Monetary Policy in Norway

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NORGES BANK

Outline

- What?
- Why?
- How?

What?

Monetary policy in Norway

Policy objective:

- Low and stable inflation
  Close to 2.5 per cent over time
- A flexible inflation targeting regime
- Stabilise inflation in the medium term
  - The horizon will depend on disturbances to which the economy is exposed and the effects on prospects for the path for inflation and the real economy.

Policy decision:

- Every sixth week
- Press conference and written document explaining the assessments
  - Also when the rate is not changed

Economic analysis:

- Monetary Policy Report
  - Three per year
  - Forecasts of inflation, output gap, the key interest rate (!), the exchange rate, unemployment, etc

Decision-making process:

- "Autocratically-collegial" committee (Blinder, 2009)
  - 2 Internals (Governor and Dep. Governor) + 5 externals (part-time)
- No minutes or voting record
- But: The written document explaining the decision has some elements of "minutes"
- Speeches by the internal members

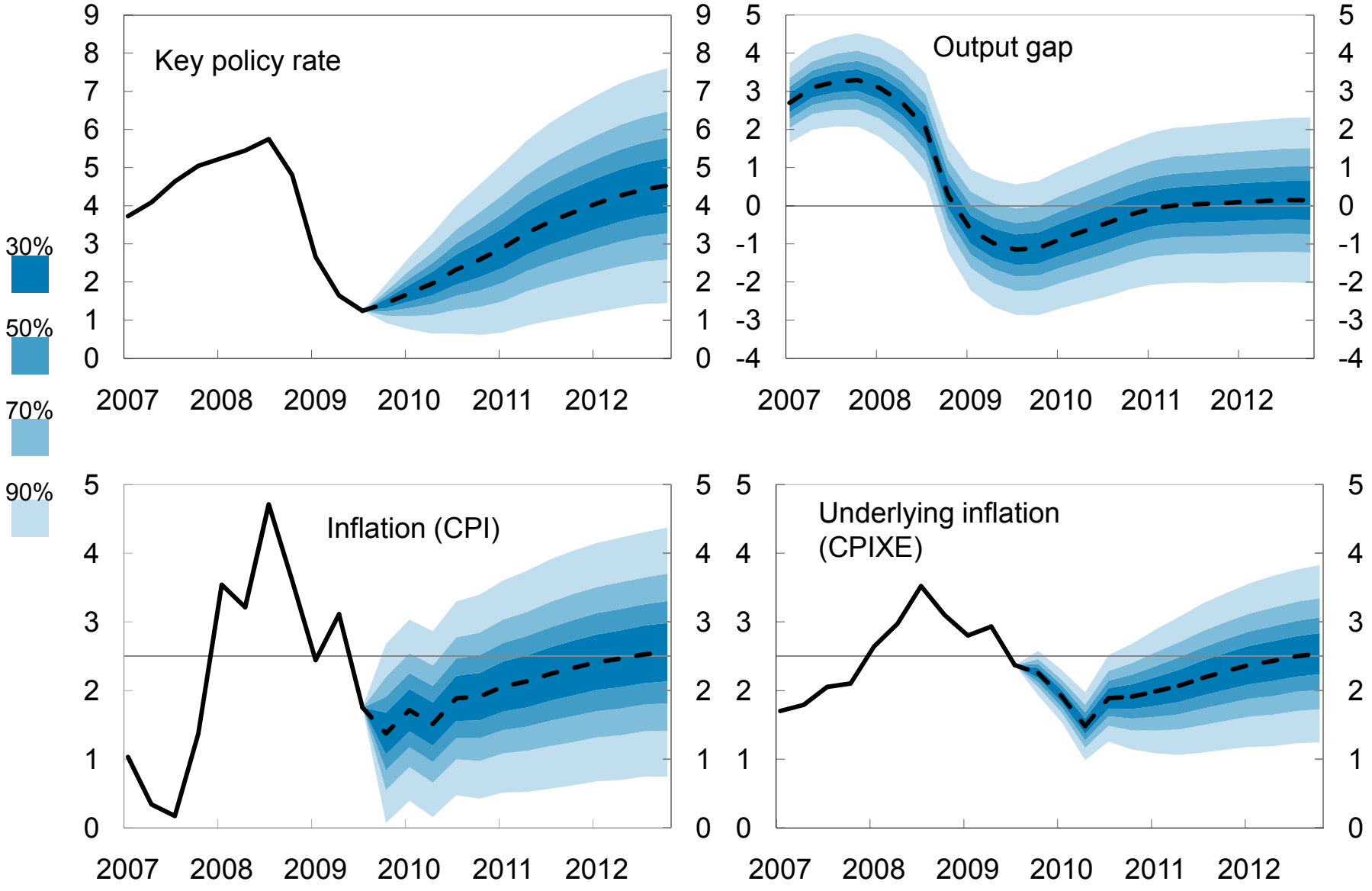
Monetary Policy Report

1. Forecasts with fan charts

2. Alternative scenarios

3. “Delta accounting”
   - Reasons for changing the interest rate path

Baseline scenarios in MPR 3/09

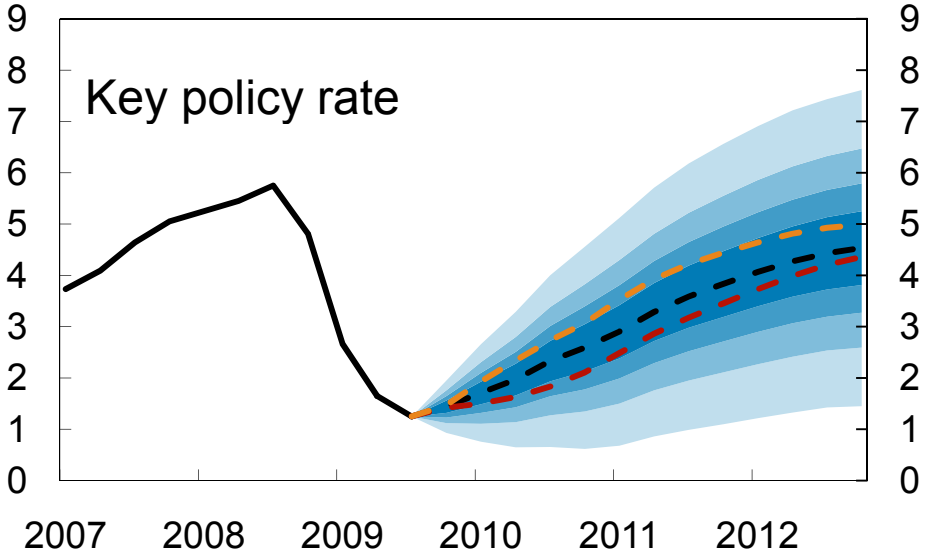


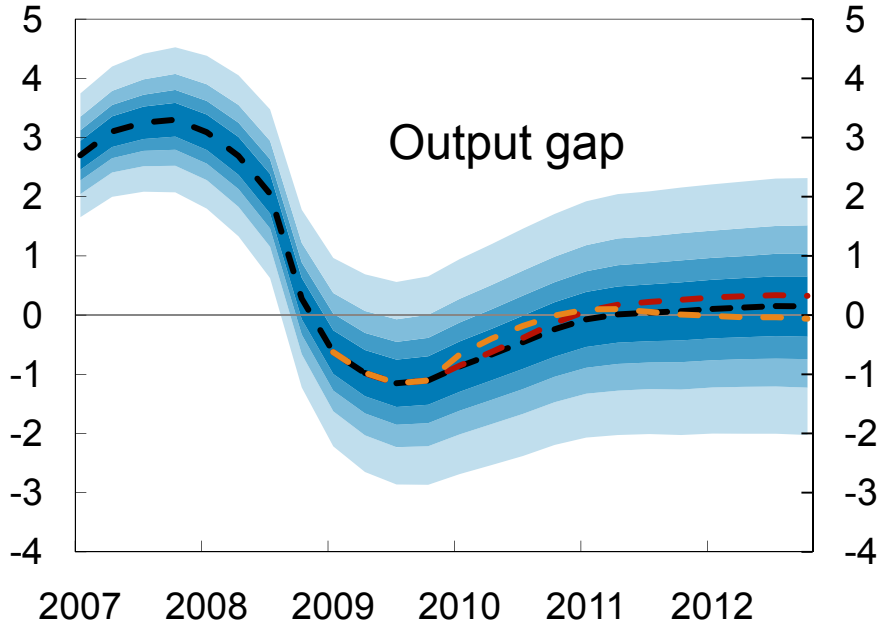
Sources: Statistics Norway and Norges Bank

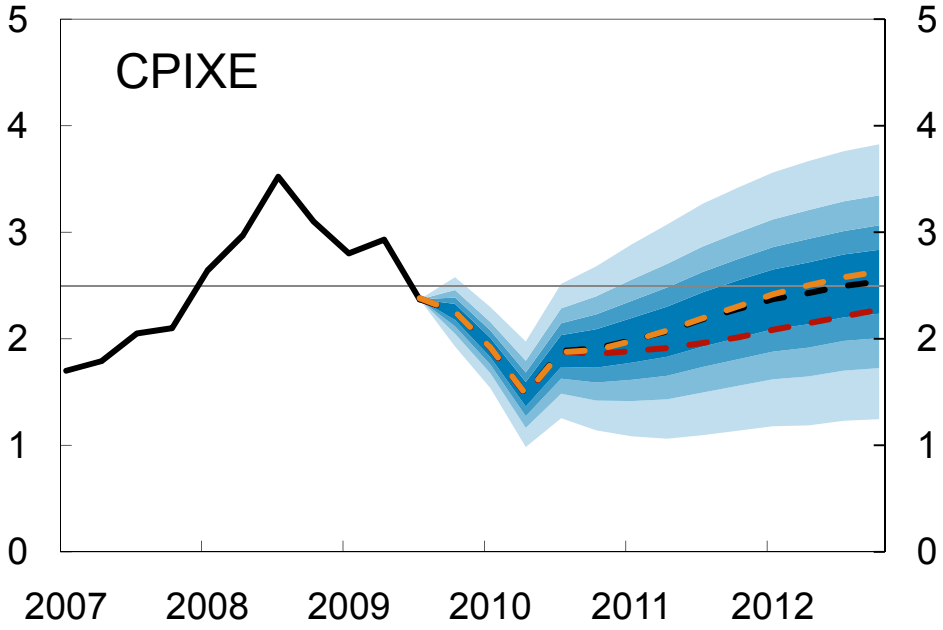
Alternative scenarios in MPR 3/09

30% 50% 70% 90%

----- Higher demand growth
----- Baseline scenario
----- Lower price and cost inflation

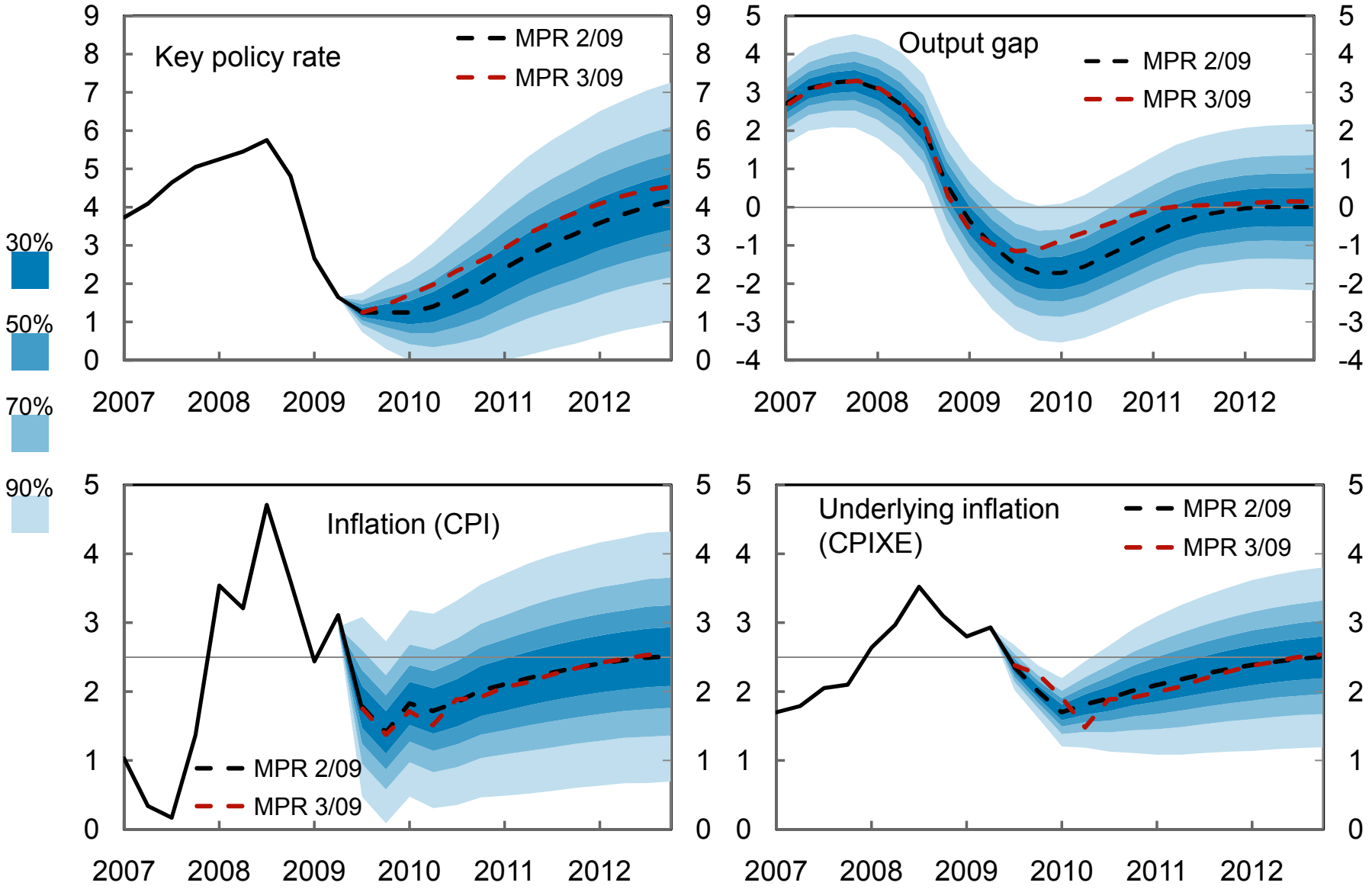






Source: Norges Bank

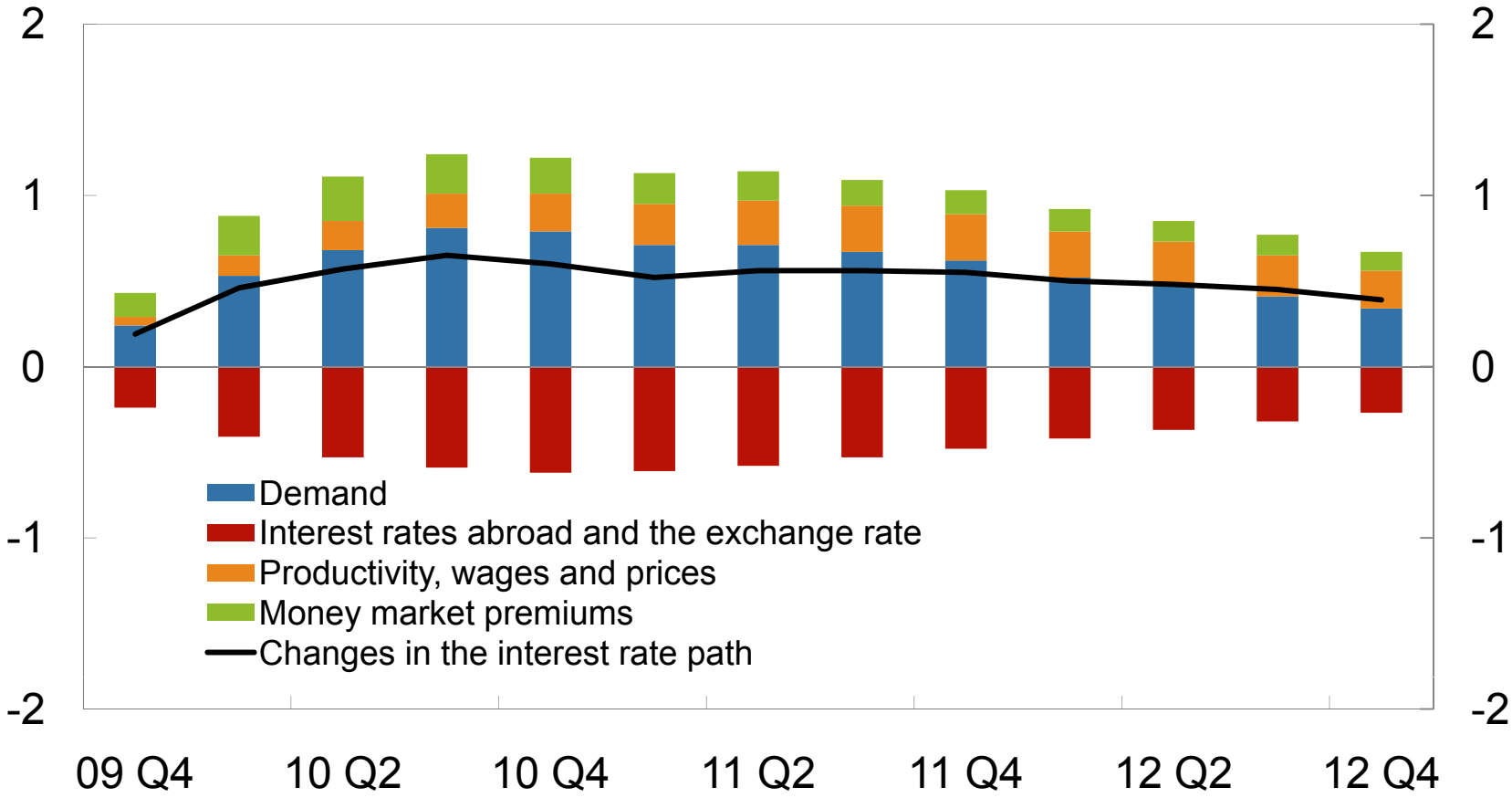
Baseline scenarios in MPR 2/09 and MPR 3/09



Sources: Statistics Norway and Norges Bank

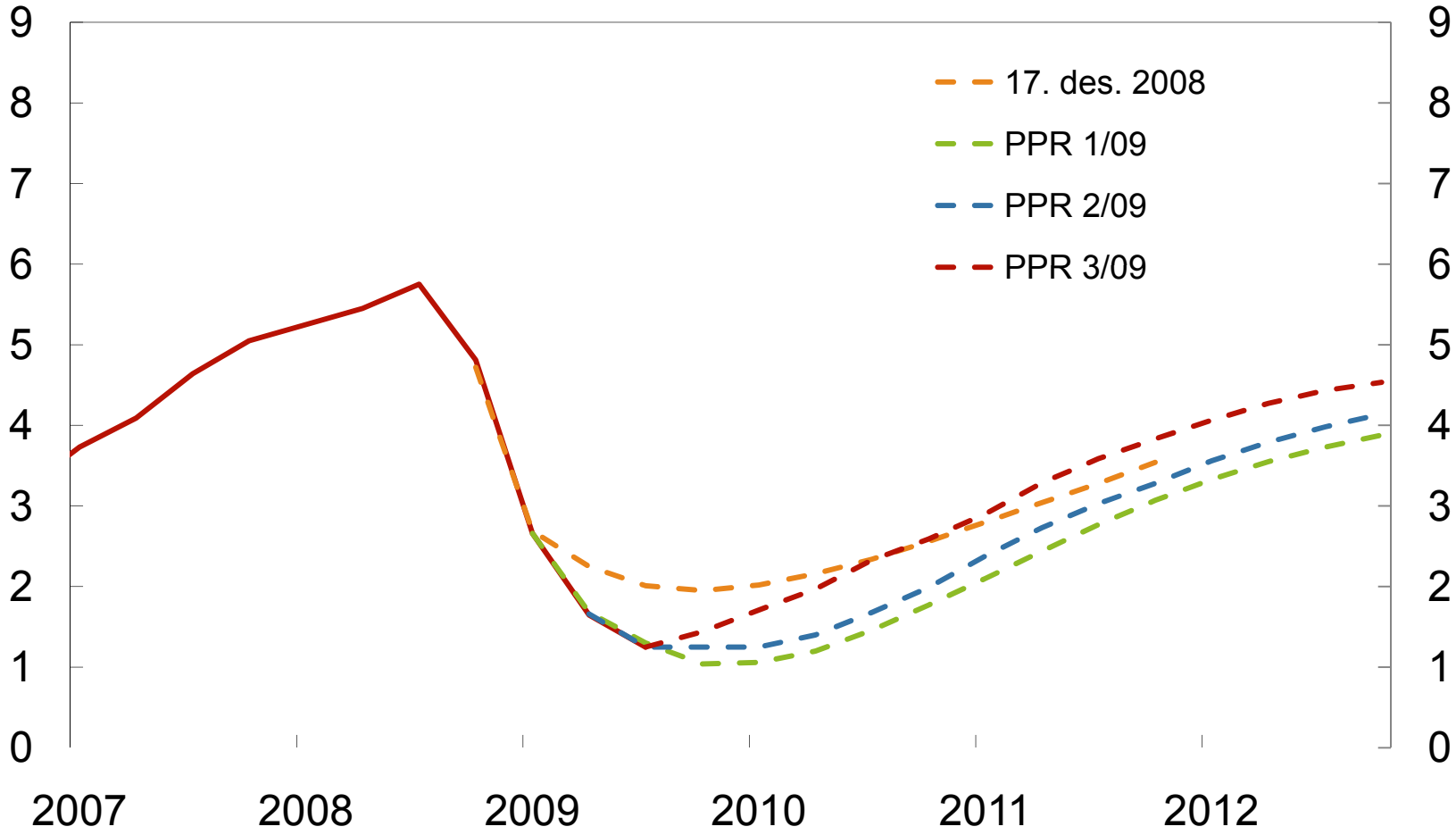
Factors behind changes in the interest rate path

Since MPR 2/09. Accumulated contribution. Percentage points



Source: Norges Bank

”When facts change, we change our minds”



Source: Norges Bank

Why?

Monetary policy as ”management of expectations”

“Central banks generally control only the overnight interest rate, an interest rate that is relevant to virtually no economically interesting transactions.” (Blinder, 1998)

”For not only do expectations about policy matter, but (…) very little else matters” (Woodford, 2005)

Everyone talks about the future in one way or another

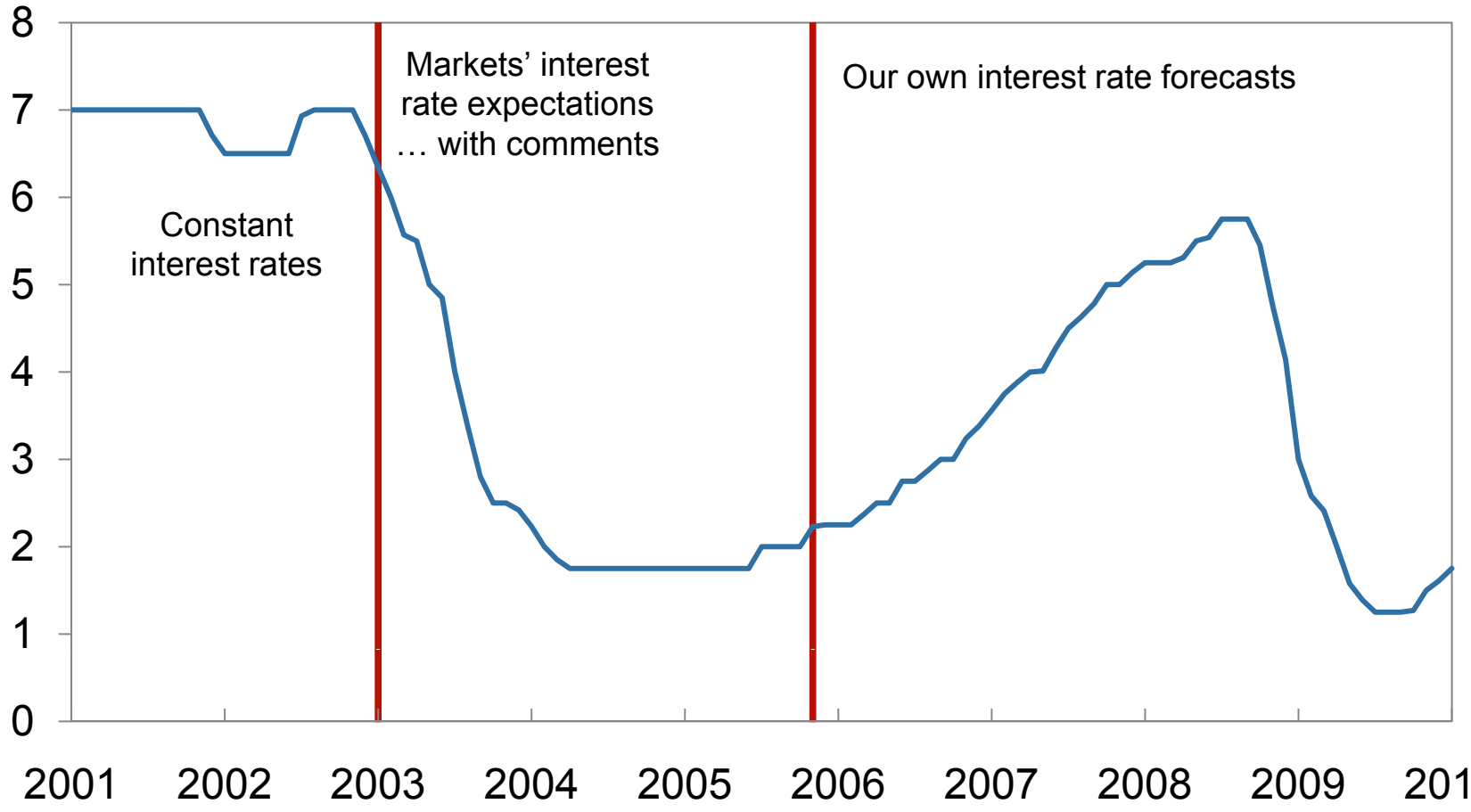
Bank of England, Inflation Report, February 2008:
"Under market interest rates, the central projection for inflation was a little above the target in the medium term, while under constant interest rates, it was below the target."

Claude Trichet, June 5, 2008:
"….the possibility is not excluded that, …, we could decide to move our rates by a small amount in our next meeting in order to secure the solid anchoring of inflation expectations…."

Claude Trichet, June 25, 2008:
"I didn't say that we would envisage a series of increases. I didn't say that."

Changes in Norges Bank's interest rate assumptions.

Key policy rate. Monthly average of daily observations. 2001 - 2010



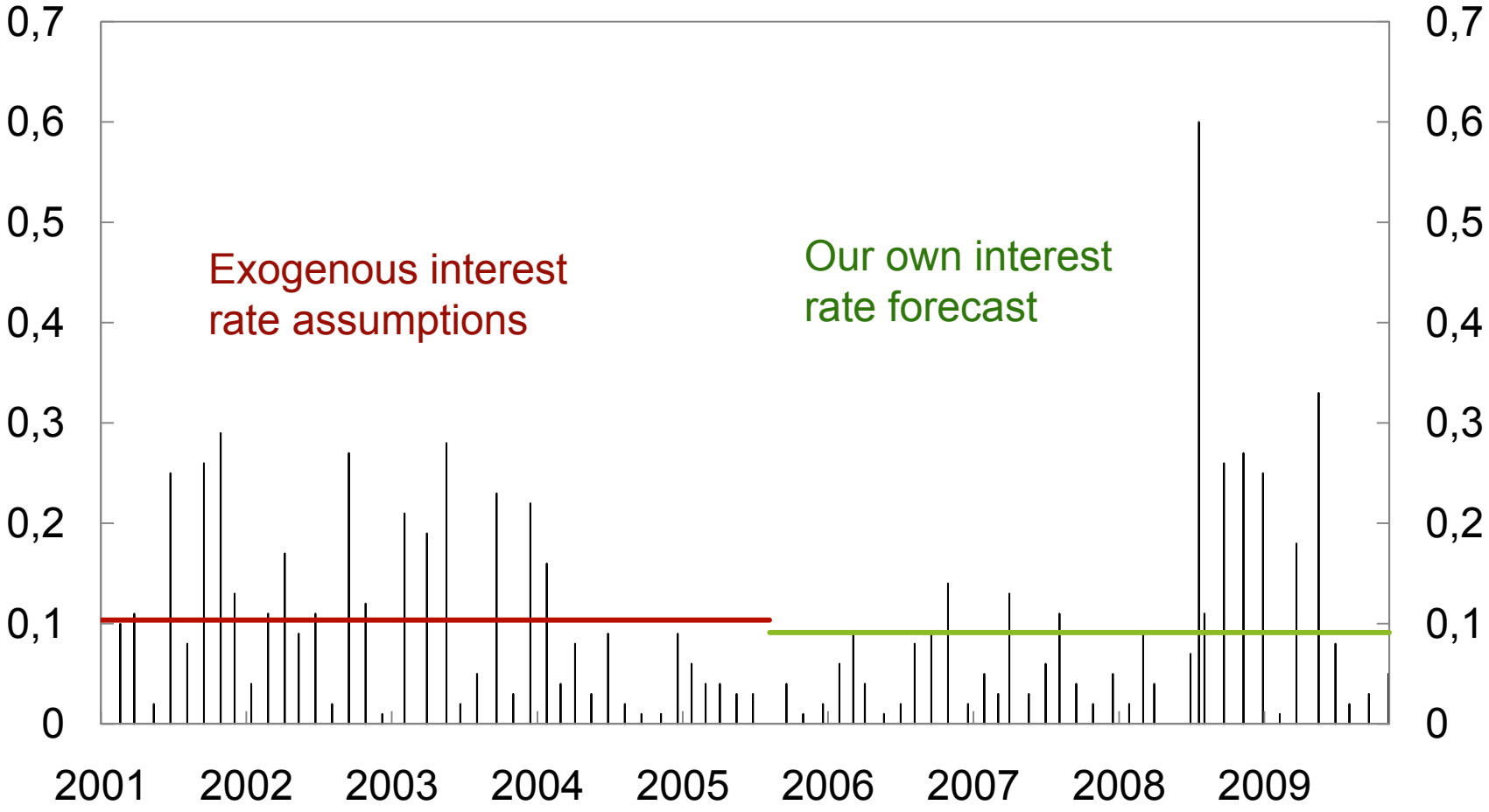
Effects of publishing interest rate forecast

- More stable inflation and output?
  - To early to conclude

- Reaction pattern better understood by the market?
  - Test: Market interest rates should adjust when economic news occur, and not when we announce the policy decision

Average absolute change in short term interest rates after policy announcements

12-month NIBOR. Mar. 2001 – Feb. 2010



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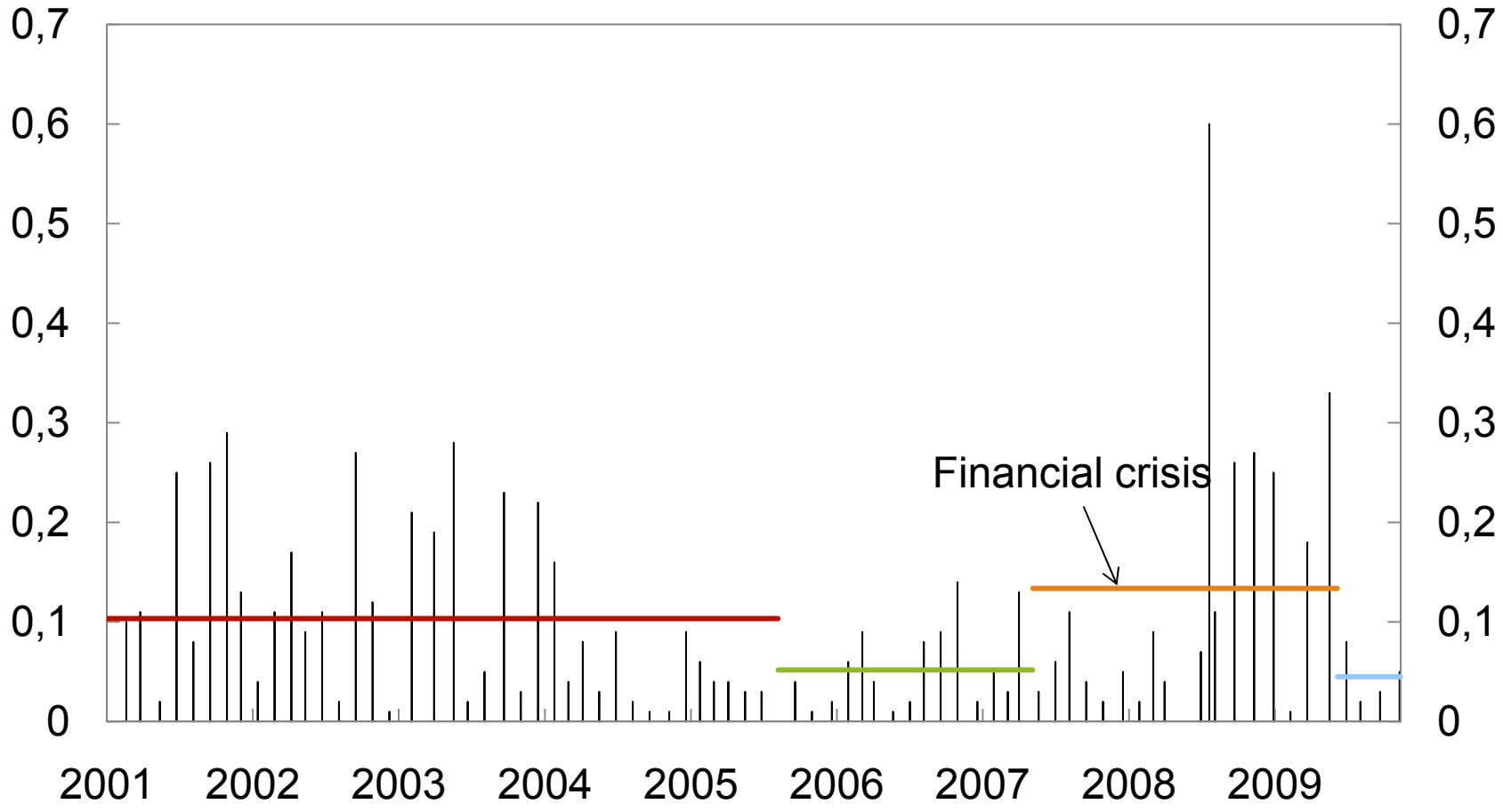


Experiences with publishing the interest rate forecast

- More precise communication than verbal deliberations
  - But not a giant step in transparency
- Conditionality well understood by market participants
  - It's a forecast – not a promise
- Less monetary policy surprices
  - (If we adjust for the financial crisis)
- Makes the internal process more focused
  - Each piece in the forecasting process has measurable interest rate implications

How?

Norges Bank's criteria for a good interest rate path:

1. Stabilising inflation close to the target in the medium term.

2. A reasonable balance between the path for inflation and the path for capacity utilisation.

3. Gradualism and consistency

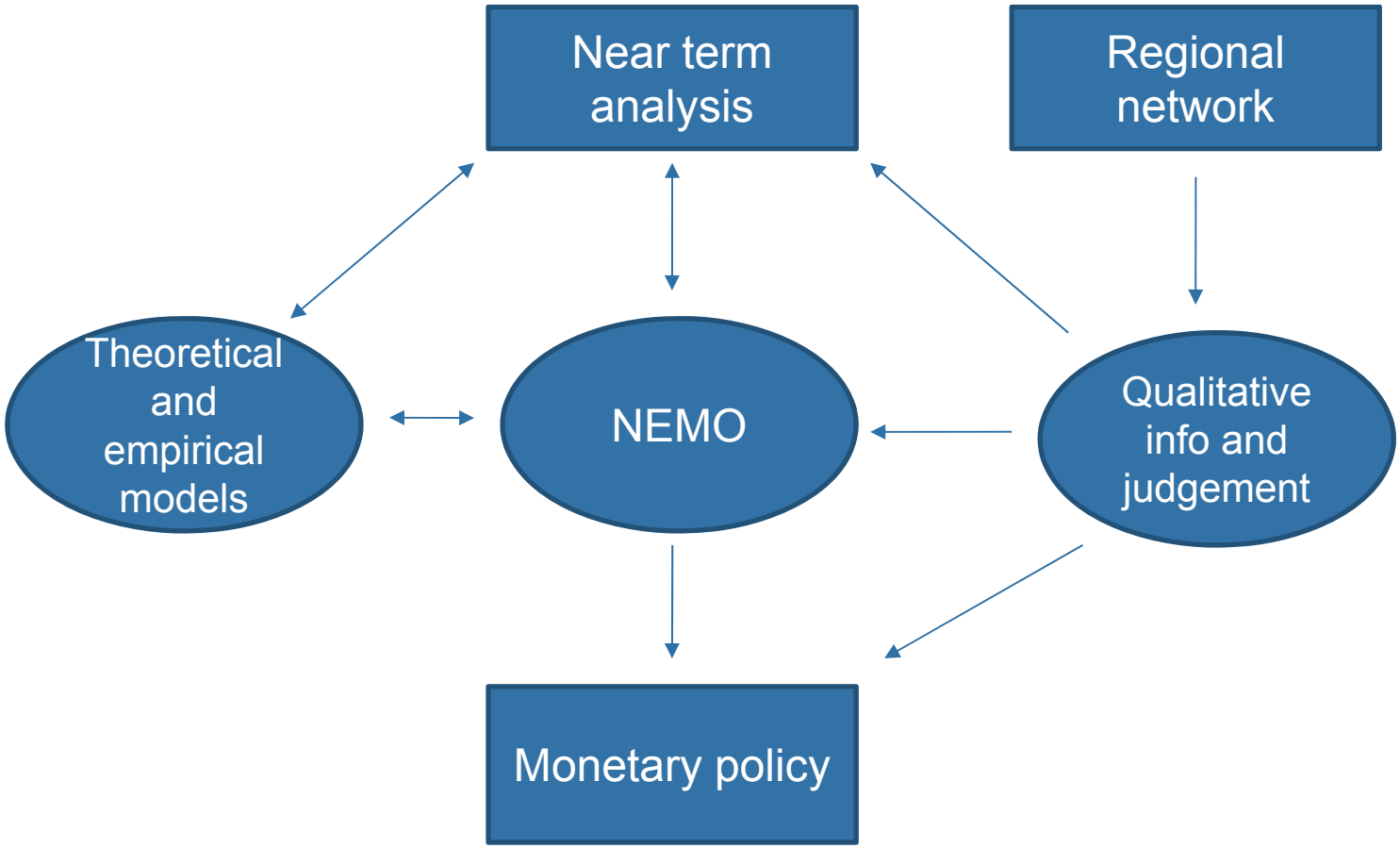
4. Robustness and cross-checks

Implementing the criteria: A model-based approach

Why model the interest rate path?

- Ensure consistency
- Focus the discussions
- Document the use of judgement

Norges Bank's suite of models



NEMO (Norwegian Economy MOdel)

- A medium-sized DSGE-model of a small open economy
- New Keynesian
  - Nominal and real rigidities
  - Imperfect competition
    - Output is determined by demand
- Bayesian estimation method
  - Data + prior information/judgements
- Try to avoid an ever-increasing core model
  - "Research versions" with various extensions
    - e.g., housing sector and financial frictions

Deriving the interest rate path: Two approaches

- Simple interest rate rule

$$r_t = \alpha r_{t-1} + (1-\alpha)[\beta_1(E_t\pi_{t+k} - \pi^*) + \beta_2 y_t + \beta_3 \Delta y_t]$$

- Optimal policy: Minimizing a loss function

$$L = (\pi - \pi^*)^2 + \lambda y^2 + \delta(r - r_{-1})^2$$

Simple rule

$$r_t = \alpha r_{t-1} + (1-\alpha)[\beta_1(E_t\pi_{t+k} - \pi^*) + \beta_2 y_t + \beta_3 \Delta y_t]$$

- Approximate “optimal” policy through choices of coefficients
- But there will be deviations from the rule
  - Does not utilize all information optimally
  - How should we model deviations from the rule?

Optimal policy

- Maximum achievement of the objectives
  - Given the model
- Can analyse implications of alternative policy preferences
- Explicit about the time-inconsistency problem
  - Must make an assumption about commitment vs discretion

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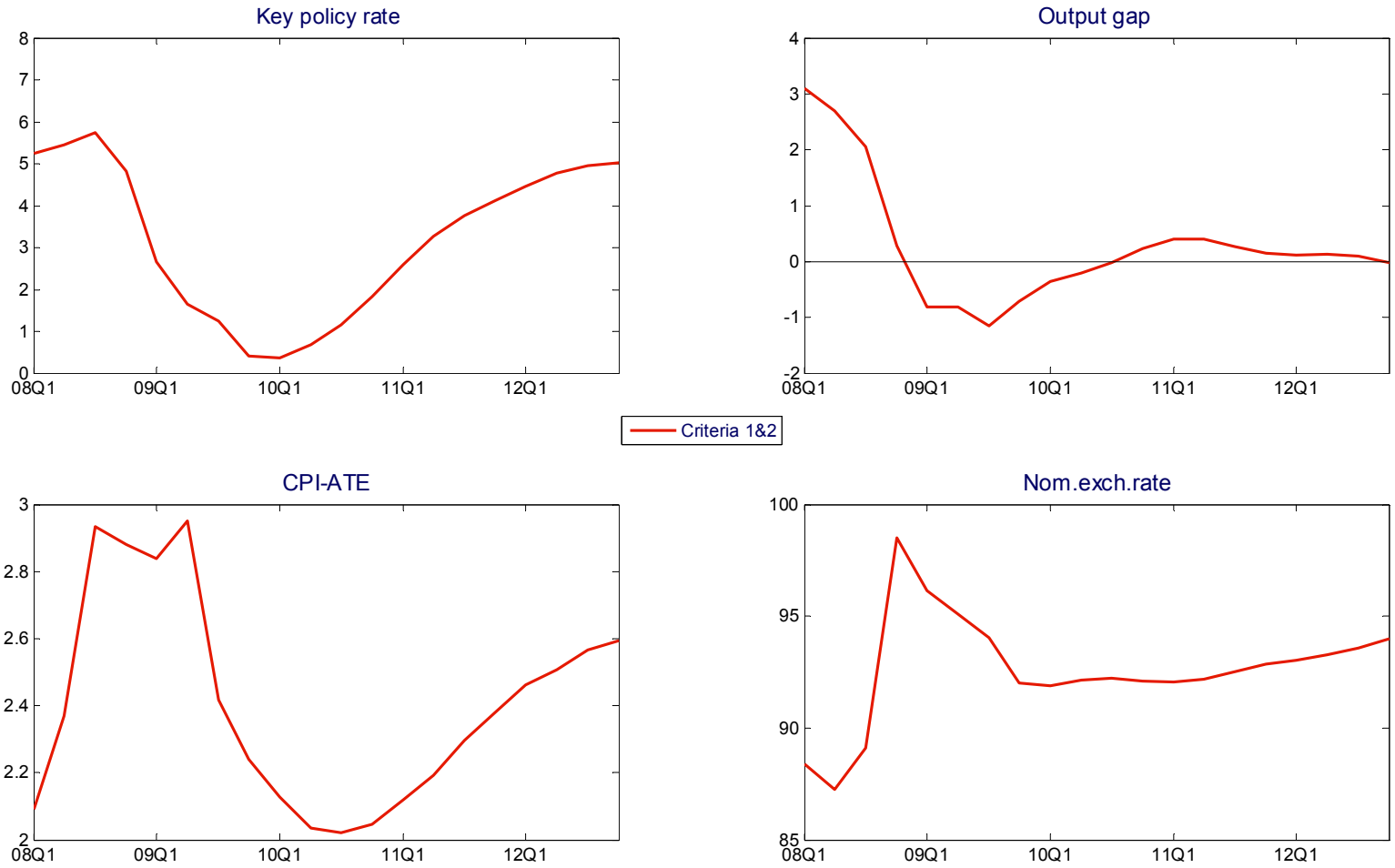
MPR 3/09. Criteria 1 & 2

$$L = (\pi - \pi^*)^2 + \lambda y^2$$



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Criteria 1, 2 & 3.

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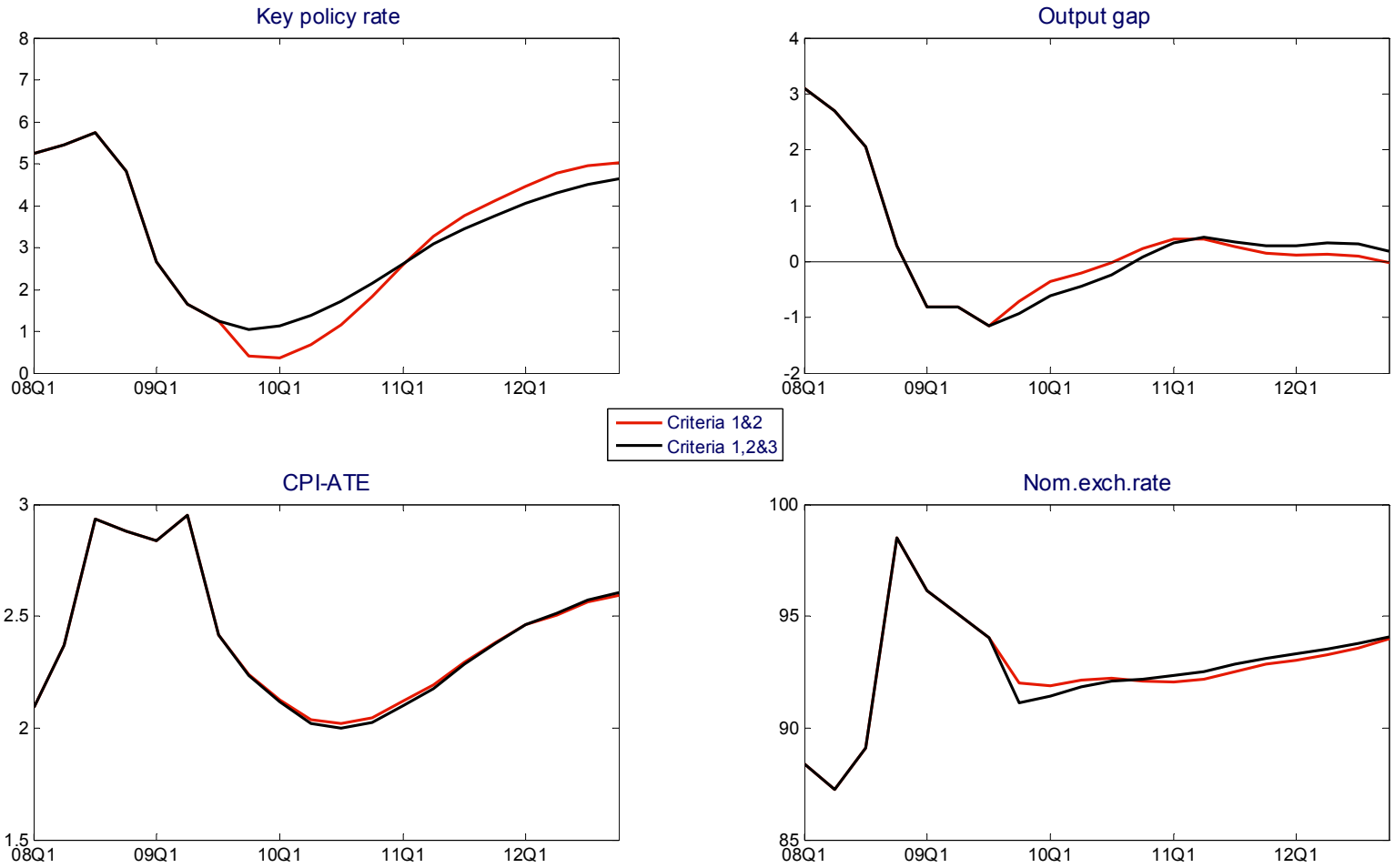

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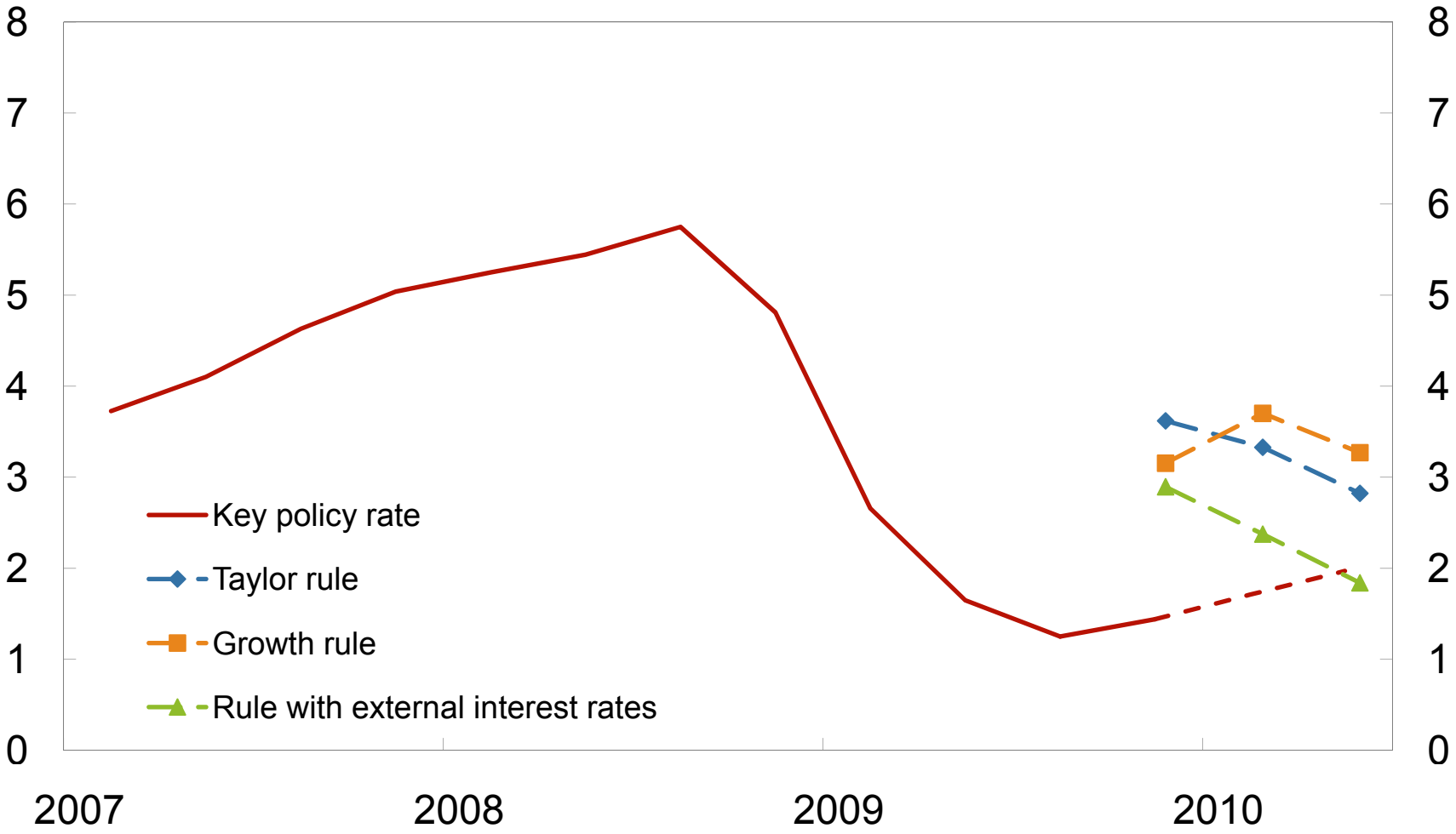
Robust monetary policy

- Optimal policy not very robust (?)
- Everyone is in favour of robust policy
  - But how can we provide it?
- ”Reasonable” interest rate path
  - Loss function that also penalizes interest rate volatility
- Cross checks
  - Market expectations
  - Simple interest rate rules

Simple rules as cross-checks[1)]

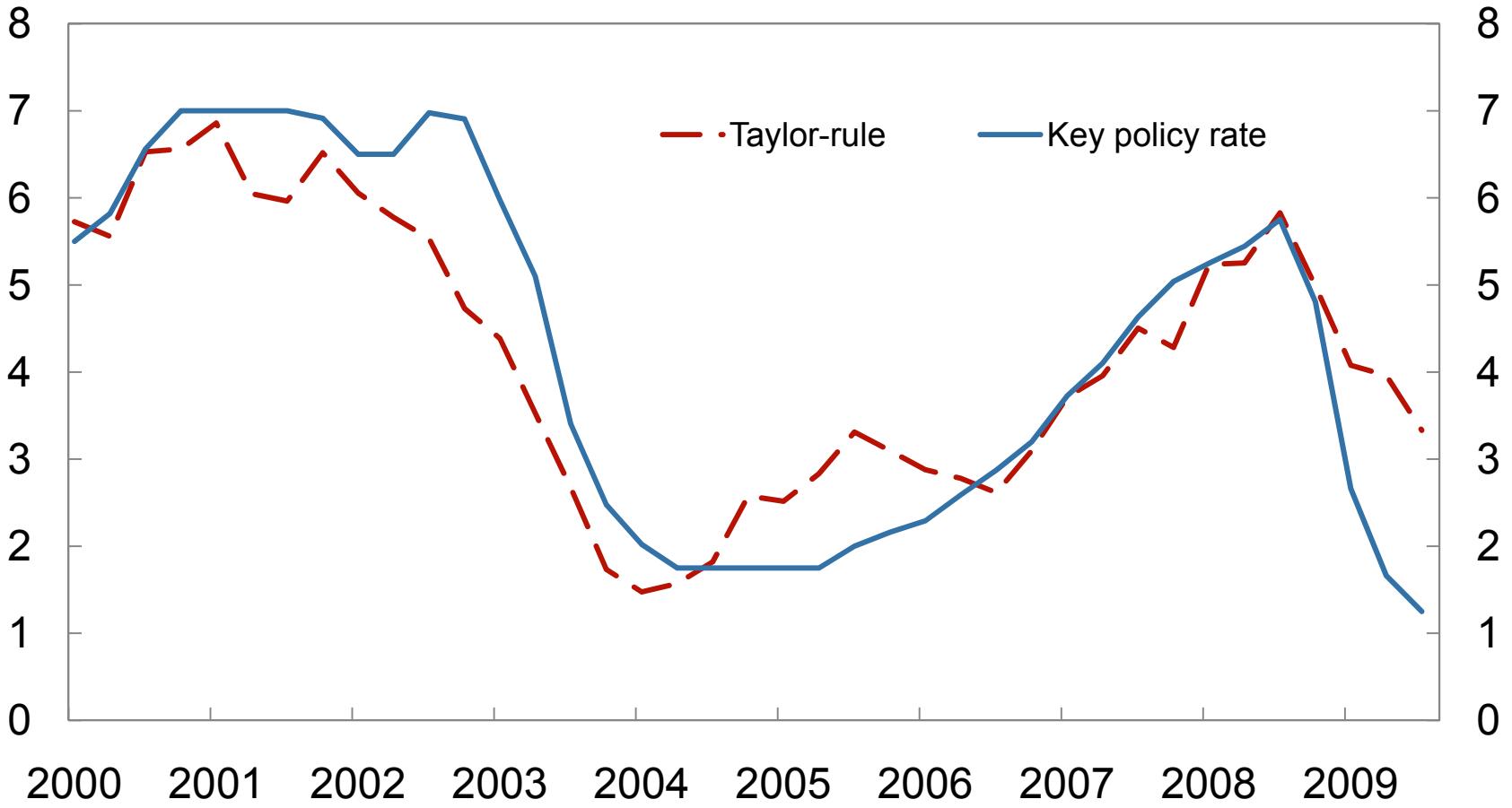


1) The calculations are based on Norges Bank's projections for the output gap, consumer prices adjusted for tax changes and excluding temprary changes in energy prices (CPIXE) and three-month money market rates. To ensure comparability with the key policy rate the simple rules are adjusted for risk premiums in three-month money market rates

Source: Norges Bank

Key policy rate and Taylor rule

Real time output gaps. Per cent. 2000 Q1 – 2009 Q3



Source: Norges Bank

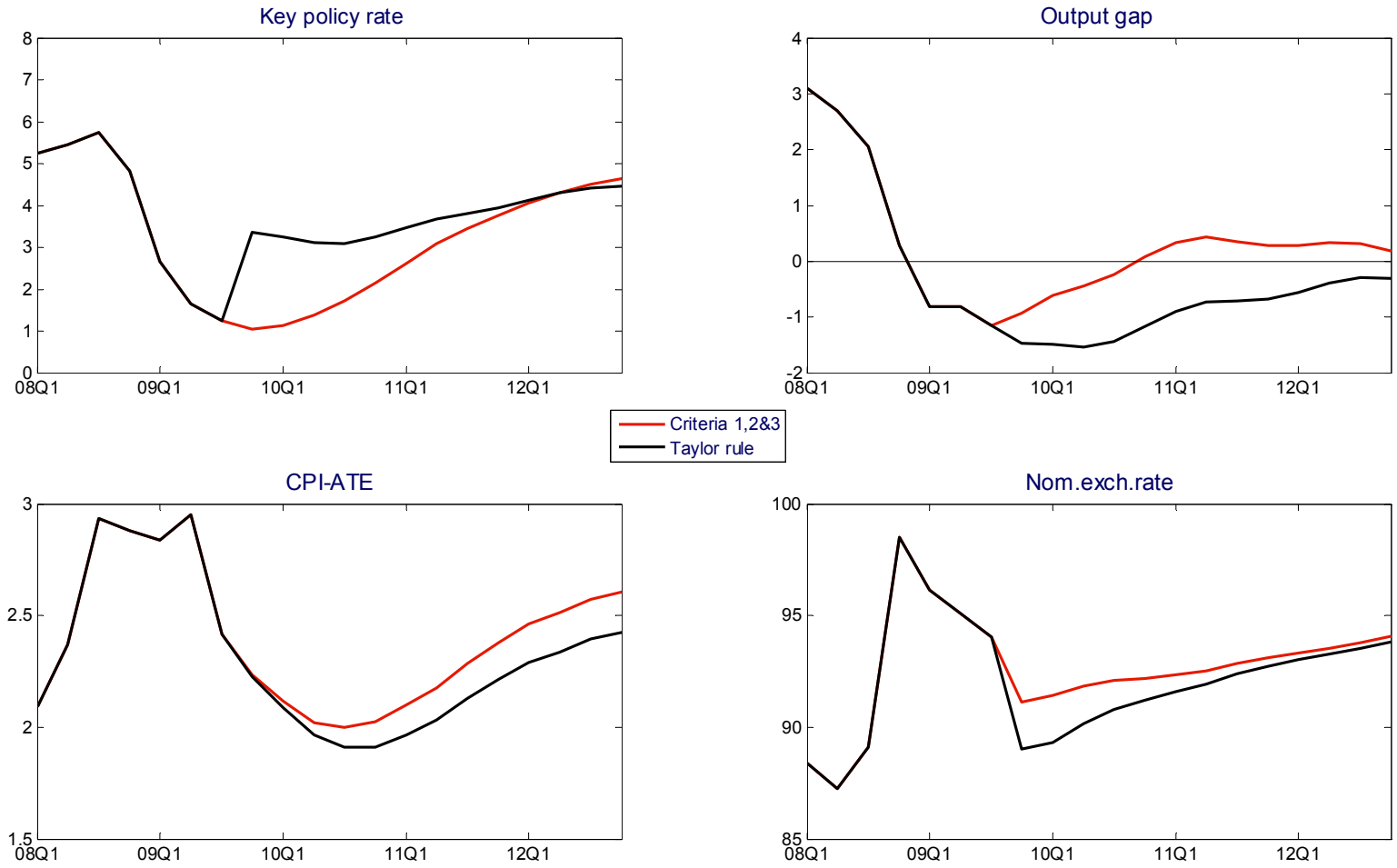
The case for Taylor rules

- The simple Taylor rule robust across models (?)
  - Taylor and Williams (2008), Taylor (2009)

- Deviations from the Taylor rule may lead to financial imbalances?
  - Arend, Cournede and Price (2008): Monetary Policy, Market Excesses and Financial Turmoil“

    OECD Economics Department Working Papers, No. 597

Model-forecasts based on the Taylor rule



Simple rules as guidelines

- John Taylor:

  ”Simple rules should be used as guidelines, not as mechanical formulas”

- Lars Svensson:

  “The proposal to use simple instrument rules as mere guidelines is incomplete and too vague to be operational”

How can we operationalize cross checks?

- Extended loss function:

$$L = (\pi_t - \pi^*)^2 + \lambda y_t^2 + \gamma\,(r_t - r_{t-1})^2 + \kappa(r_t - r_t^T)^2$$

r_t^T = Taylor rule

- True believer: $\kappa = 0$
- True agnostic: $\kappa \to \infty$
- Doubtful believer: $0 < \kappa < \infty$

Criterium 4: Robustness

$$L = (\pi_t - \pi^*)^2 + \lambda y_t^2 + \gamma\,(r_t - r_{t-1})^2 + \kappa(r_t - r_t^T)^2$$