewhere a number of issues that the Committee is likely to face going forward with this strategy, including:
 - The FOMC cannot pretend to target medium- or long-term unemployment.
 - The Committee needs to reiterate that it considers many more variables in attempting to gauge the state of the U.S. economy.
 - The thresholds will likely be viewed as triggers for action.

The Woodford Period

The Woodford period

- Received New Keynesian theory suggests one method of coping with the zero lower bound on the policy rate.
- The idea is to promise to keep the policy rate at zero beyond the time when “normal” policy considerations would call for an increase in the policy rate above zero.
- The extra time at zero “makes up” for the period during which the policy rate was constrained at zero, in a way that provides the optimal amount of accommodation.
- I call this the “Woodford period,” after Michael Woodford.
- Is the FOMC’s current policy consistent with this theory?
Yes.

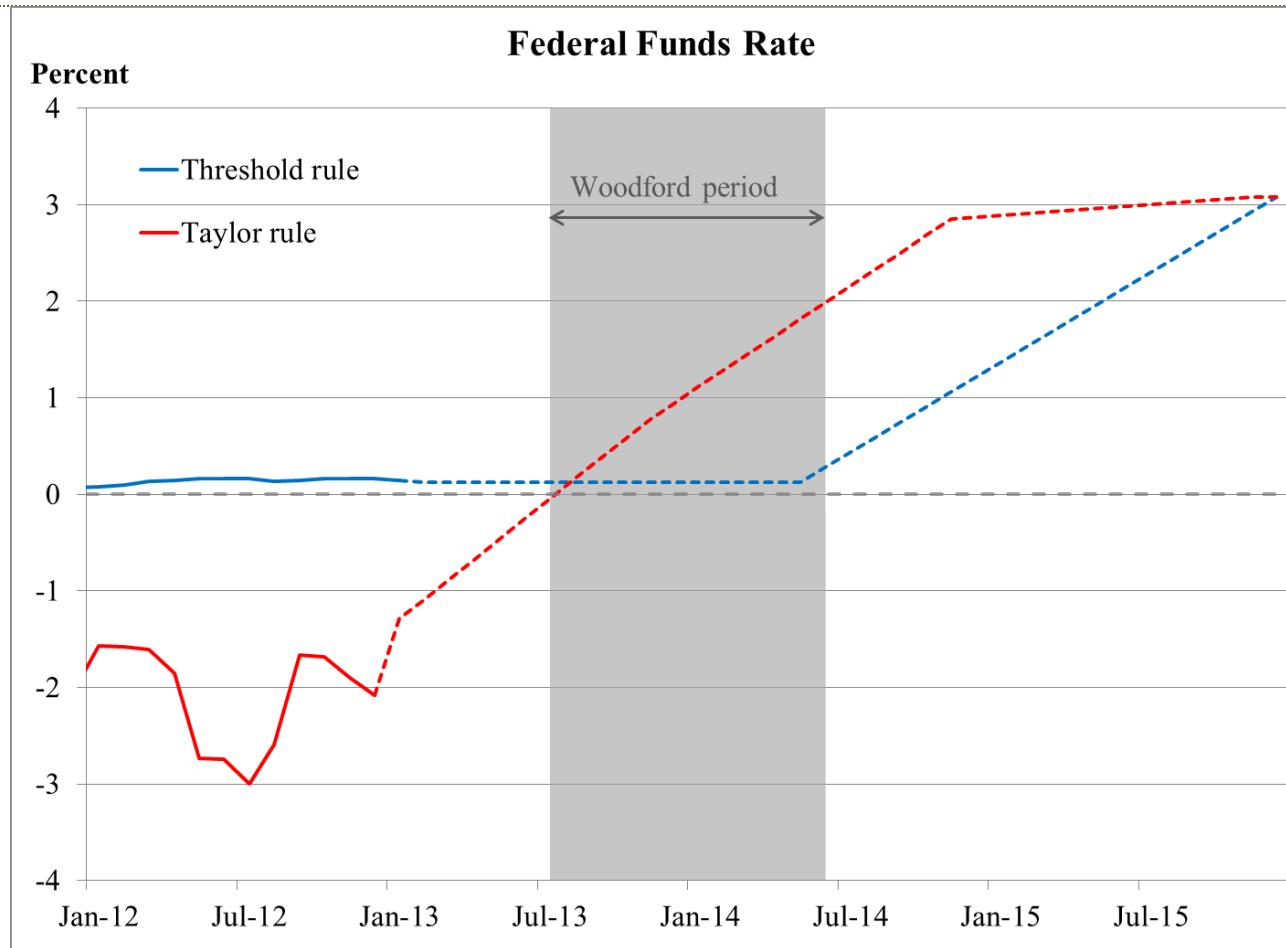
Visualizing the Woodford period

- Let's take the Taylor (1999) rule to represent "normal" U.S. monetary policy.
 - Actual monetary policy can be viewed as deviating from this rule by applying thresholds.
- The current St. Louis Fed forecast for the unemployment rate implies that the 6.5 percent threshold will be crossed in June 2014.
- Let's assume for purposes of illustration that the policy rate will rise at a linear pace until 2015.

St. Louis Fed forecasts and the Woodford period

- The policy rate implied jointly by the Taylor (1999) rule and the St. Louis Fed forecasts should increase in August 2013.
 - Think of this as “normal” policy.
- However, the Committee’s thresholds imply a “Woodford period” since the policy rate would be held at zero past the point where ordinary FOMC behavior would indicate an increase.
- According to received theory, this is a more stimulative monetary policy and possibly even an optimal monetary policy when the zero lower bound is constraining.

The Woodford period



How Long Can QE Continue?

Four considerations for the QE program

- The Committee has stated that it seeks “substantial improvement in labor markets” as a condition for ending the current asset purchase program.
- Without an end date, the Committee may have to alter the pace of purchases as news arrives concerning U.S. macroeconomic performance.
- Worries about rising inflation have so far been unfounded.
 - However, QE2 did change inflation and inflation expectations.
- The size of the balance sheet may complicate or prevent a graceful exit.

Substantial Labor Market Improvement

Many aspects of labor markets

- The Committee could consider many different aspects of labor market performance when evaluating whether there has been “substantial improvement.”
- Among these: Unemployment, employment, hours worked, and Job Openings and Labor Turnover Survey (JOLTS) data.
- The Committee will have to make a judgment about the degree of labor market improvement.

Altering the Pace of Purchases

Altering the pace of purchases

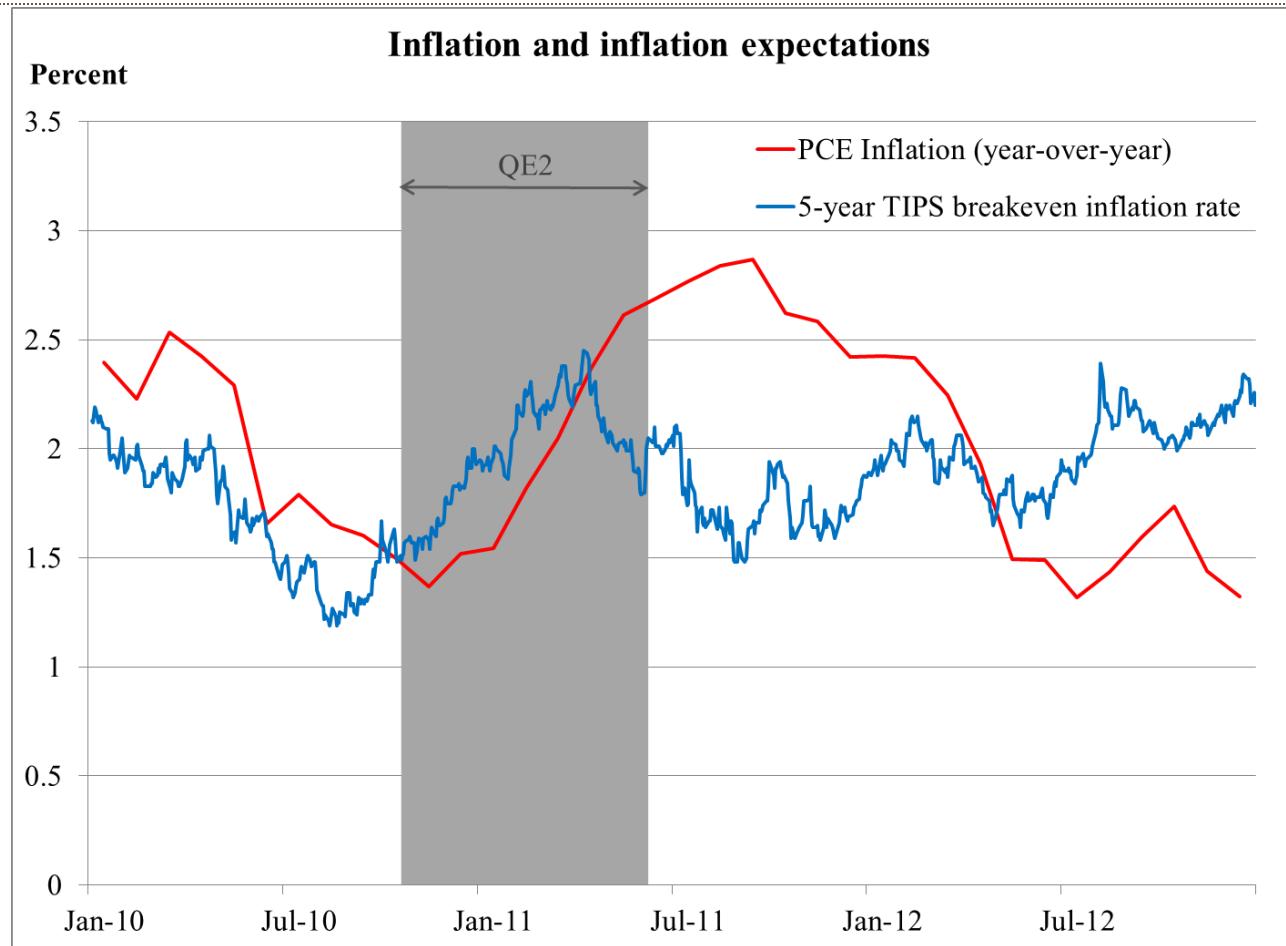
- “Substantial labor market improvement” does not arrive suddenly.
- This suggests that as labor markets improve somewhat, the pace of asset purchases could be reduced somewhat, but not ended altogether.
- This type of policy would send important signals to the private sector concerning the Committee’s judgment on the amount of progress made to that point.

Inflation and Inflation Expectations

Inflation and inflation expectations

- Current readings on inflation are rather low.
- This may give the Committee some leeway to continue purchases longer than otherwise.
- The lesson from QE2 is that inflation and inflation expectations did trend higher.
 - It is too early to know if that will happen this time.

Inflation and inflation expectations

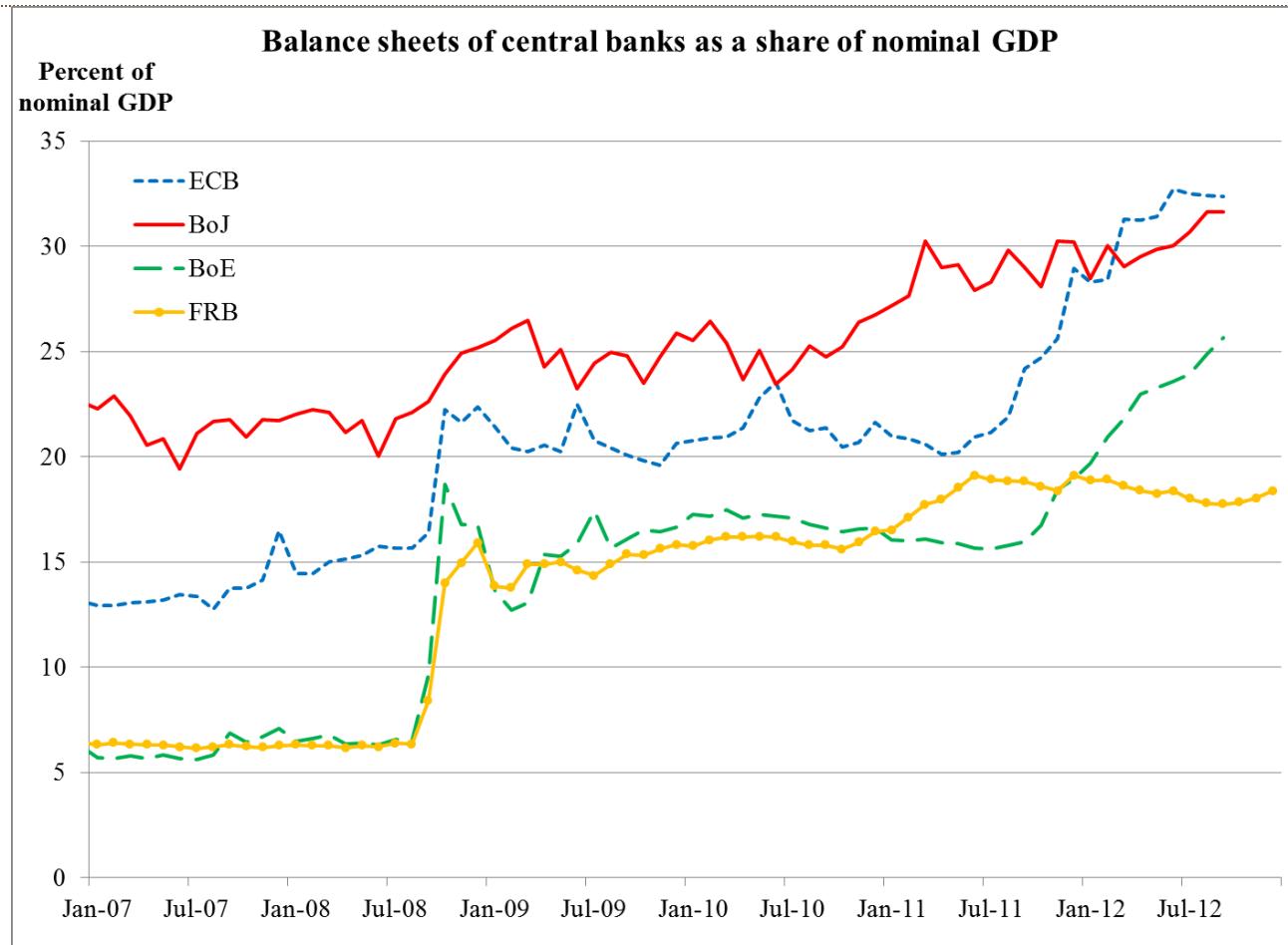


Size of the Balance Sheet

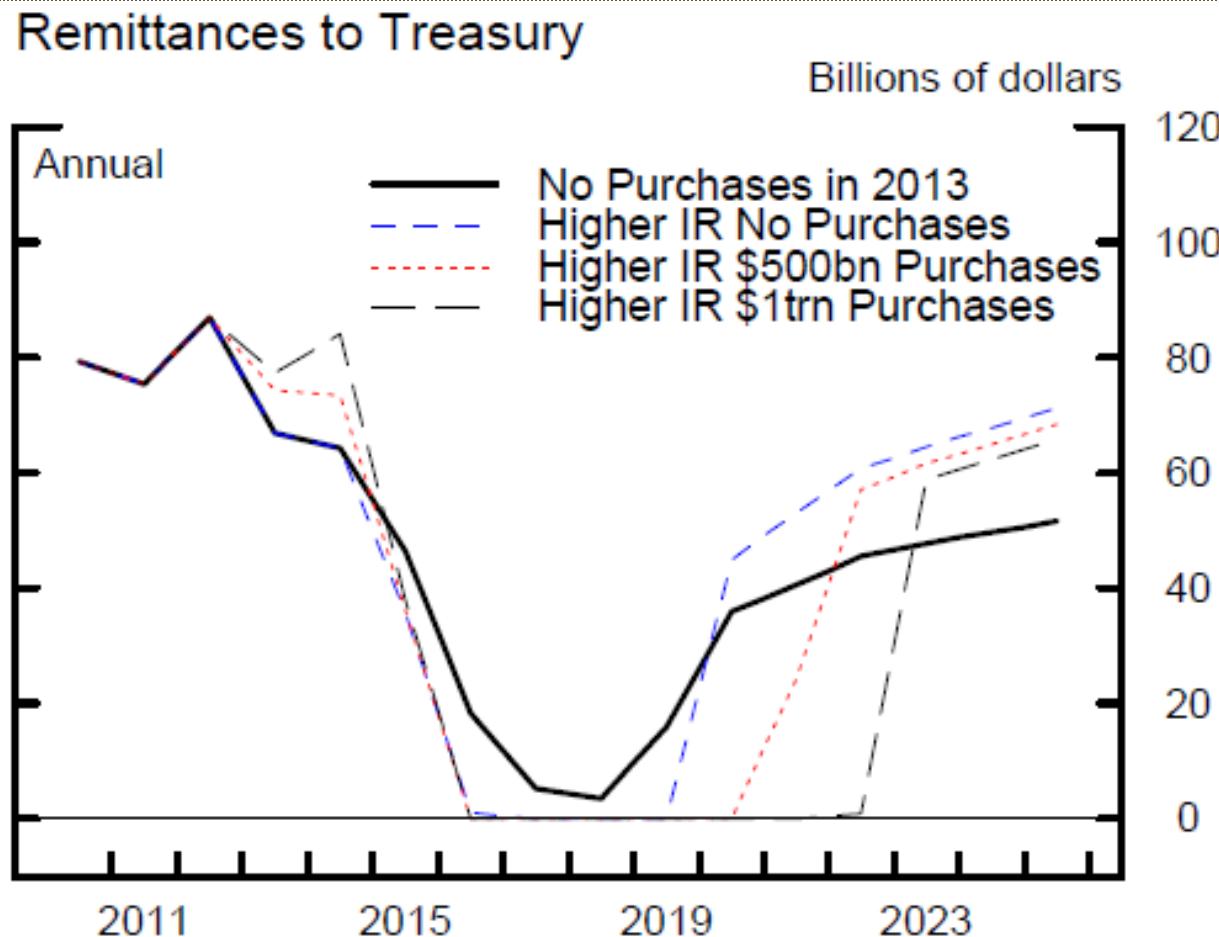
Size of the balance sheet

- The size of the balance sheet could inhibit the Committee's ability to exit appropriately from the current very aggressive monetary policy.
- The Fed's balance sheet relative to GDP is not as large as some other key central banks.
- However, when interest rates rise, asset values will fall, possibly complicating monetary policy decisions.

Fed balance sheet relative to GDP



Balance sheet size: Complications?



Source:

Carpenter et al., 2013, "The Federal Reserve's Balance Sheet and Earnings: A Primer and projections," FEDS Working Paper No. 2013-01

Conclusions

Summary

- The stance of U.S. monetary policy is considerably easier today than it was during 2012.
 - The nature of forward guidance has improved.
 - The open-ended asset purchase program is more potent than previous programs.



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