

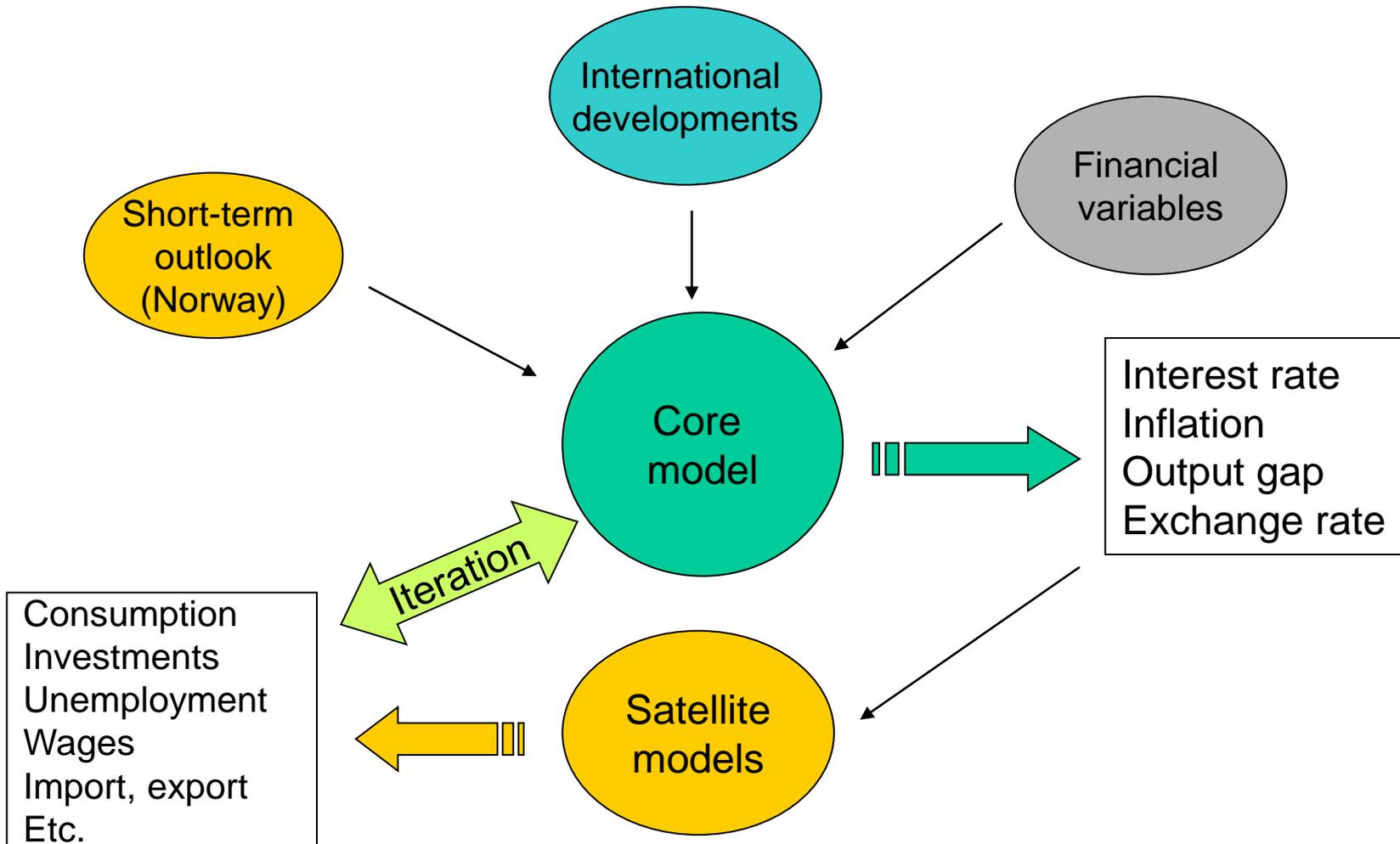
# The forecasting process at Norges Bank - a comment to Michael Andersson

Workshop at Bank of Canada  
October 26, 2007

Ingvild Svendsen  
Norges Bank  
Economics Department

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# The forecast process – division of labor



# Current situation and short-term outlook: Now-casting

- Output gap

- Short-term projections for GDP (ARIMA, VAR, BVAR, indicator models)
- Potential output (labour supply, productivity growth)
- Technical analysis (HP-filter, MVUC, product functions)
- Regional network, capacity utilisation (different indicators), labour market



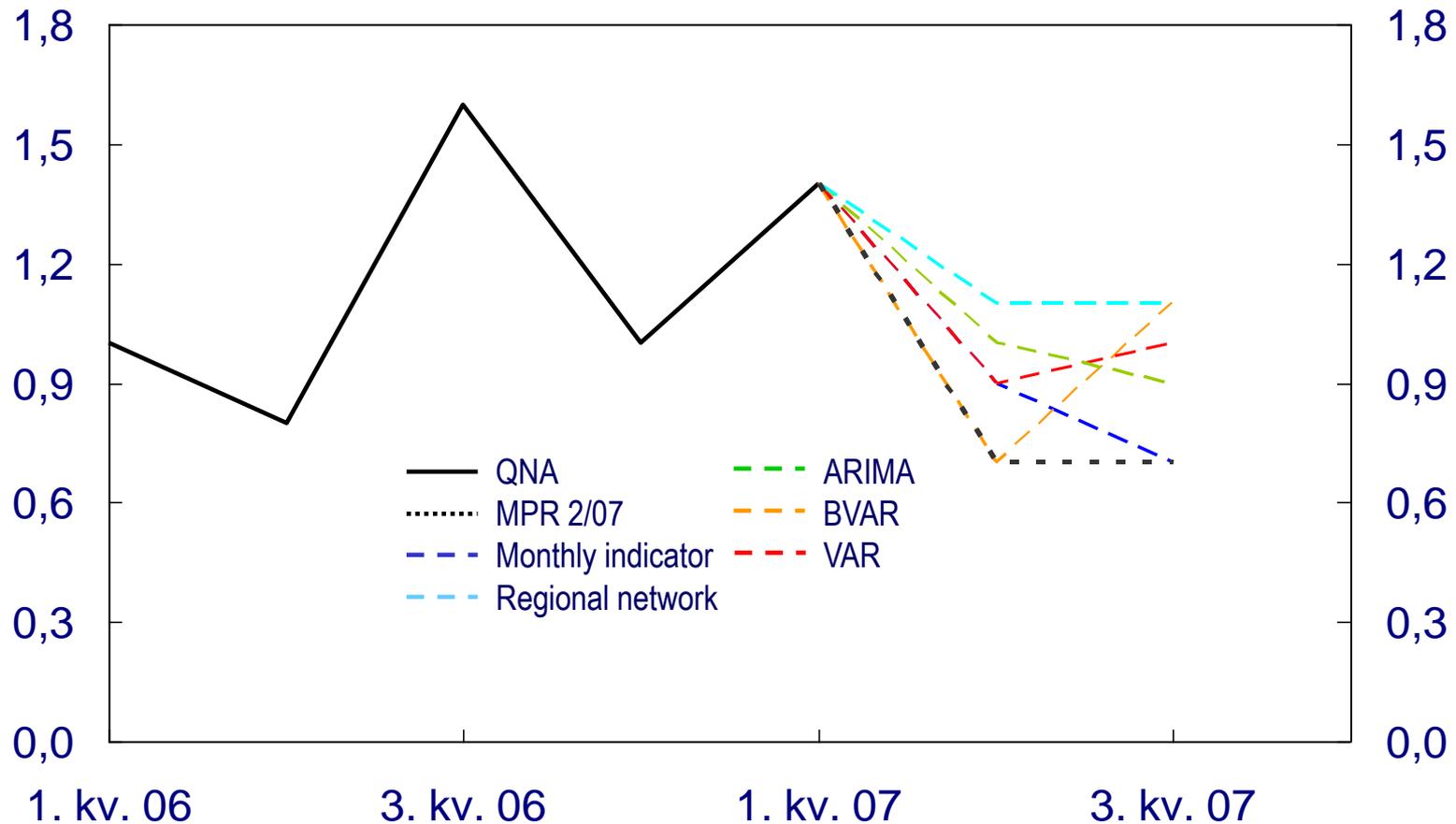
Estimate on output gap now and next 2 quarters

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# GDP Mainland-Norway

2006 Q1 – 2007 Q3. MPR 2/07.<sup>1)</sup>

Quarterly growth. Seasonal adjusted.

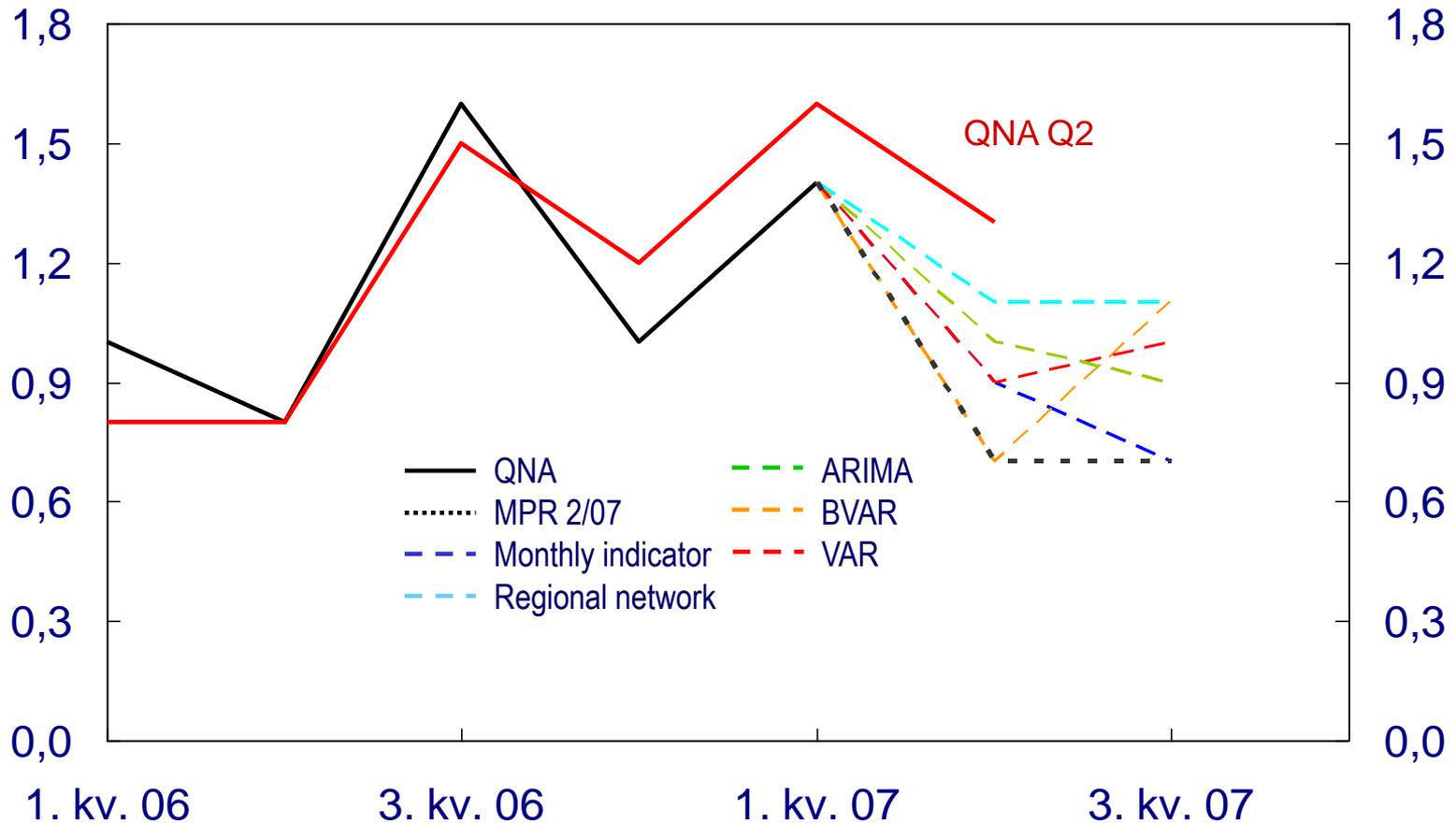


<sup>1)</sup> Projections for 07 Q2 and 07 Q3.

# GDP Mainland-Norway

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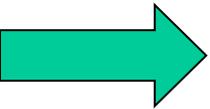
<sup>1)</sup> Projections for 07 Q2 and 07 Q3.

## Further developments

- Improved versions of the VARs and BVAR
  - Factor model
  - VAR-DSGE-model
  - VEqM
  - “The bucket”: Combining a set of models (incl. different transformations, lags etc.)
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## Current situation and short-term outlook: Now-casting

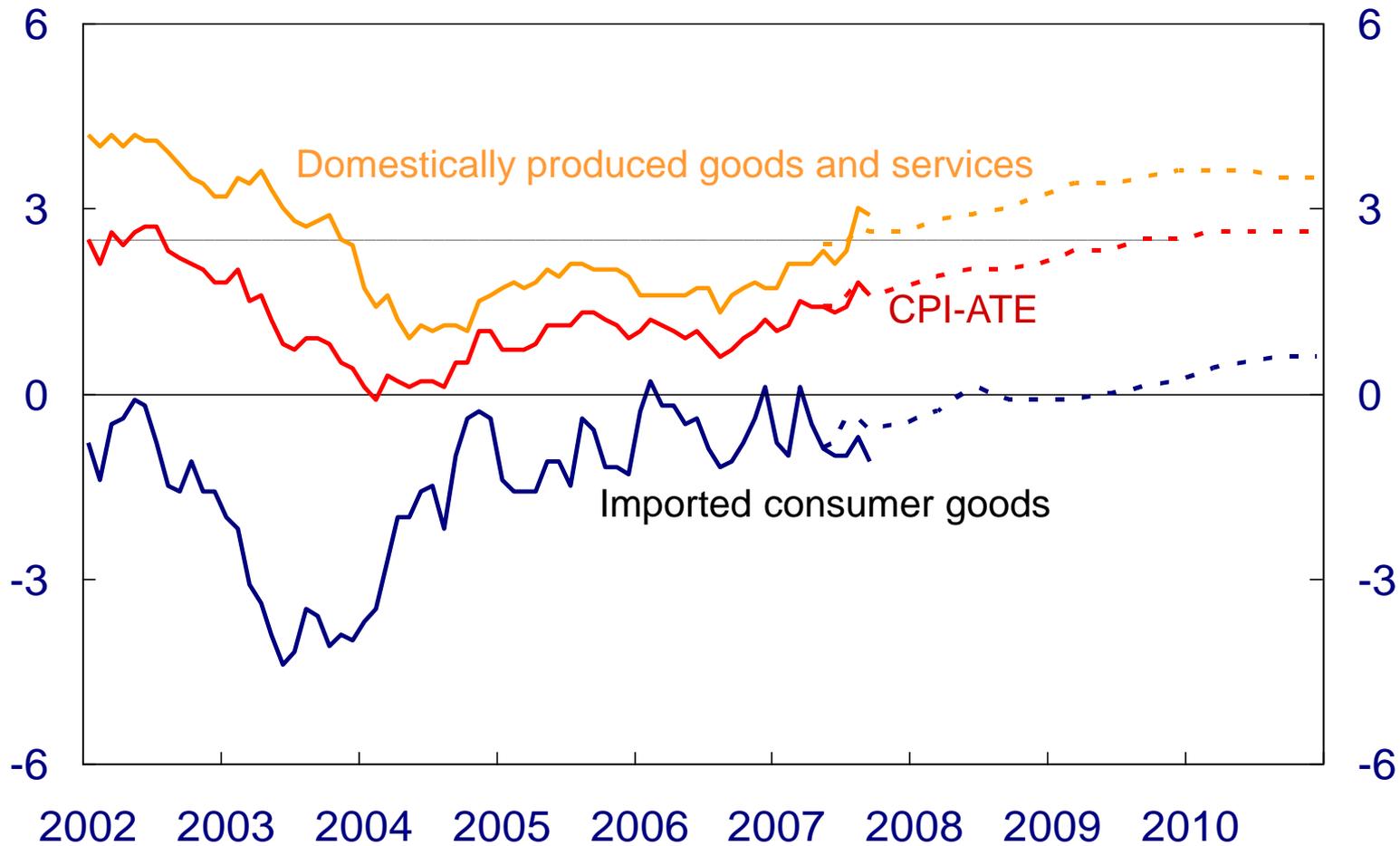
- Level of inflation (and why)?
  - Underlying inflation; different measures
  - Identifying shocks -> add factors



Projected path next 2-4 quarters

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# Consumer prices 12-month change. Per cent. 2003 –2010

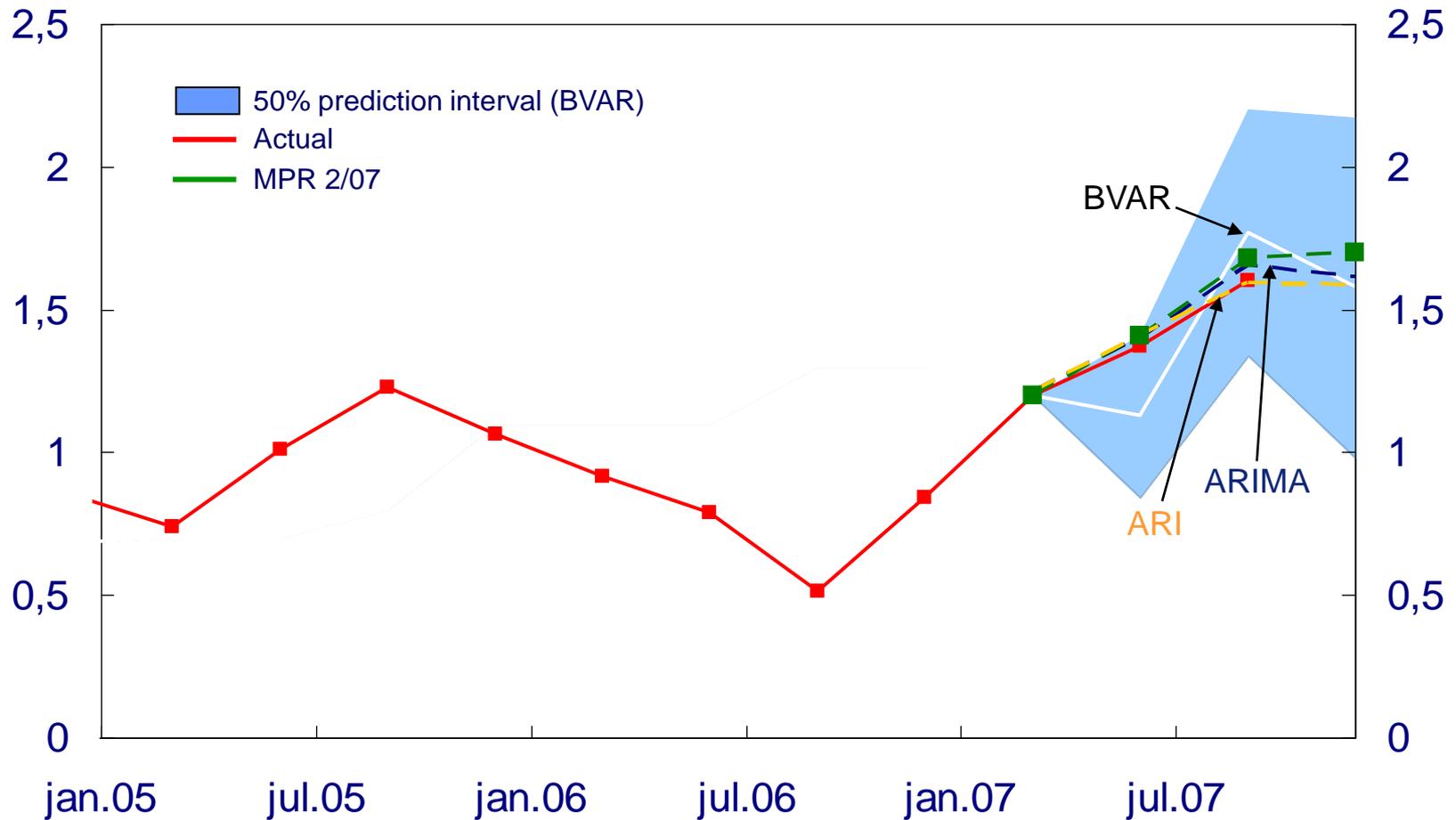


## Consumer prices

- Domestic inflation
    - Wage costs
  - Imported inflation
    - Exchange rate pass through (estimated)
    - Indicator for external price impulses (IPK)
      - Based on six subgroups of goods.
      - Producer prices and export prices in foreign markets
      - Allows for changes in trade patterns
    - Domestic costs (wages, transport)
-

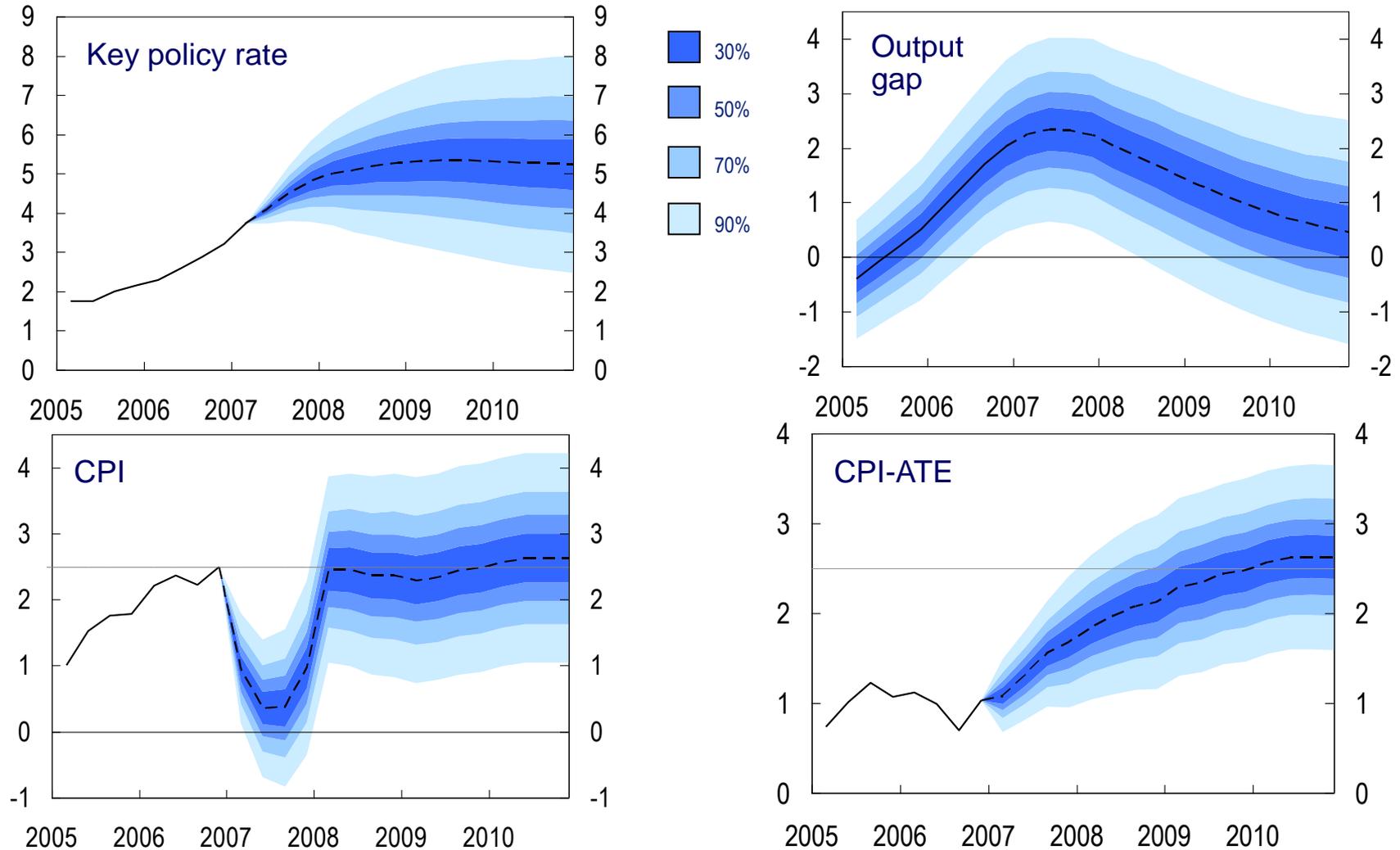
# CPI-ATE

Estimates for 2007 Q2 – Q4  
12-month changes. Per cent



# Projections in the baseline scenario with uncertainty fans

Per cent. Quarterly figures. 04 Q1 – 10 Q4. MPR 2/07



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EKSTRA

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# The Norwegian Economy

## Some stylized facts - 2006

GDP (in billions of NOK)	2148
GDP Mainland Norway (in billions of NOK)	1563
<b>Per cent of GDP</b>	
Exports	46.4
- exports of oil and gas	23.1
Imports	28.6
Current account surplus	17.0
Central government budget surplus	14.0
Government Petroleum Fund	83.1
Unemployment. % of total labour force (LFS)	3½
<b>Prices and wages. % yearly change</b>	
CPI	2.3
CPI-ATE	1.0
Wages	4.3

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# Model 1a

(1) **Output gap** depends on

- Interest rates (short and long)
- Exchange rate
- International developments
- Disturbances

(2) **Inflation** depends on

- Output gap
- Inflation abroad and exchange rate
- Inflation expectations
  - Past inflation
  - Inflation target
  - Future inflation
- Disturbances

(3) **Exchange rate** depends on

- Interest rate differential
- Exchange rate expectations
- Disturbances

(4) **Interest rate** depends on

- Future inflation
- Output gap

# How resource-demanding are the different parts?

