



CENTRAL BANK OF CYPRUS
EUROSYSTEM

Simple Rules as Guidelines for Policy Decisions

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On the use of simple rules as guidelines for policy decisions
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Monetary Policy Strategy

- Broad consensus
 - Clear definition of primary objective of price stability, π^* .
 - Forward-looking policy orientation.
 - Focus on maintaining well-anchored inflation expectations over the medium and longer term.
 - Systematic policy based on a contingency plan or policy rule has advantages over purely discretionary policy.
- Perennial debate on how to pursue systematic policy
 - How ambitious should monetary policy be?
 - Simplicity and robustness vs perceived optimality
 - Policy activism vs stability-oriented policy

A Tension between the Theoretical Ideal and Practice

“Rational policymaking needs to be adjusted to the actual state of knowledge and the operations of institutions and not to an imagined ideal. Rational policy is a choice among institutional arrangements designed to lower uncertainty about the course of action to be pursued by the monetary authorities. Such arrangements are represented by rules requiring comparatively little information that offer easy opportunities for the public to monitor the authorities performance.” (Brunner and Meltzer, 1993, p. 225-226.)

- Acknowledgment of the difference between the “actual state of knowledge” and the “imagined ideal” is the key element for appreciating the value of simple, robust policy rules.

Limited Knowledge

- How do we judge the macroeconomy's "ideal" performance?
- What is "natural" and what is the economy's "potential"?
- What are the key frictions and dynamic interactions in the macroeconomy?
- What is the monetary transmission mechanism?
- What is the role of financial intermediation?
- What are the key determinants of price-setting behavior and inflation in the short-run?
- How are inflation expectations formed and how do they evolve over time?

Activist Approach

- Motivated by viewing the monetary policy problem as the solution to a maximization problem that, in addition to price stability, targets the level of real economic activity.
- A key objective of policy is to close the “output gap” ($q - q^*$), constructed by comparing actual (or forecast) GDP, q , to its ideal “potential” level, q^*
- Policy respects price stability but treats closing the output gap ($q - q^*$) and the inflation gap ($\pi - \pi^*$) in a symmetric manner.

Counterfactual Examples for ECB

- ECB does not follow this activist approach
- Use IMF WEO analysis and policy advice as case study examples suggestive of what ECB might have done if it followed this approach. (Orphanides, 2010.)

IMF Advice in Spring 2000

- Inflation was rising from a low level and the ECB had started tightening policy.
- But inflation appeared contained and with output below potential the IMF projected that it would fall in 2001.
- IMF Spring 2000 WEO output gap forecasts: -1.2 percent for 2000, -0.5 percent for 2001.

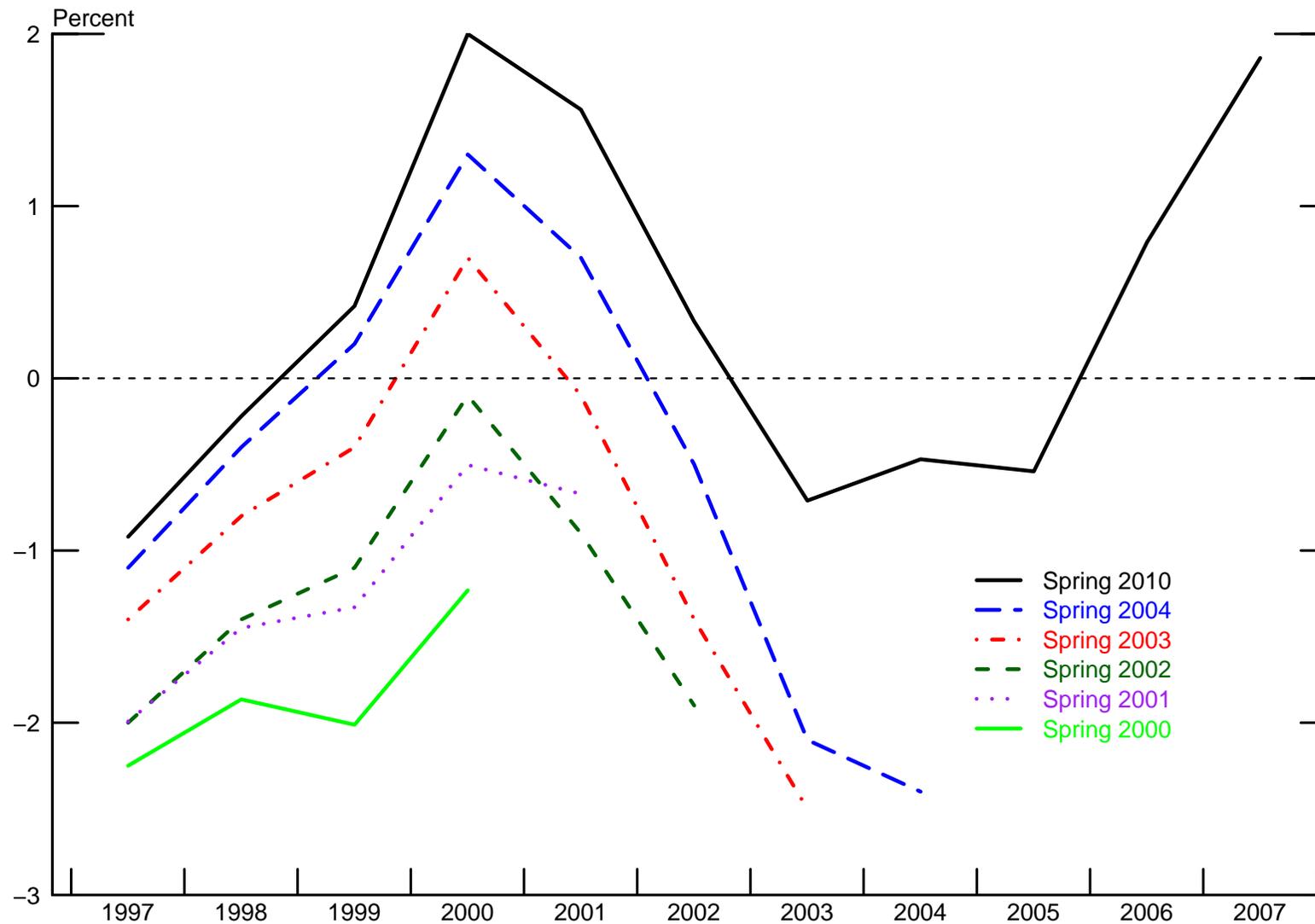
Suggested Policy in April 2000

“[I]nflationary pressures should remain subdued due to the large output gap (projected at about 1 1/4 percent in 2000)

...

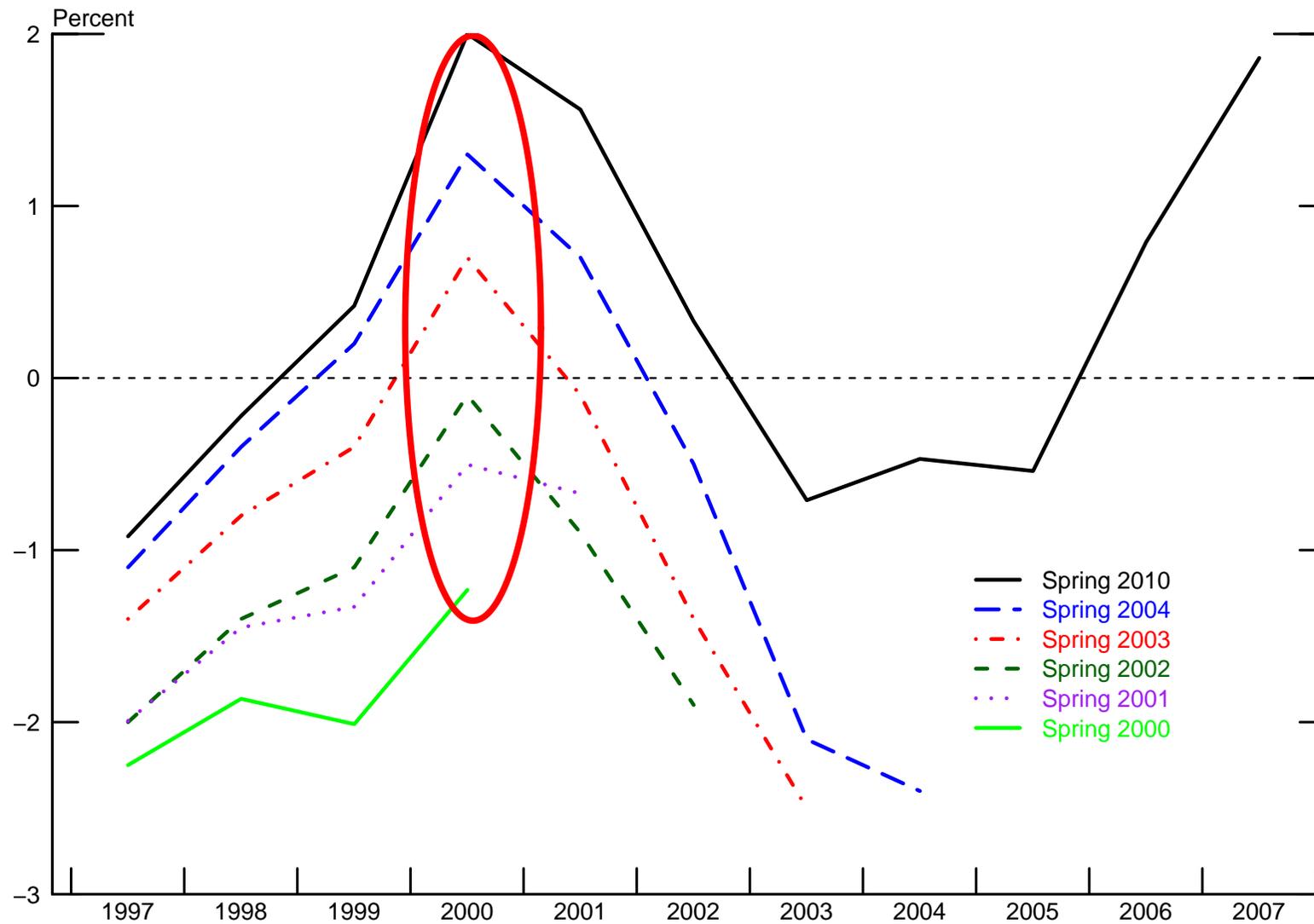
While the ECB needs to maintain a strong anti-inflationary stance, and a gradual shift to less accommodative stance is to be expected as slack is absorbed, inflation prospects remain benign and it is important currently to avoid holding back the ongoing recovery through a rapid tightening of policy.” (IMF, WEO, May 2000)

Evolution of History of the Output Gap: 2000 on



Notes: Successive vintages of estimates from IMF Spring WEO from 2000 on, and the latest vintage.

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IMF Advice in Spring 2006

- IMF Spring 2006 WEO output gap forecasts for all advanced economies: -0.6 percent for 2006 and -0.5 percent for 2007
- IMF Spring 2006 WEO output gap forecasts for euro area: -1.4 percent for 2006 and -1.3 percent for 2007

Suggested Policy in April 2006

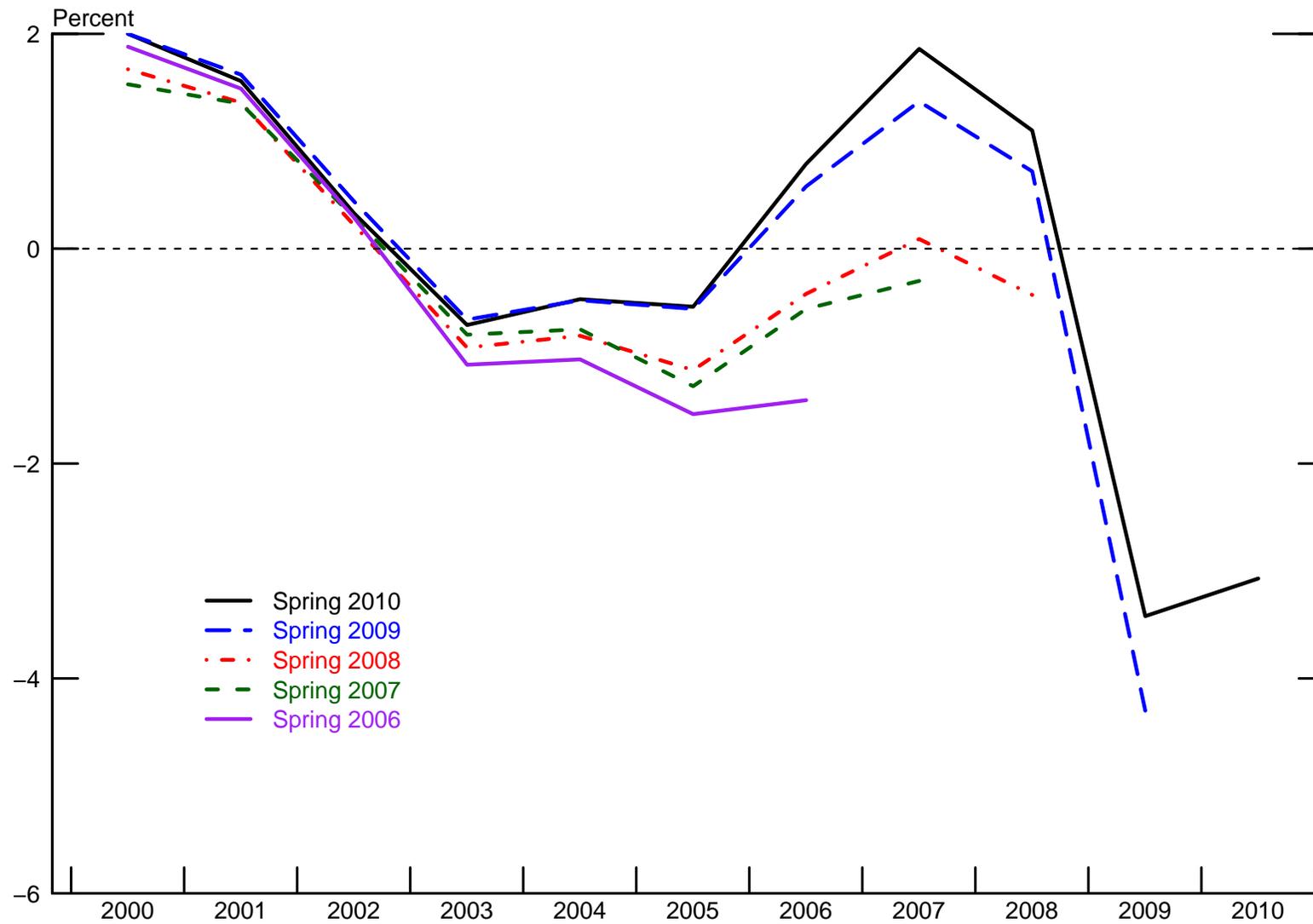
“Quiescent inflation, partly because of a significant global output gap, allowed monetary policy to be very accommodative. Now as the global output gap narrows, monetary accommodation is being withdrawn”

“[T]he European Central Bank (ECB) raised its policy rate

...

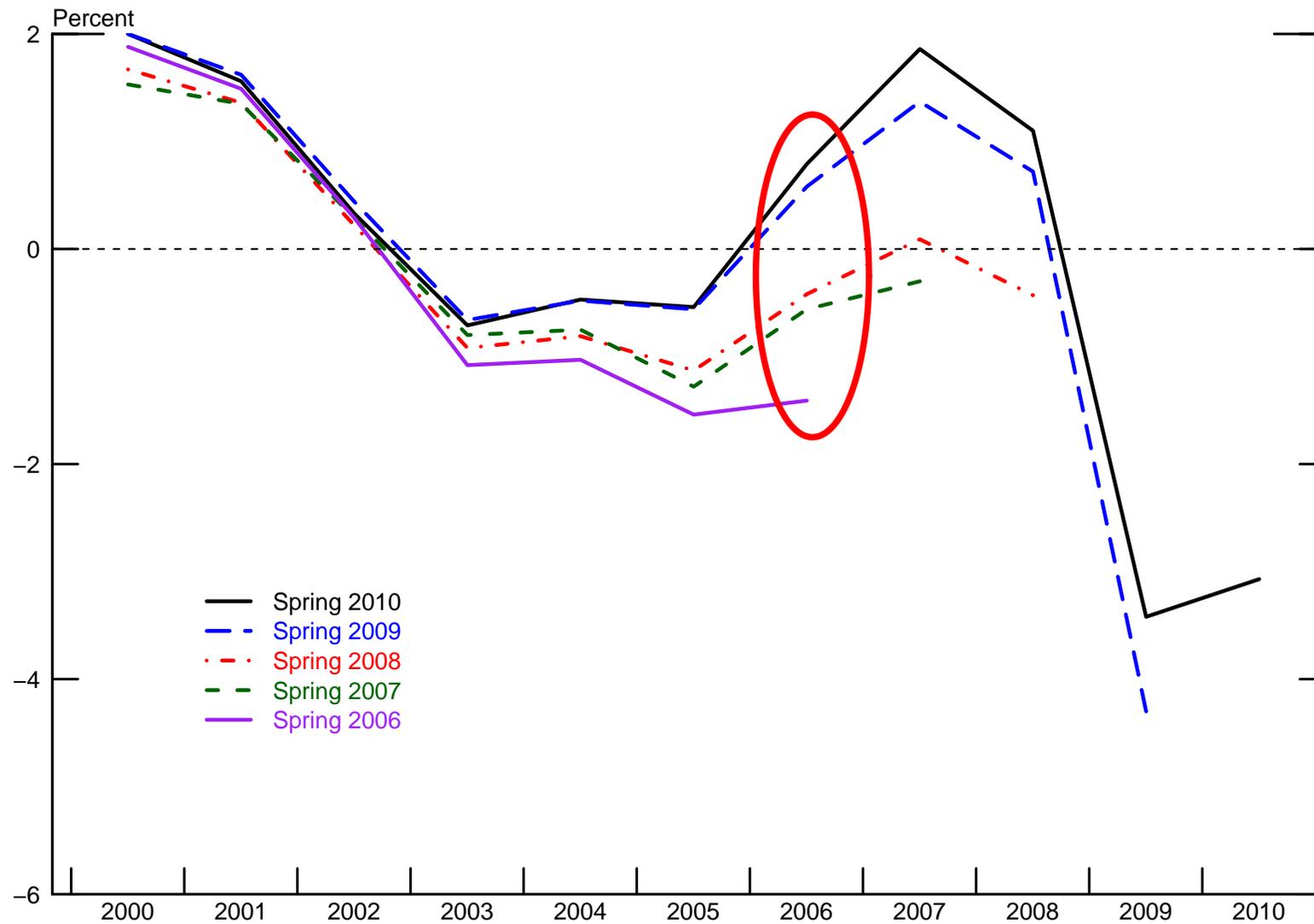
with underlying inflationary pressures contained and domestic demand still fragile, there appears to be no need to rush to normalize rates” (IMF, WEO, May 2000)

Evolution of History of the Output Gap: 2006 on



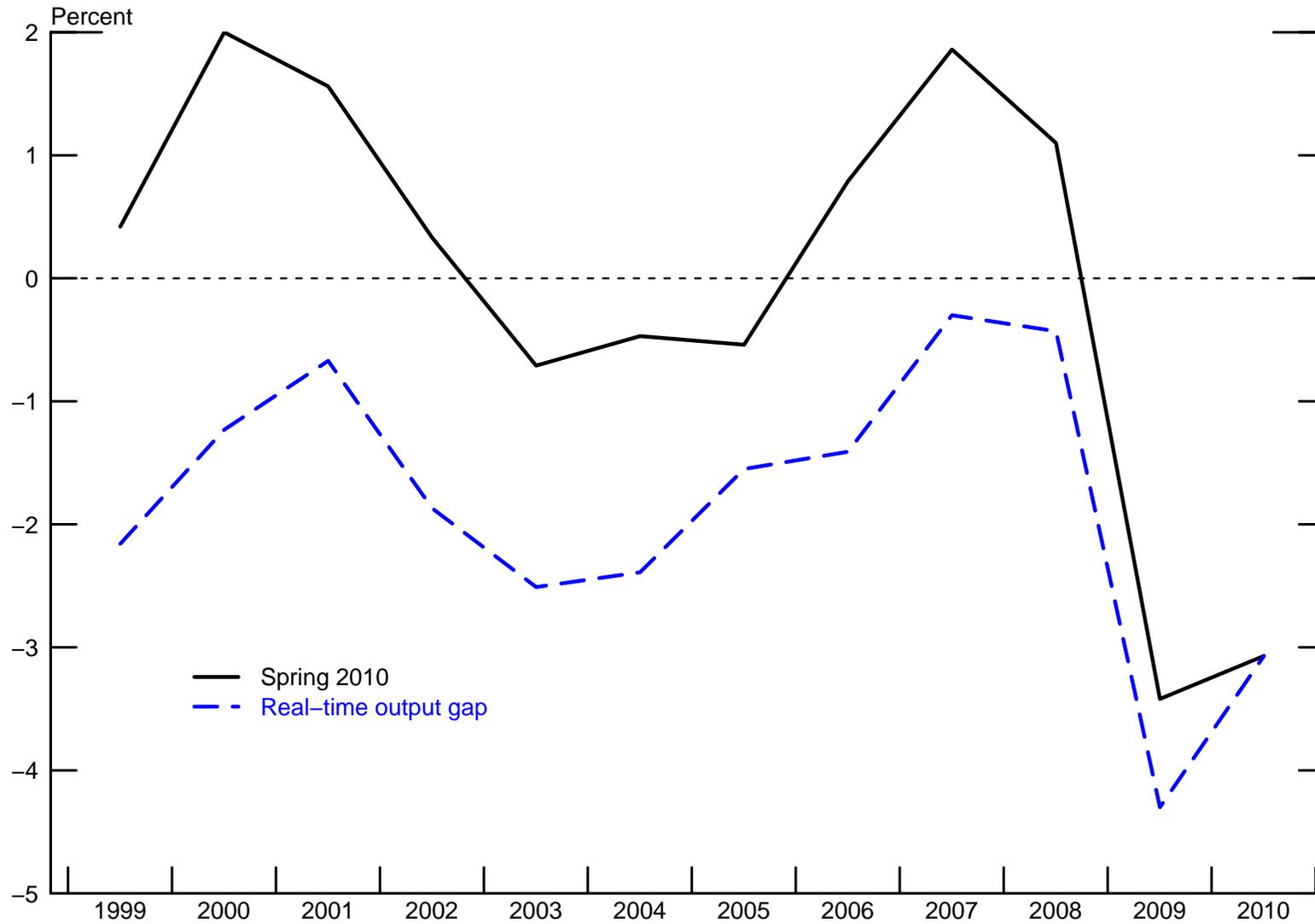
Notes: Successive vintages of estimates from IMF Spring WEO from 2006 on.

Evolution of History of the Output Gap: 2006 on



Notes: Successive vintages of estimates from IMF Spring WEO from 2006 on.

Real-time vs Retrospective Output Gap Estimates



Notes: IMF Spring WEO estimates.

The (Un)reliability of Output Gaps for Policy Analysis

- Example of IMF estimates is not atypical.
- ECB fully aware of unreliability.
- ECB analysis (*Monthly Bulletin*, February 2005) showed similar unreliability in IMF, OECD and European Commission estimates.
- Analysis for other countries indicates similar unreliability.

Stability-Oriented Approach

- No need to rely on unreliable activist approach
- Focus on stable growth instead of on output gap.
- In addition to inflation outlook, guidance from the outlook of output growth Δq compared to its trend Δq^*
- Suggestive illustration with a simple policy rule

Simple difference policy rules

$$\Delta i = \theta_{\pi}(\pi - \pi^*) + \theta_{\Delta q}(\Delta q - \Delta q^*)$$

- Link to Wicksell (1898) price-stability rule and Friedman (1960) k-percent rule.
- Similar to money-growth rules, an estimate for the growth rate but not the level of potential output is needed.
- Can be implemented based on short-term forecasts, thus incorporating information about the outlook.
- Robust to imperfect knowledge considerations. (Orphanides and Williams, 2002, 2008; Taylor and Williams, 2010.)

A Suggestive Illustration for the Euro Area

$$\Delta i = \frac{1}{2}(\pi - \pi^*) + \frac{1}{2}(\Delta q - \Delta q^*)$$

- Forecast-based implementation, quarterly data
- Using year-ahead forecasts from the ECB's SPF.
- Inflation outlook: Compare forecast to:
 - upper guide of 2 percent
 - lower guide of 1.5 percent
- Output growth outlook: Compare to:
 - trend reflected in long-term SPF growth forecast
 - real-time potential output growth in IMF Spring WEO.

Illustration may not be Accurate Description

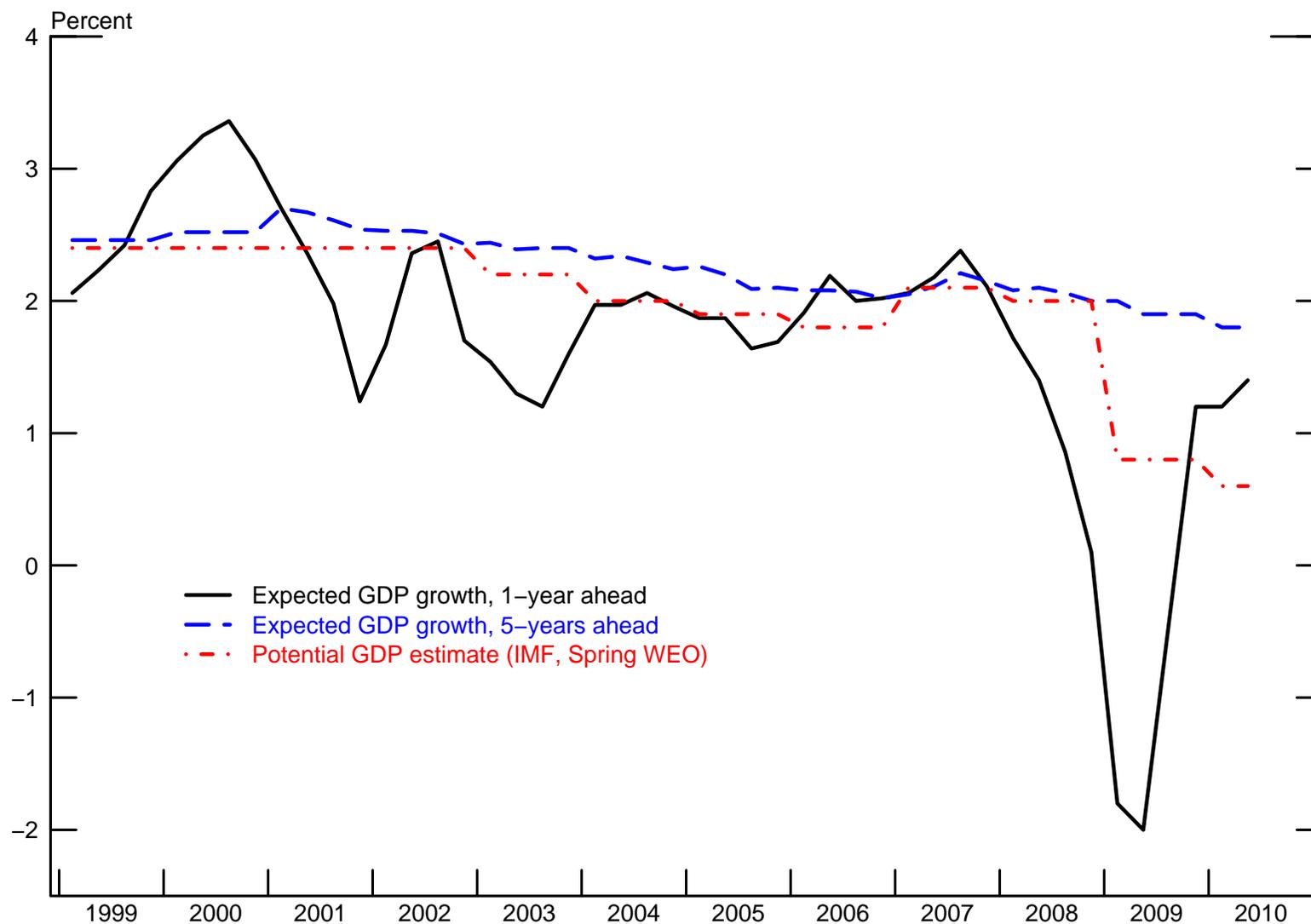
- Illustration does not use ECB policymaker views.
- SPF forecasts often differ ECB/ESCB forecasts
- Tighter policy would be suggested if, for example:
 - Inflation forecast higher
 - Output growth forecast higher
 - Potential output growth estimate lower

Outlook for Inflation: One-year ahead



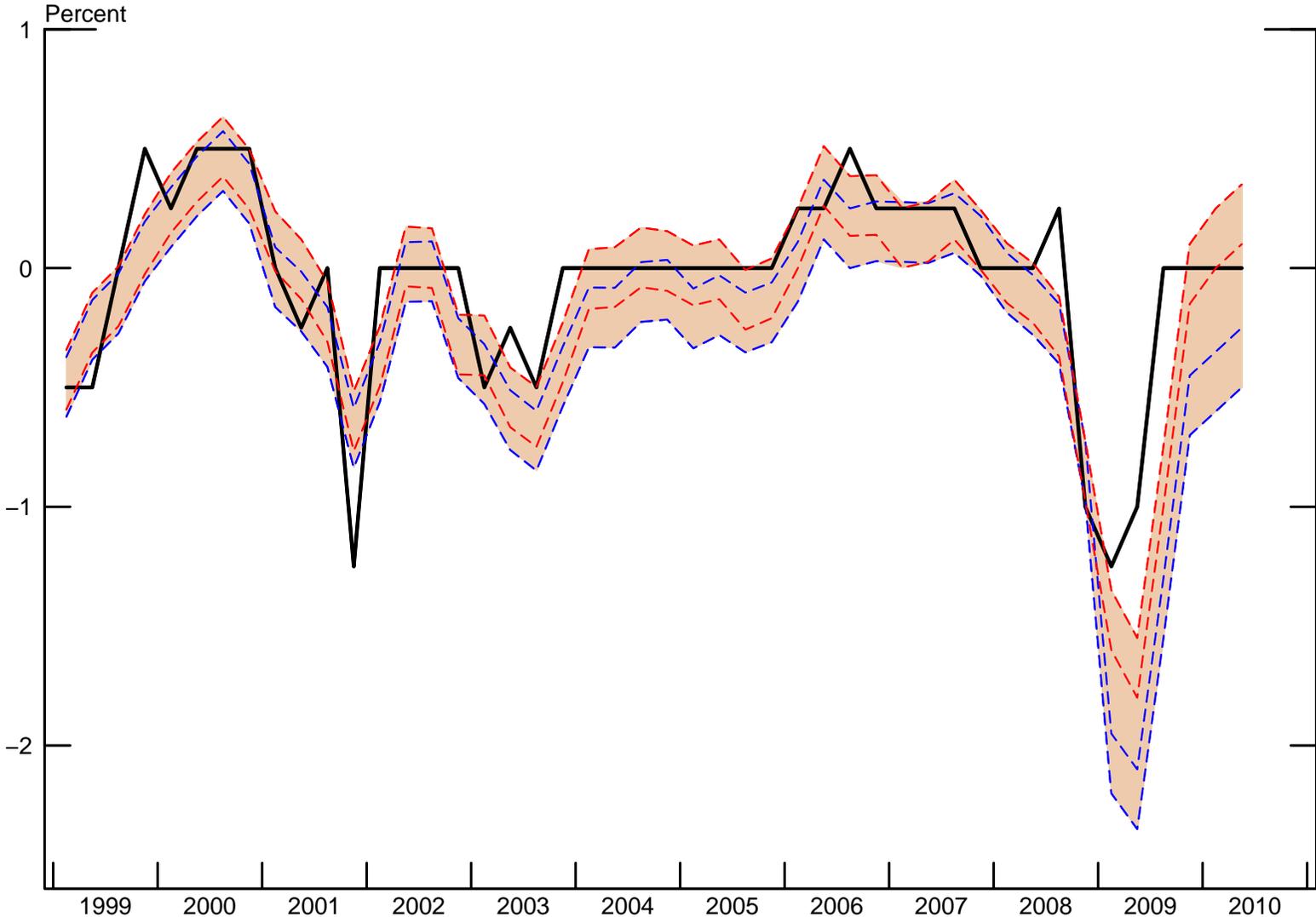
Notes: ECB SPF average of individual responses.

Outlook for GDP Growth: One-year ahead and trend



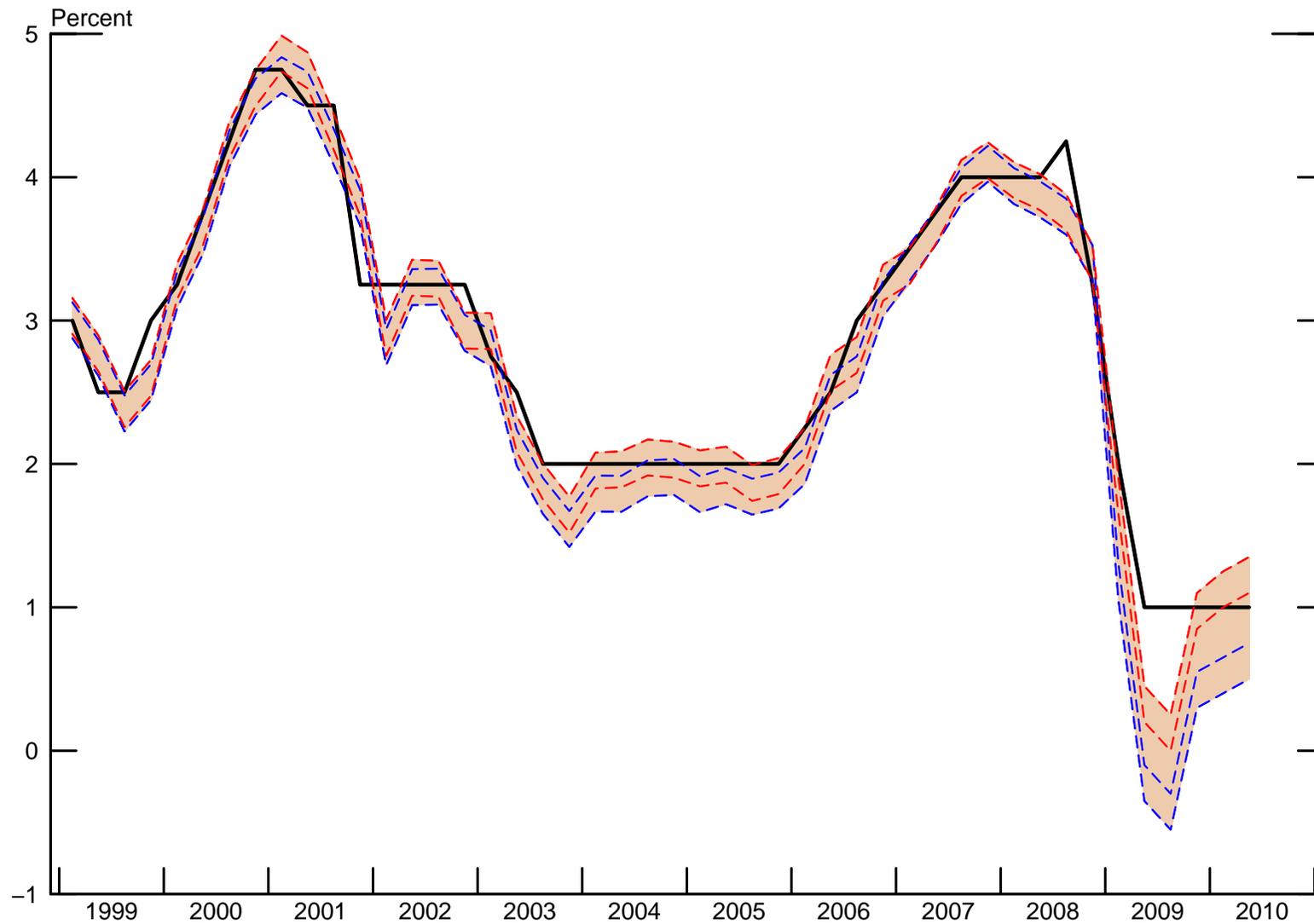
Notes: ECB SPF average of individual responses. IMF real-time Spring WEO.

Policy Rate and Simple Rule Prescription: Quarterly Change



$$\Delta i = \frac{1}{2}(\pi - \pi^*) + \frac{1}{2}(\Delta q - \Delta q^*)$$

Policy Rate and Simple Rule Prescription

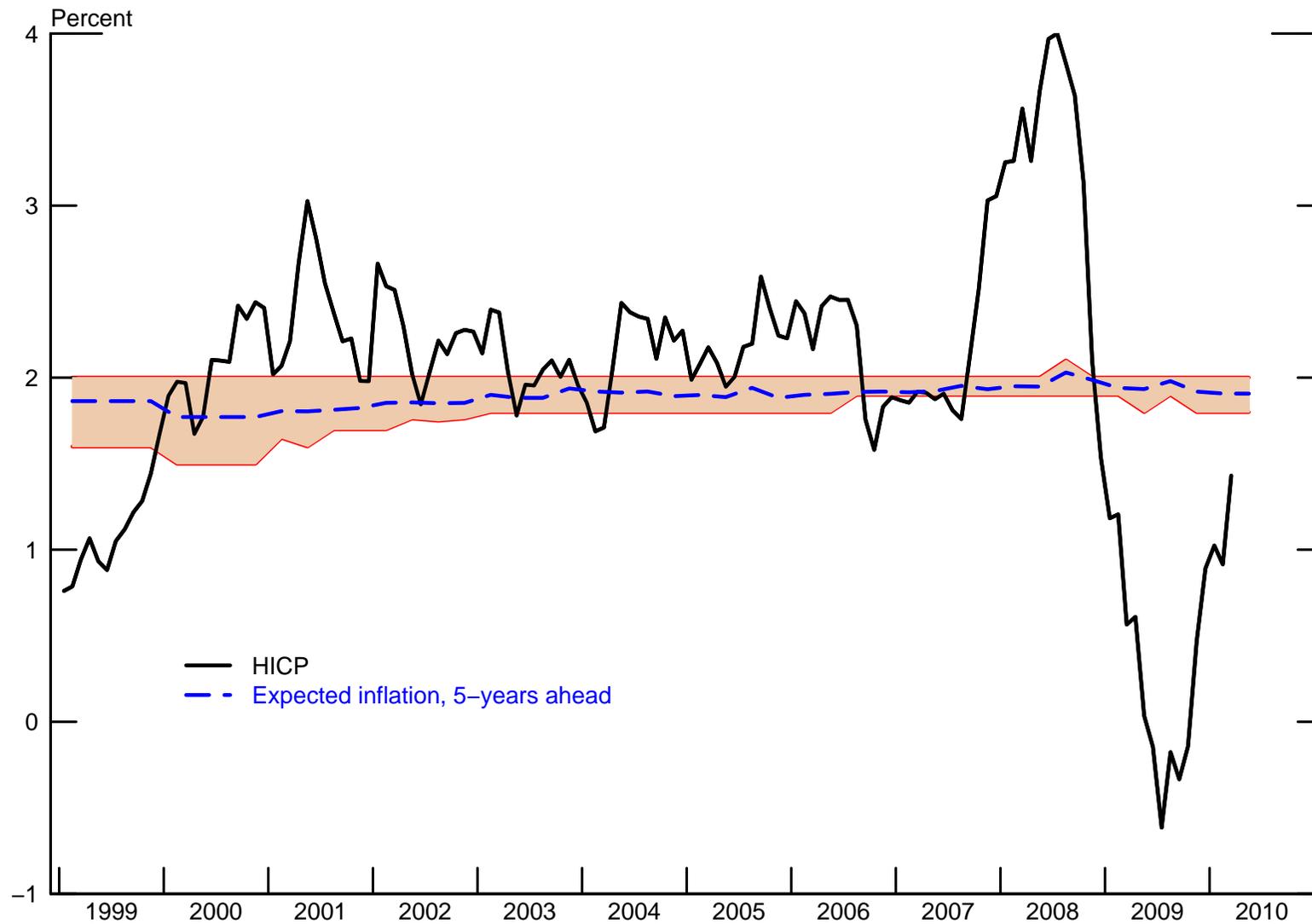


$$\Delta i = \frac{1}{2}(\pi - \pi^*) + \frac{1}{2}(\Delta q - \Delta q^*)$$

Deviations

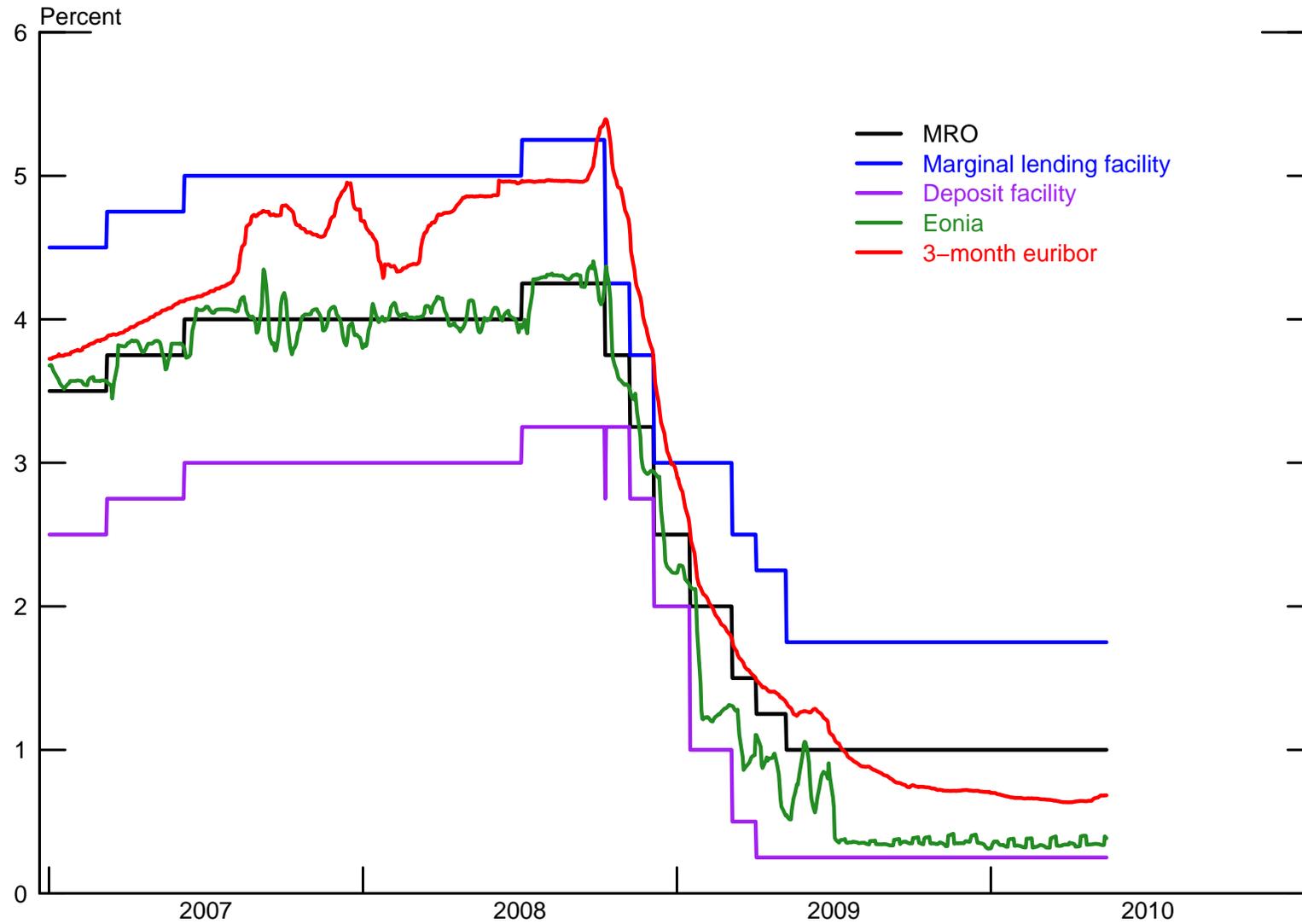
- Deviations from any simple rule would be expected, reflecting factors that may importantly influence policy on some occasions but are not captured by the simple rule.
- Summer 2008:
 - Concern that inflation expectations risked becoming unmoored
 - Peak of oil price shock
- Summer 2009:
 - Unconventional measures near the zero lower bound
 - Monetary policy stance not adequately represented by conventional changes in main policy rate under these circumstances

Inflation and Long-Term Inflation Expectations



Notes: ECB SPF, average and interquartile range of individual responses.

Money Market and ECB Policy Interest Rates



Concluding Remarks

- Simple rules offer a useful framework for organizing the discussion of systematic monetary policy and for guiding policy decisions.
- The particular simple rule appropriate in a given context must be selected so as to be robust to the key elements of uncertainty about the pertinent characteristics of the economy, and account for the the availability and reliability of information.
- To enforce the systematic nature of monetary policy with appropriate focus on the primary objective of price stability, a policy rule must be simple and transparent to communicate, implement and verify.
- Guided by a simple rule, policymakers can avoid the inefficiency associated with the time-inconsistency problem and the temptation to overburden monetary policy with infeasible objectives.