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# Comments of “The Macroeconomic Effects of the Federal Reserve’s Unconventional Monetary Policies”

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# **Discussion of “The Macroeconomic Effects of the Federal Reserve’s Unconventional Monetary Policies”**

**by E.M. Engen, T. Laubach, and D. Reifschneider**

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International Monetary Fund

Sixteenth Jacques Polak Annual Research Conference

November 5<sup>th</sup>, 2015

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# Goals of the Paper

To estimate the effects of asset purchases and forward guidance on real activity and inflation.

- A. Infer perceptions about shifts in the monetary policy reaction function (parameter on the output gap) from revisions in private-sector forecasts.
- B. Estimate effects of asset purchases on the path of the term premium.
- C. Assess macroeconomic impacts of A+B using the FRB/US model.

Due to the interdependency of asset purchases and forward guidance, joint evaluation is needed.

# Main Results

1. QE and increasingly aggressive forward guidance exerted downward pressure on real long-term rates and thus supported the recovery.
2. Private-sector forecasters learned only gradually that FOMC would pursue more accommodative policy in the future.
3. Output and inflation effects limited by the slow change in policy expectations of the private sector. Little effect for the first two years due to lags in policy transmission and delays related to understanding the FOMC's intentions, peak unemployment effect not realized until 2015 and inflation until 2016.

# Bottom Line (1)

- I really like this ELR paper! Careful empirical work, sensible results and very policy relevant. And not just relevant for the United States. Useful results for any country dealing with zero interest rate floor constraints.
- FRB/US is clearly the best production model in town. Clearly need a structural model with plausible forward-looking channels and rigidities to analyze the effects of QE and FG on the real economy.
- ELR also very careful to point out the limitations of their analysis. FRB/US does not capture adverse confidence effects that might be associated with not doing unconventional policies. Any missing nonlinearities? Do we need a different model with stronger macro-financial linkages?

## Bottom Line (2)

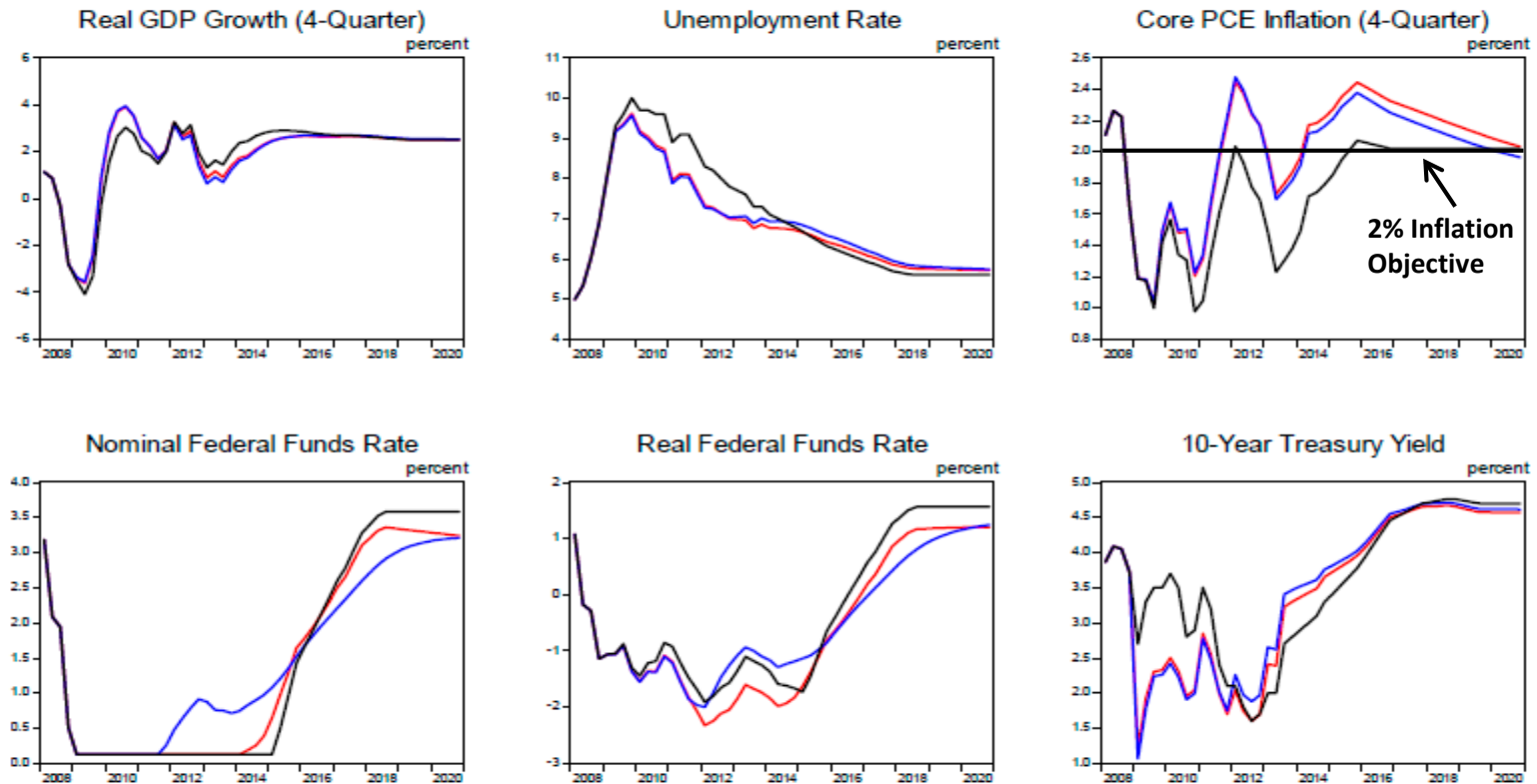
“Based on these simulation results, one can reasonably argue that the FOMC is likely to have a somewhat greater ability to mitigate the effects of a future crisis than it did at the start of the current one, as long as the public anticipates that the FOMC will once again aggressively deploy its unconventional policy tools.”

Question 1: Would expectations have evolved differently in 2009-10 had the Fed published a macro forecast with the path for the policy rate? What can we learn from the experiences of inflation-forecast targeting central banks? Important area for future research.

# Would expectations have adjusted faster by publishing an overshooting path?

Figure 12. Predicted Evolution of the Economy if Late-2013 Perceptions of Unconventional Policy Had Been in Place in Early 2009

— version 1 policy (non-inertial) — version 2 policy (inertial) — history with Oct-2013 Blue Chip projections



Note: The version 1 simulation assumes that agents in the historical baseline always view the fund rate rule as non-inertial. In the version 2 simulations, agents in the baseline perceive the funds rate rule becoming inertial ( $\lambda=0.8$ ) beginning in 2012.

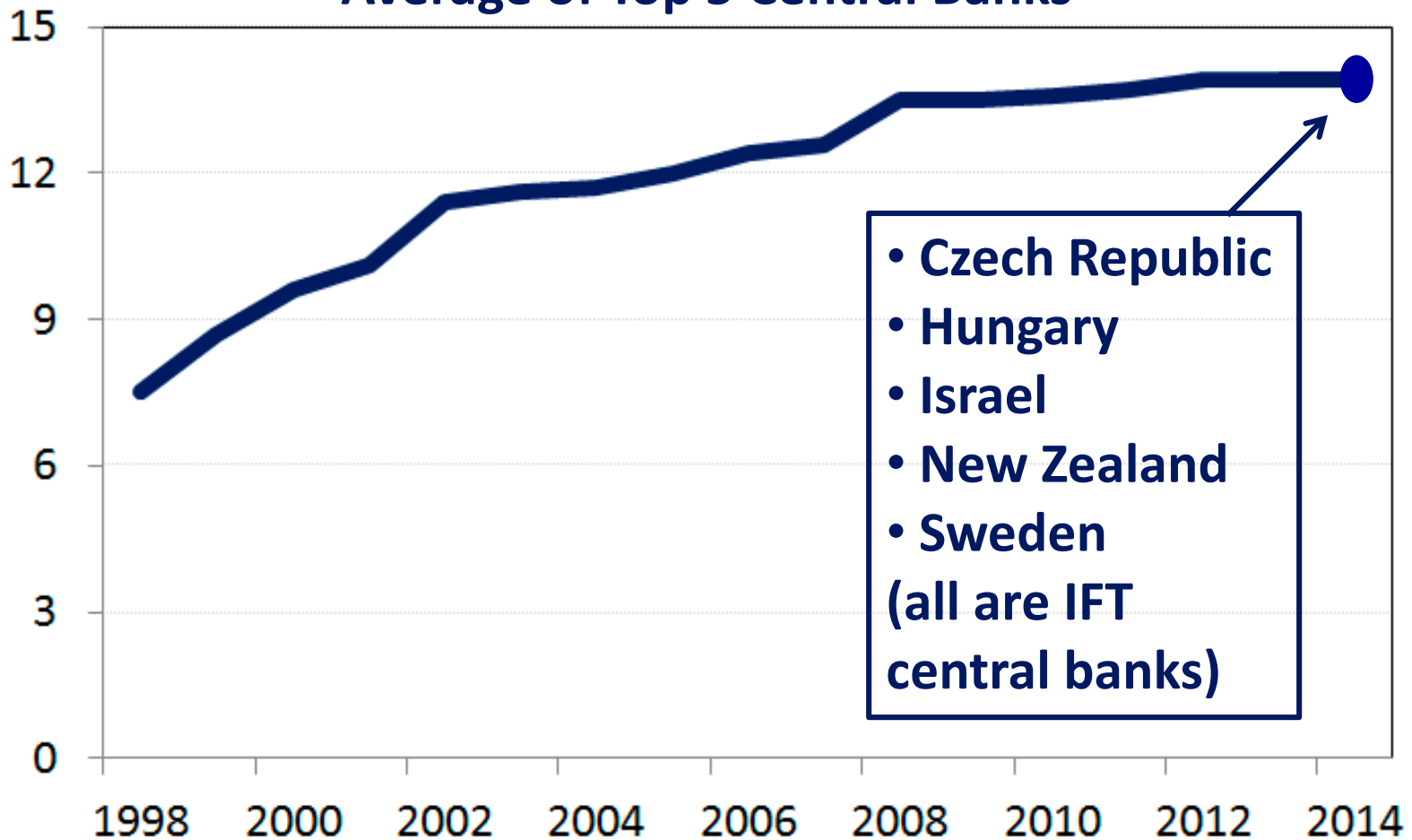


# What is Inflation-Forecast Targeting?

- Otherwise known as “flexible” inflation targeting.
- Central bank’s inflation forecast is an ideal intermediate target:
  - used to communicate how the central bank is managing the short-run output-inflation tradeoff (explicit or implicit dual-mandate);
  - based on all available information and views about how the economy works.
  - Forward-looking monetary policy requires a model of the economy (like FRB/US) and projections using the model, with the future path for the policy rate and other instruments being critical elements.

# Dincer-Eichengreen Central Bank Transparency Index (Max. Possible Score = 15)

Average of Top 5 Central Banks

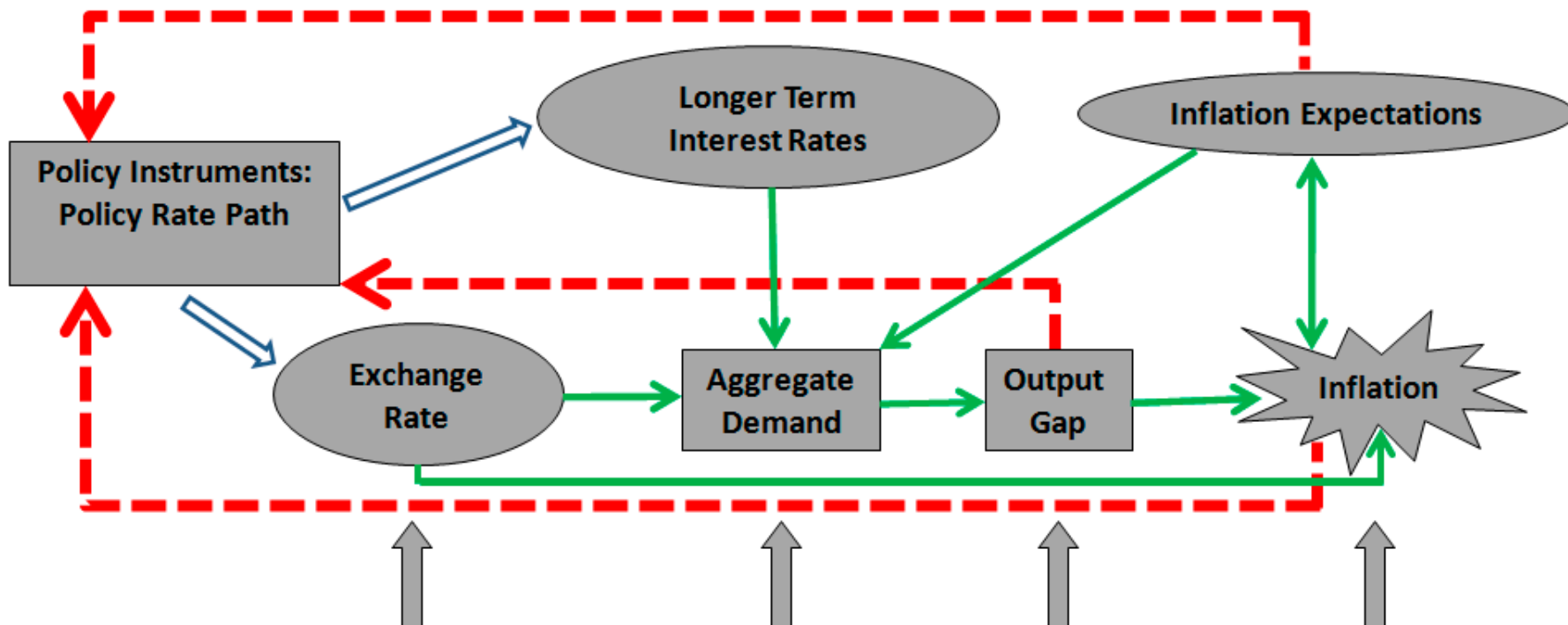


# Check List for Ideal IFT Central Bank

	Ideal IFT Central Bank
Announced numerical long-term <b>inflation objective</b> .	✓
Clear about <b>policy tradeoffs</b> (use forecasts to provide information about managing the output-inflation tradeoff).	✓
<b>Monetary Policy Report and press conference</b> explaining how to use instruments to achieve objectives.	✓
Publish <b>consistent macro forecast</b> in Monetary Policy Report and description of the forecasting and policy analysis system.	✓
<b>Minutes</b> describing differences in views using a consistent staff baseline forecast as a reference point.	✓
Publish <b>endogenous policy interest rate path</b> that is consistent with the dual mandate.	✓

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# Simple Model for IFT Central Bank



**Shocks Hitting Economy**

Financial Shocks:  
Foreign Interest Rates  
Portfolio Shifts

Shocks to Aggregate Demand:

Credit Conditions  
Foreign Demand  
Commodity Prices  
Fiscal Policy

Shocks to Potential Output

Shocks to Inflation:

Indirect Taxes  
Energy Prices

Simple Taylor Rule

$$i_t = \pi_t + \alpha(\pi_t - \pi^*) + \beta_t y_t$$

VS

Loss Minimization

$$L_t = \sum_{i=0}^{\infty} [(\pi_{t+i} - \pi^*)^2 + y_{t+i}^2 + 0.5(i_{t+i} - i_{t+i-1})^2]$$

# U.S. Monetary Policy: Avoiding Dark Corners

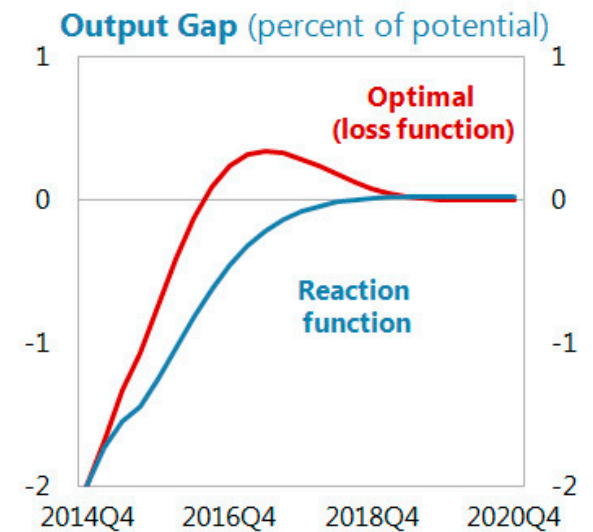
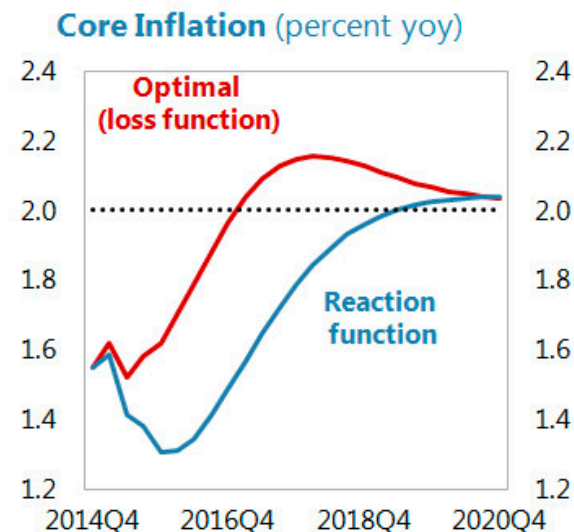
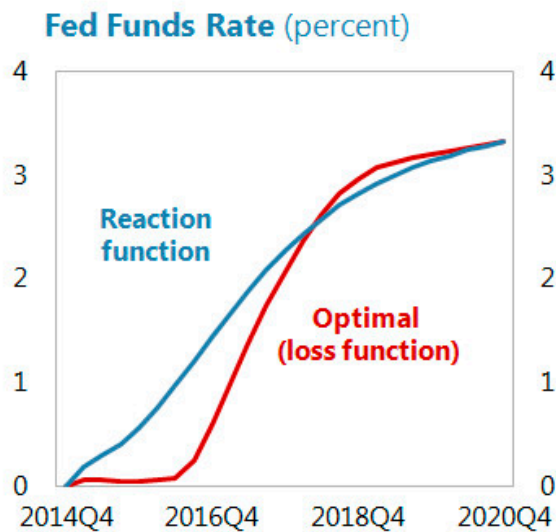
Posted on June 25, 2015 by iMFdirect

## Chart 1. A Model-Based Illustration of Two Potential Policy Paths

*Deferring rate increases, would mean a subsequently steeper path for policy rates.*

*The cost would be a path for inflation that temporarily, but modestly, exceeds the Fed's objective.*

*But this would facilitate a faster return to full employment and provide insurance against ending back at zero policy rates.*



Source: IMF staff estimates

# Two examples of how monetary policy was communicated by the Czech National Bank (CNB).

- The staff produce the forecast and the emphasis is on macro consistency.
- Key question: What instruments are necessary to achieve the CNB's inflation and output objectives?
- During normal times what path for the policy rate would be consistent with steering inflation back to the long-term target of 2 percent? Prepared to use other instruments at the zero interest rate floor.

# The CNB's Monetary Policy Objectives

- The CNB's monetary policy objective is set forth in Article 98 of the Constitution of the Czech Republic and in Article 2 of Act No. 6/1993 Coll., on the Czech National Bank. In particular, the CNB is required to maintain price stability. Without prejudice to its primary objective, the CNB shall support the general economic policies of the Government leading to sustainable economic growth.

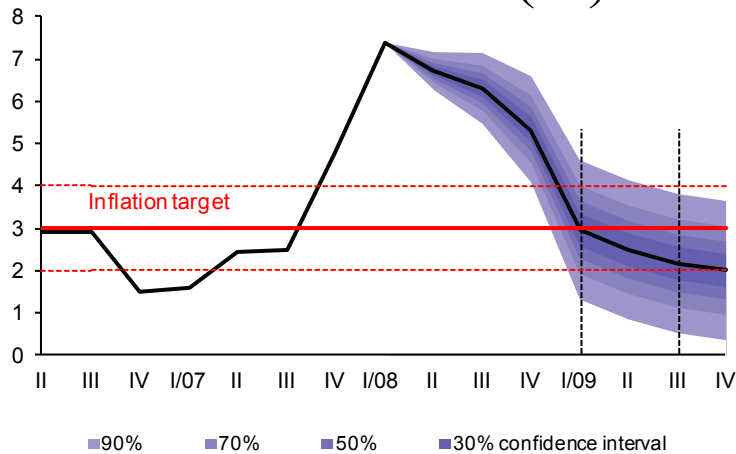
## Paragraph in Foreword of each CNB IT Report

“The forecast for the Czech economy is drawn up by the CNB’s Monetary Department... The forecast is the key, but not the only, input to the Bank Board’s decision-making. At its meetings during the quarter, the Bank Board discusses the current forecast and the balance of risks and uncertainties surrounding it. The Bank Board’s final decision may not correspond to the message of the forecast due to the arrival of new information since the forecast was drawn up and to the possibility of asymmetric assessment of the risks of the forecast and divergent views of some board members on the development of the external environment or the linkages between the various indicators within the Czech economy.”

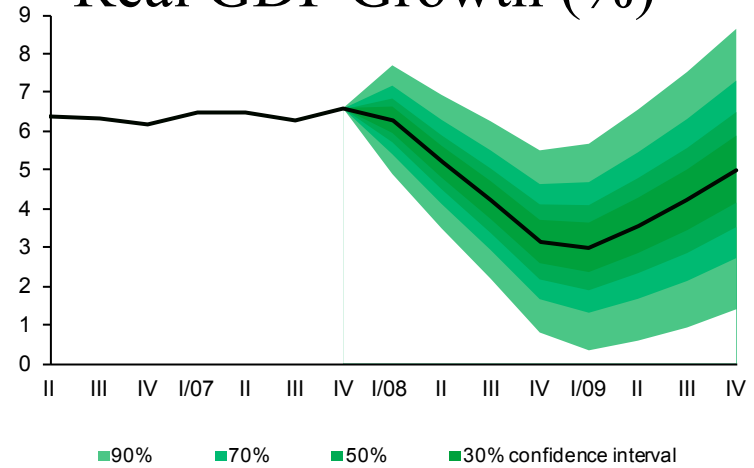


# Czech National Bank (CNB) Signals Risk of Weaker Activity on May 7, 2008

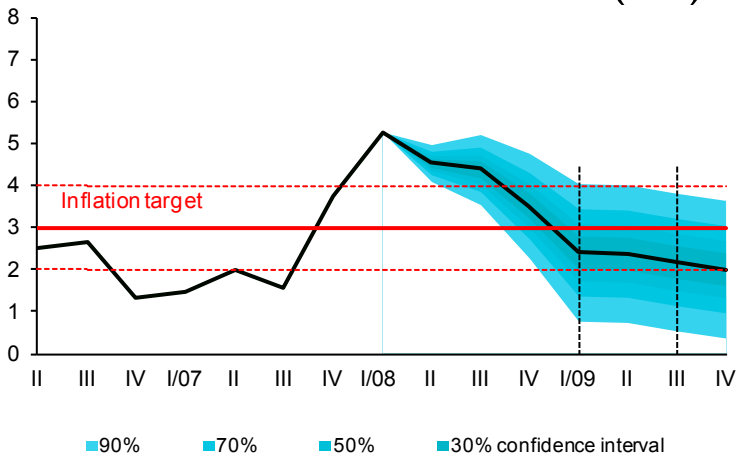
## Headline Inflation (%)



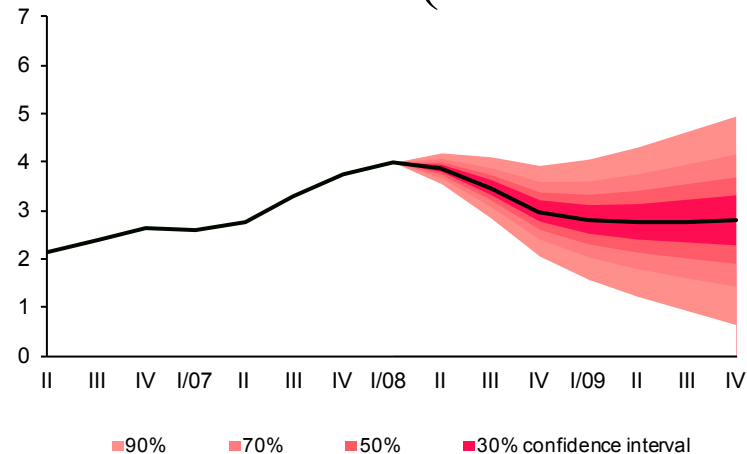
## Real GDP Growth (%)



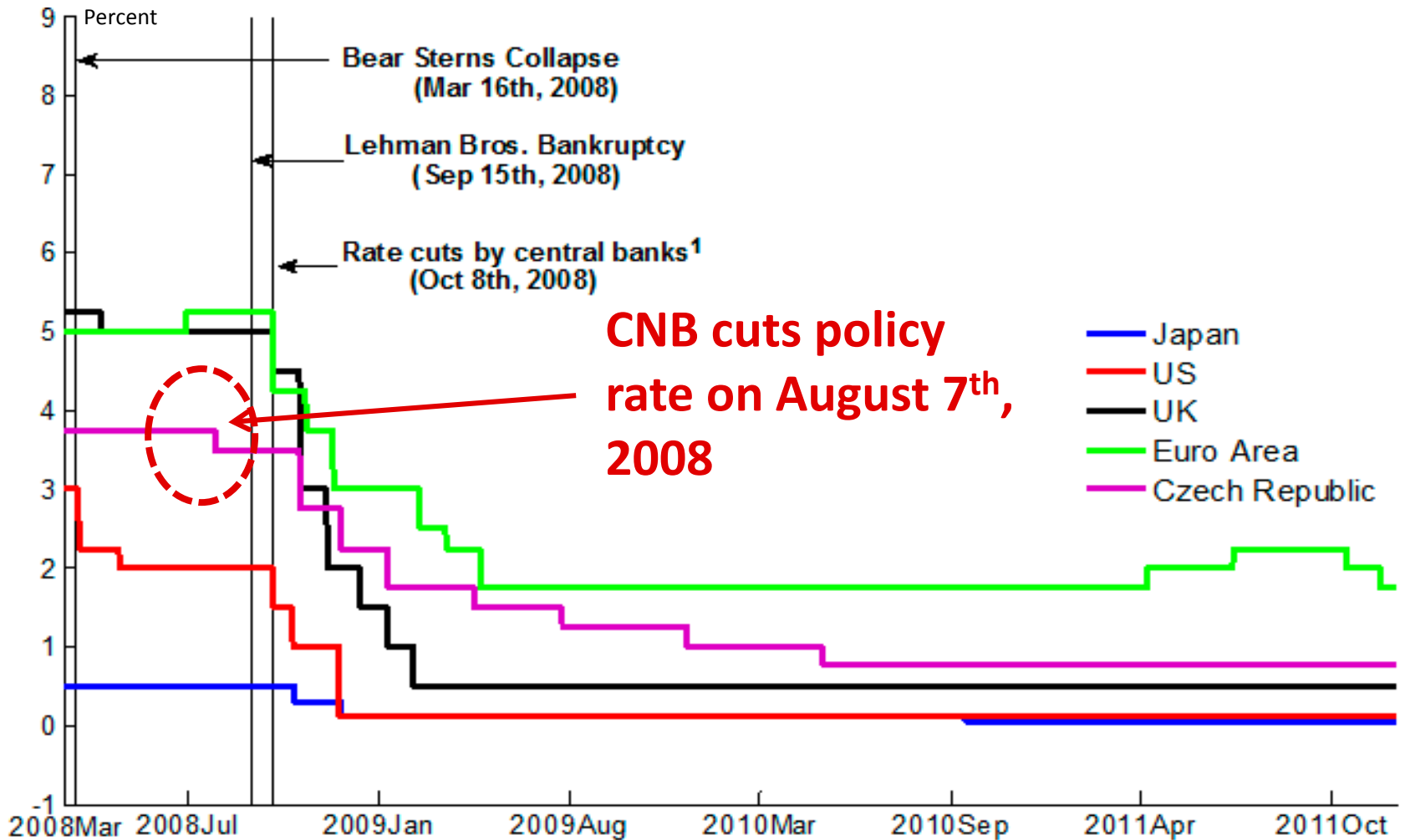
## MP-relevant Inflation (%)



## Interest Rate (3M PRIBOR) (%)

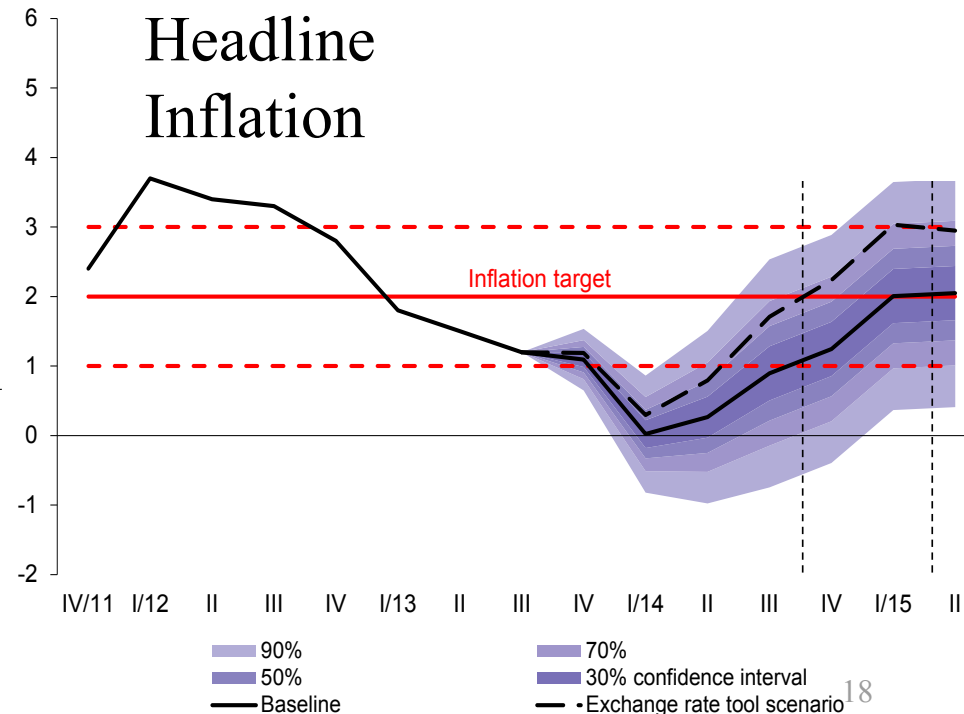
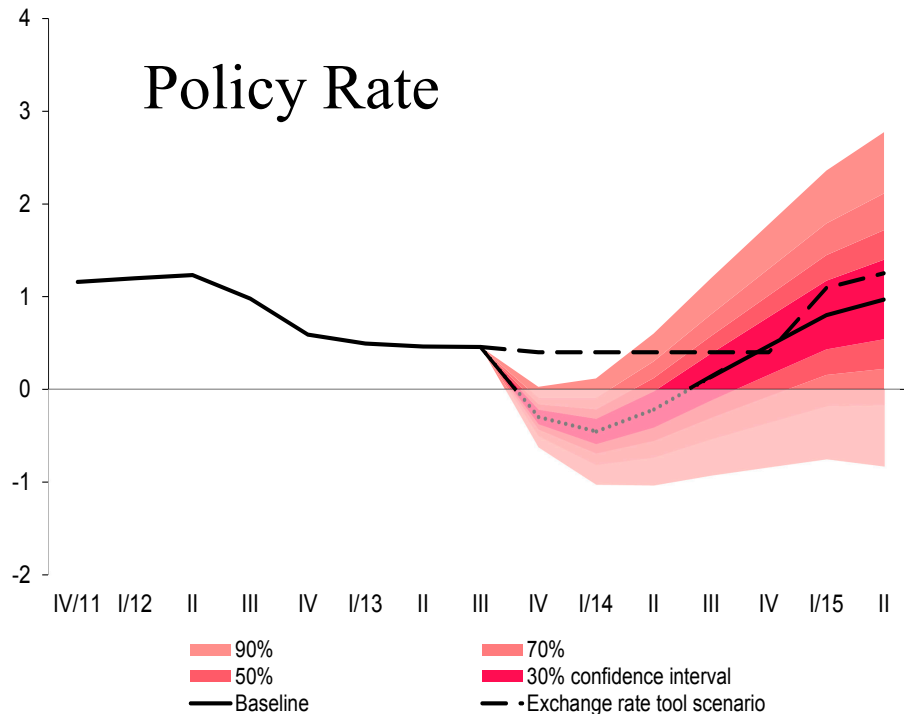


# CNB Cuts Policy Rate Before the Lehman Event



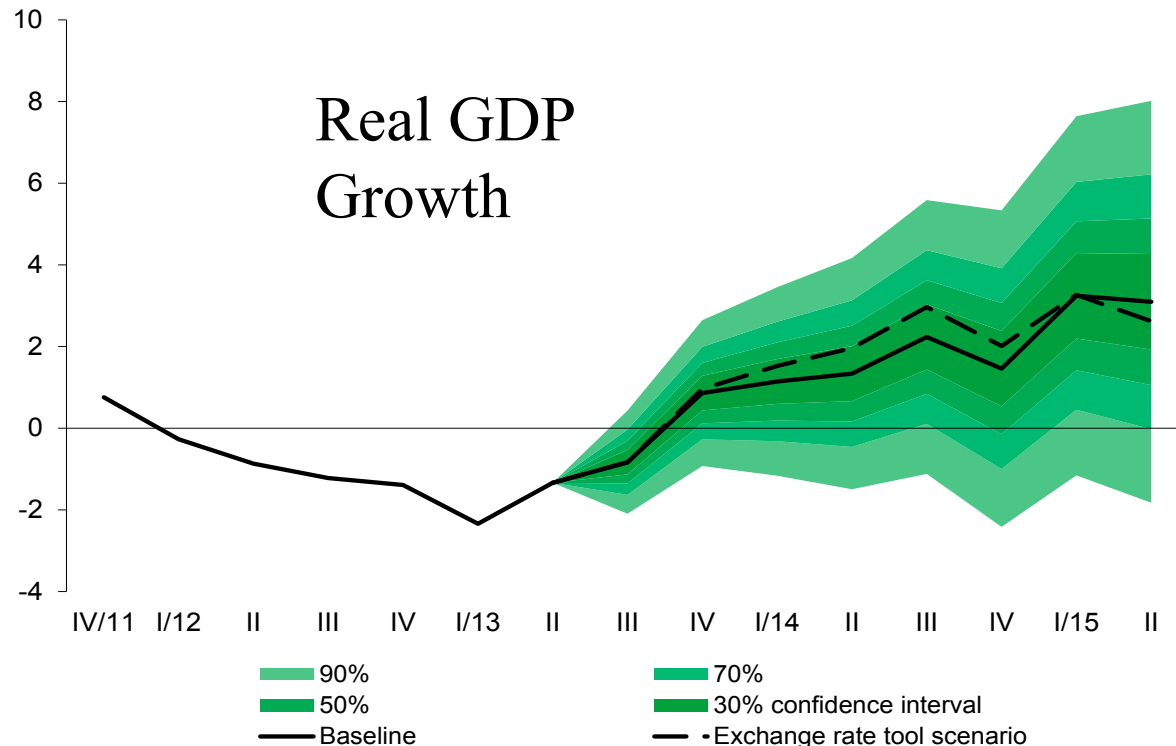
# Nov. 7, 2013 Planned Overshoot

- Consistent with an “artificial” baseline forecast was a significant decline in policy rate below the effective floor.
- An alternative scenario with the exchange rate tool confirmed that a sustained weakening of the exchange rate might be effective for accelerating the return of inflation towards the target (with an overshoot).



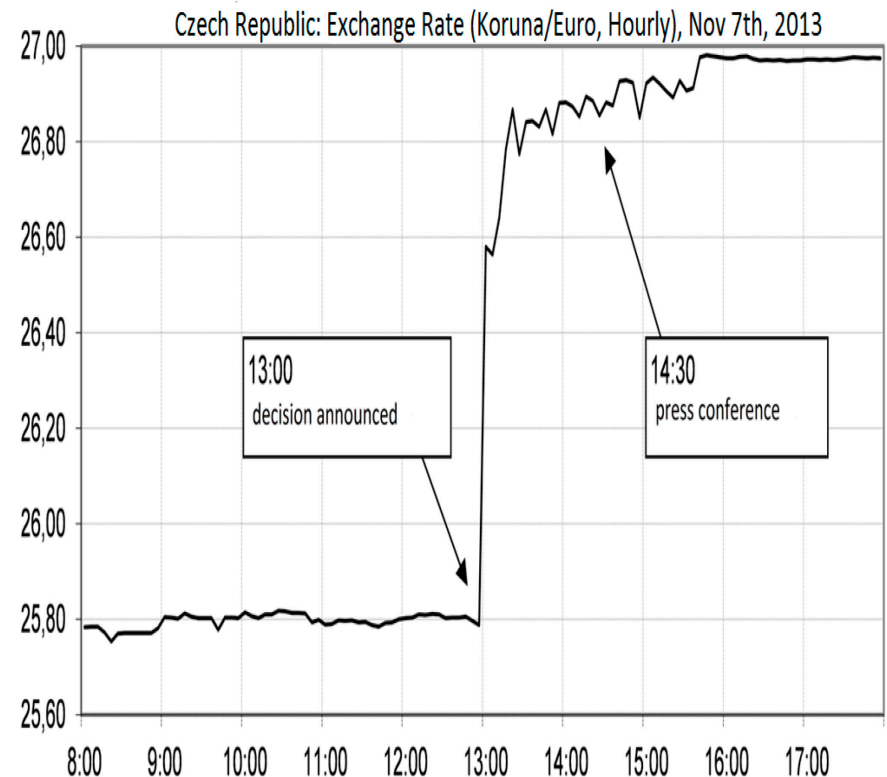
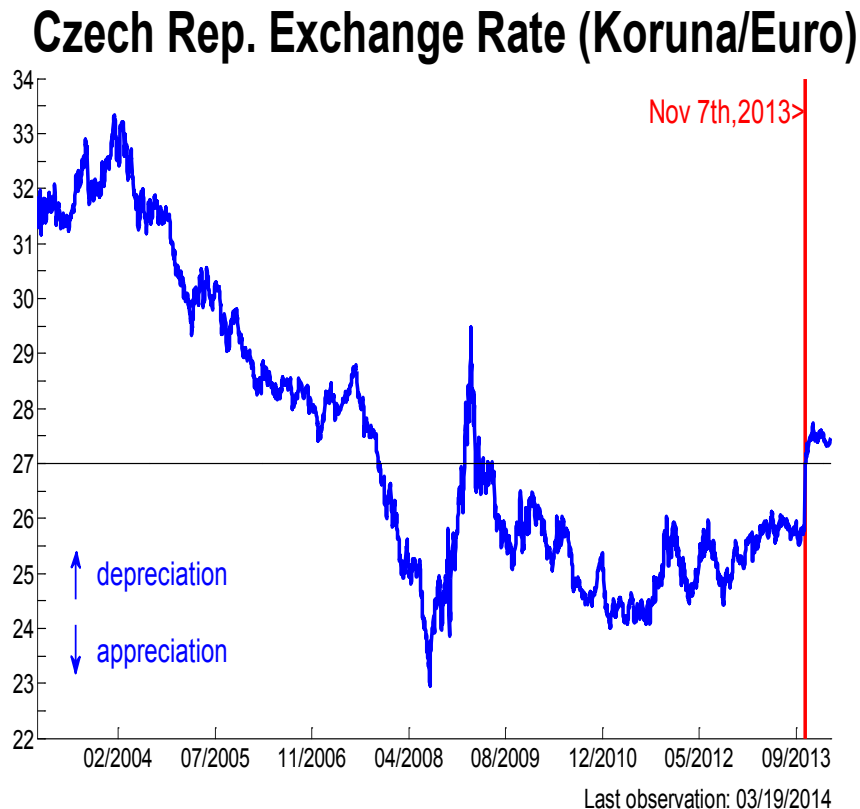
# CNB Scenarios: Nov. 7, 2013 (Continued)

Why an overshoot in the inflation forecast? To support the real economy and eliminate economic slack faster, and to reduce the risks of a bad deflation scenario.



# CNB Communicated that to....

Support the real economy and achieve higher inflation they will buy euros in **unlimited quantities** to prevent the exchange rate from appreciating above 27 koruna per euro.



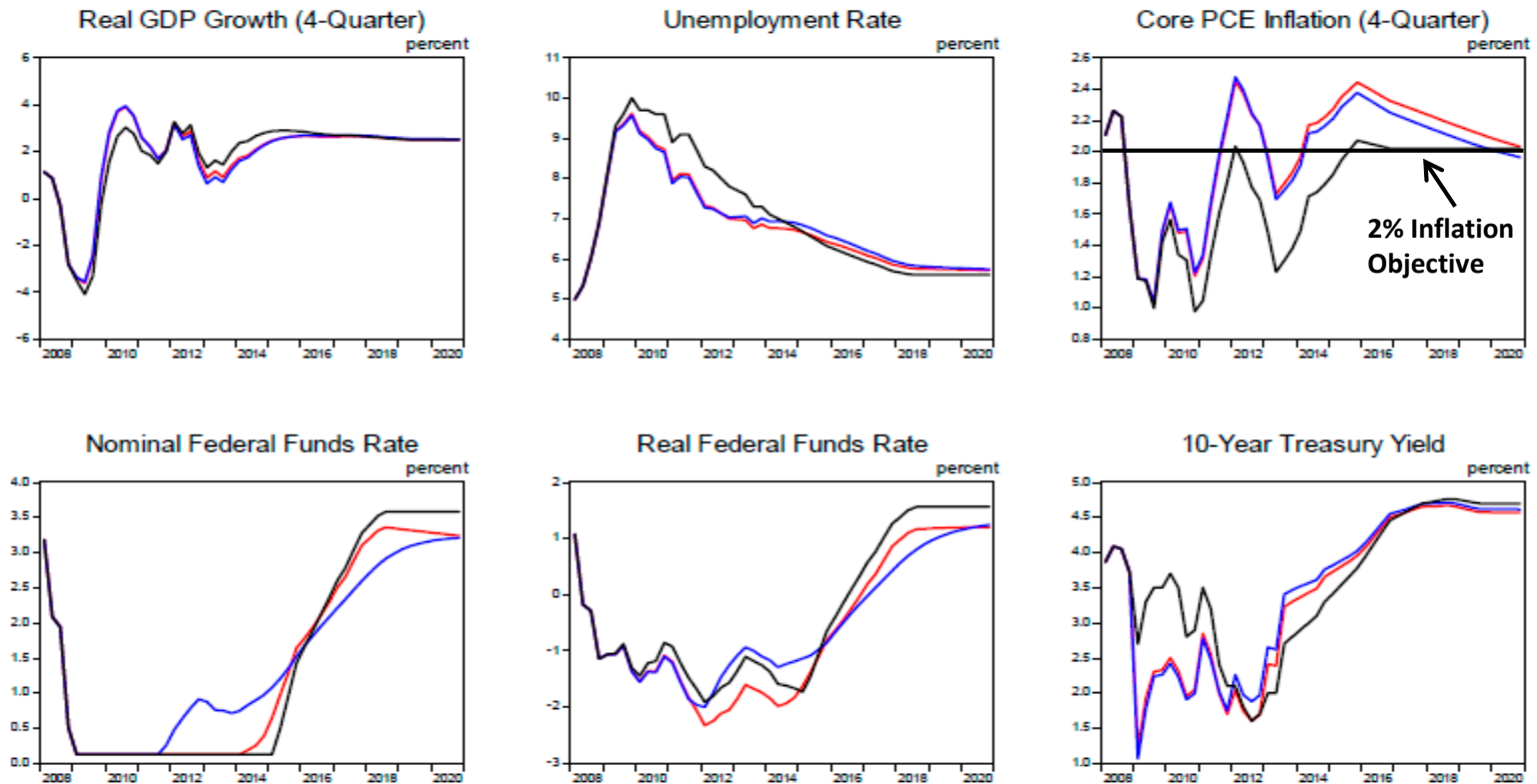
# Impact on the Czech Economy

- Key macroeconomic variables are doing much better than they were before November 2013.
- Had koruna not depreciated by 6%, inflation would have been below -2% at end of 2014.
- Weakening of koruna was an important reason for economic turnaround (significant impact on growth in 2014: weakening of koruna about 1 p.p., fiscal impulse about 1 p.p.).
- Restored confidence and strengthened domestic demand.

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# Three Questions

1. Would expectations have evolved differently in 2009-10 had the Fed published a macro forecast with the policy rate path?
2. What were the key shocks and channels in FRB/US that explains the global financial crisis?
3. Fiscal policy stimulus was also important. Is it critical for fiscal to back up monetary policy when there is uncertainty about QE/FG? It would be interesting to show a simulation about what would have happened without QE/FG and fiscal support. Would fiscal help make an overshooting path more credible?



# Congrats to the authors....

- Careful empirical work.
- Sensible results.
- Very policy relevant.
- Useful reading for any country dealing with zero interest rate floor constraints.

# Recent IMF Working Papers:

Alichi and others (2015a), “Frontiers of Monetary Policymaking: Adding the Exchange Rate as a Tool to Combat Deflationary Risks in the Czech Republic,” IMF Working Paper No. 15/74.

Alichi and others (2015a), “Avoiding Dark Corners: A Robust Monetary Policy Framework for the United States,” IMF Working Paper No. 15/134.

Benes, Kumhof and Laxton (2014), “Financial Crises in DSGE Models: Selected Applications of MAPMOD,” IMF Working Paper No. 14/56.

Clinton and others (2015), “Inflation-Forecast Targeting: Applying the Principle of Transparency,” IMF Working Paper No. 15/132.