Bank of England

Monetary policy in the face of supply shocks: the role of inflation expectations

ECB Forum on Central Banking, Sintra

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Three Questions

- How should monetary policy respond to a supply shock?

- How would that response change if supply shocks became more frequent?

- What role should inflation expectations play in the appraisal and calibration of that response?

Key Points

1. Whether monetary policy should tighten or loosen in response to a single supply shock depends on the nature and duration of the shock, the strength of second round effects, and the shock's effects on real incomes and demand.

2. If a sequence of negative supply shocks keeps inflation above target for a longer period, signs of drifting inflation expectations or stronger backward-looking inertia would call for a tighter policy response.

3. Despite their prominence in economic models and policy thinking, our understanding of the formation and economic impact of expectations remains limited.
   - Suggests caution on pinning policy decisions too strongly on expectations measures

A single shock

- How should monetary policy respond to a supply shock?

  Global increase in energy prices from the perspective of an energy importing economy.

Chart 1: Looking through an energy price shock

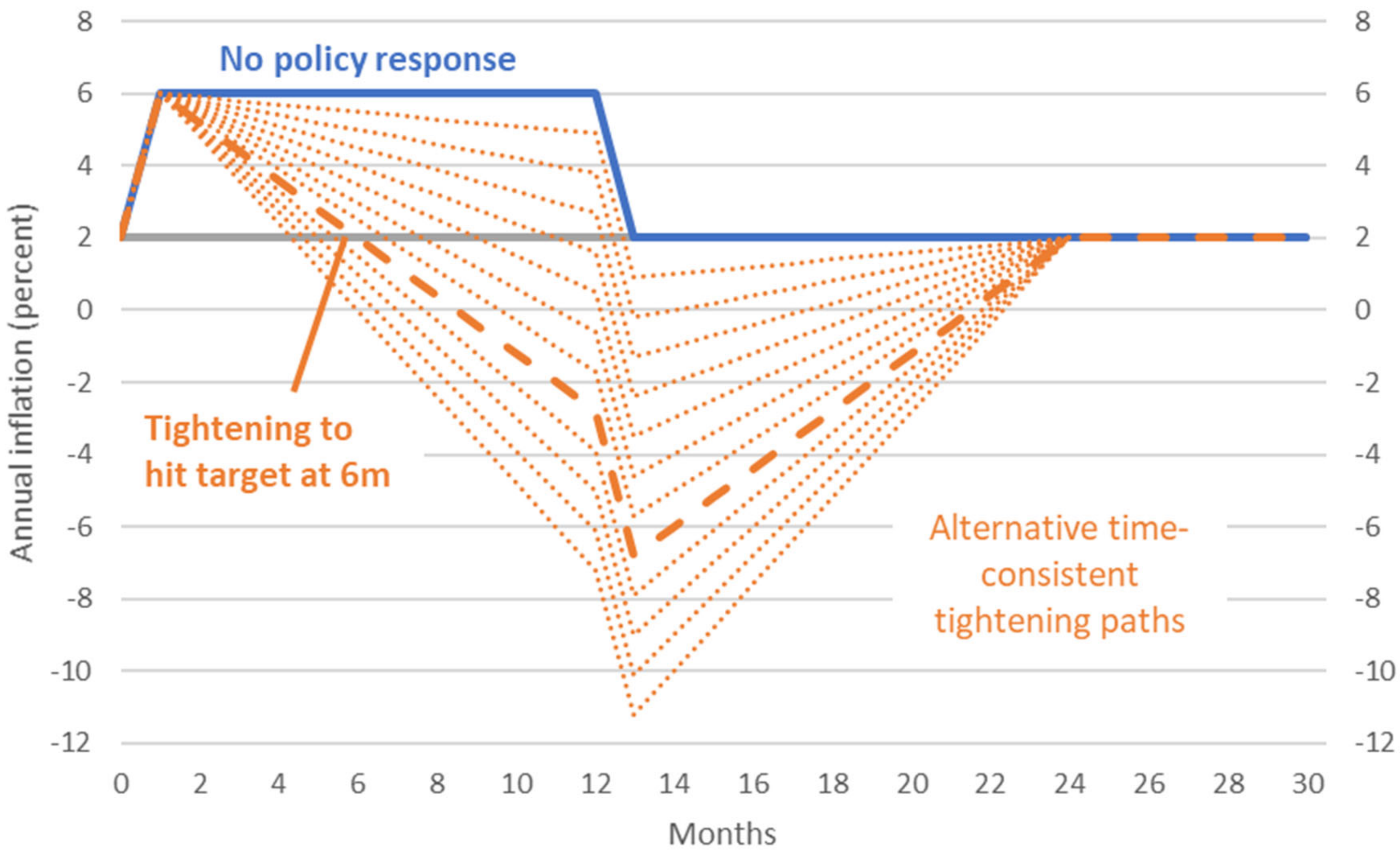
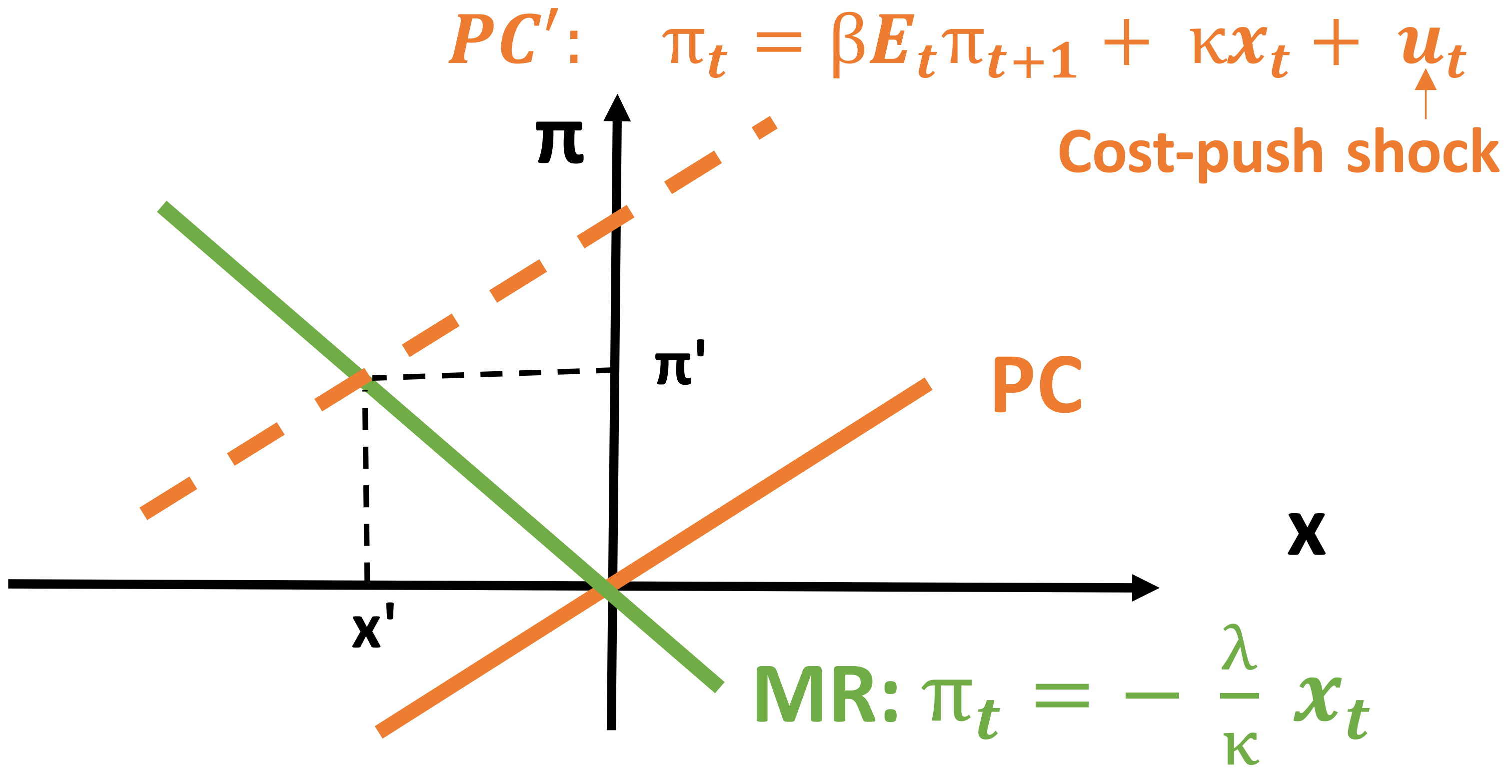


Chart 2: With real wage resistance, an energy shock works much like a cost-push shock



See: Blanchard and Gali (2007); McLeay and Tenreyro (2020).

Chart 3: Leaning against second-round effects of an energy price shock

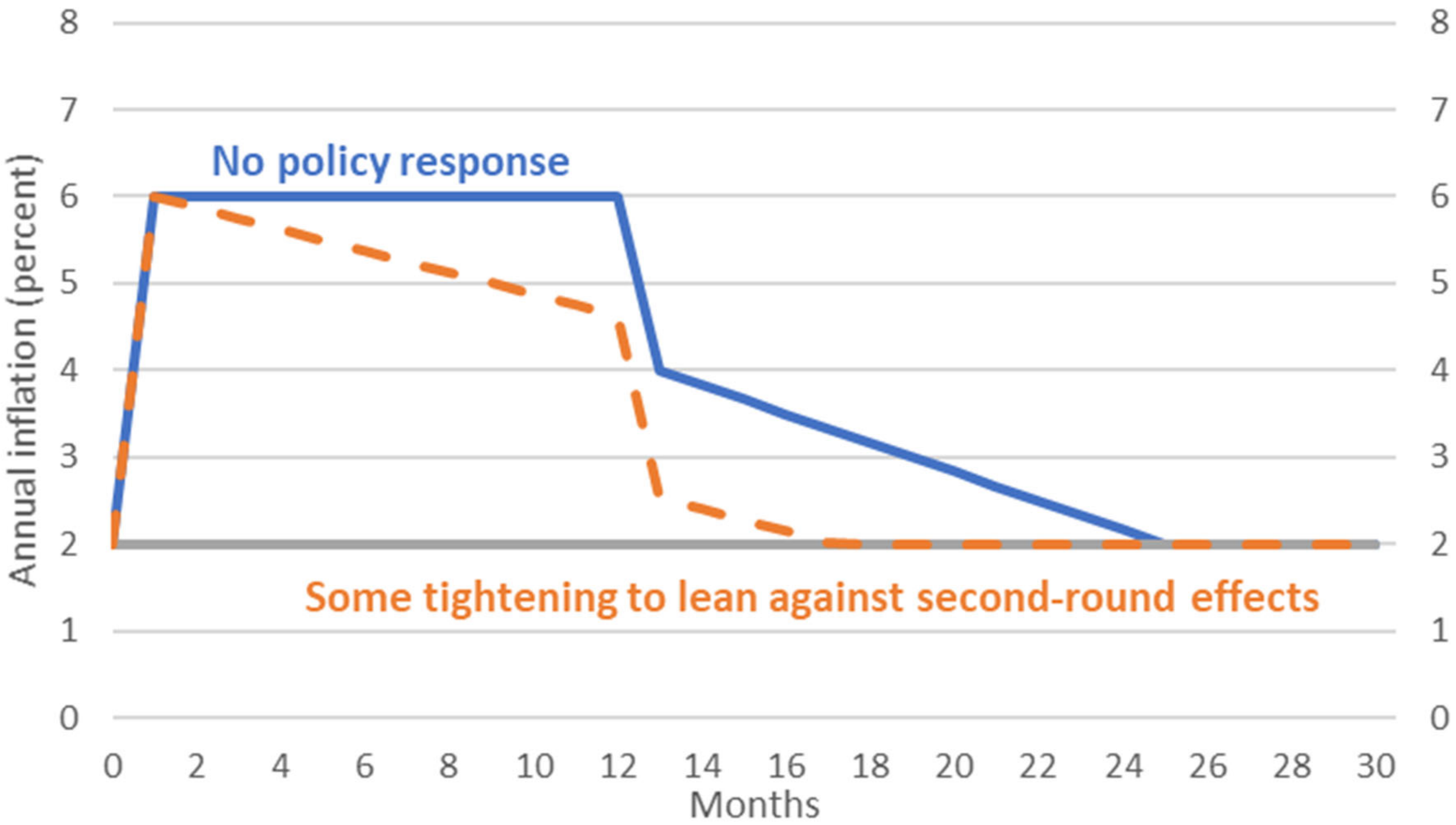
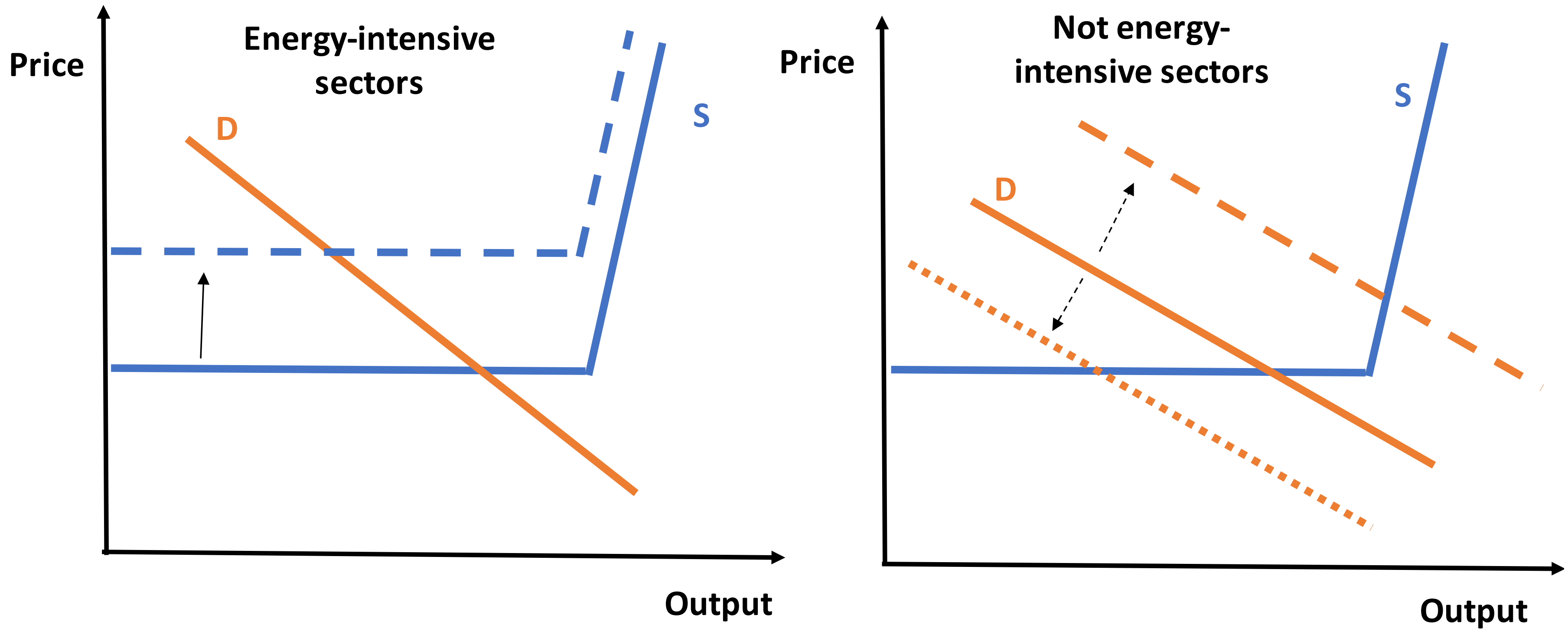
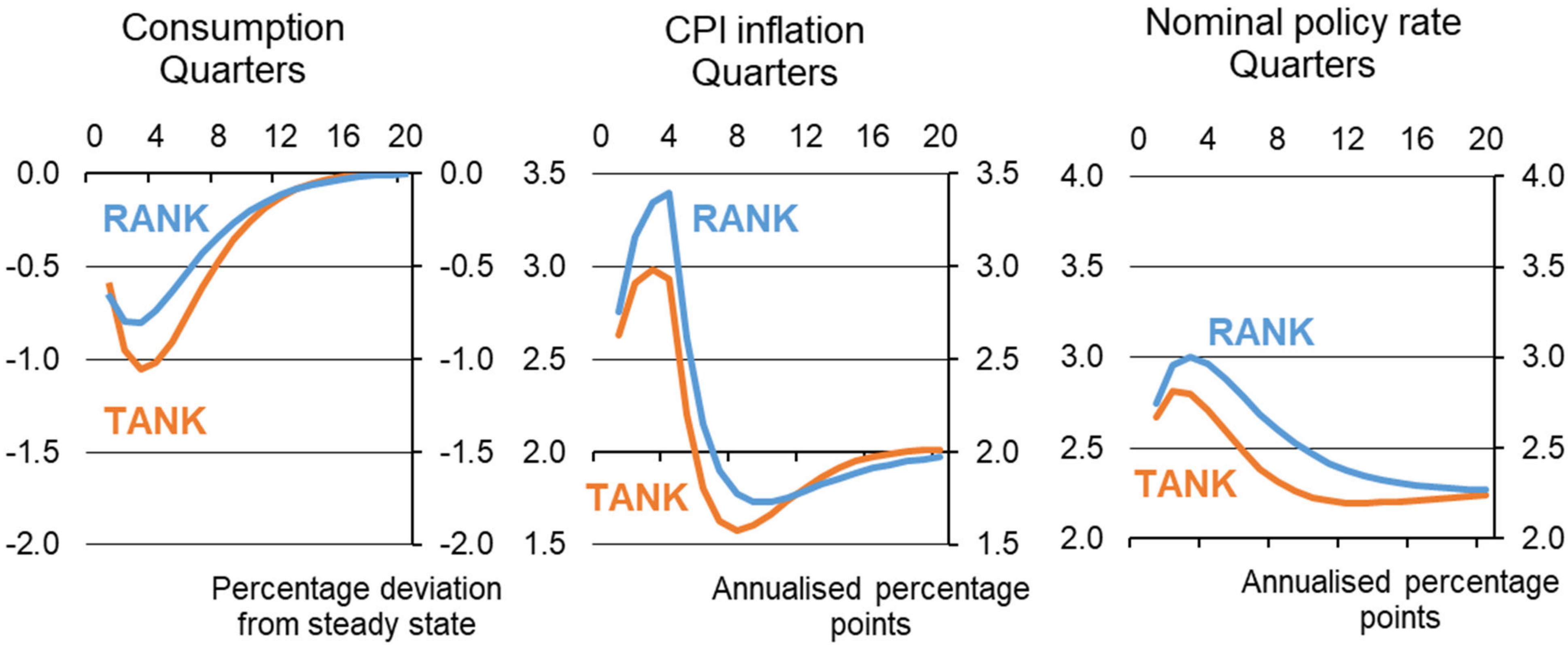


Chart 4: Relative price and real income effects of an energy price shock



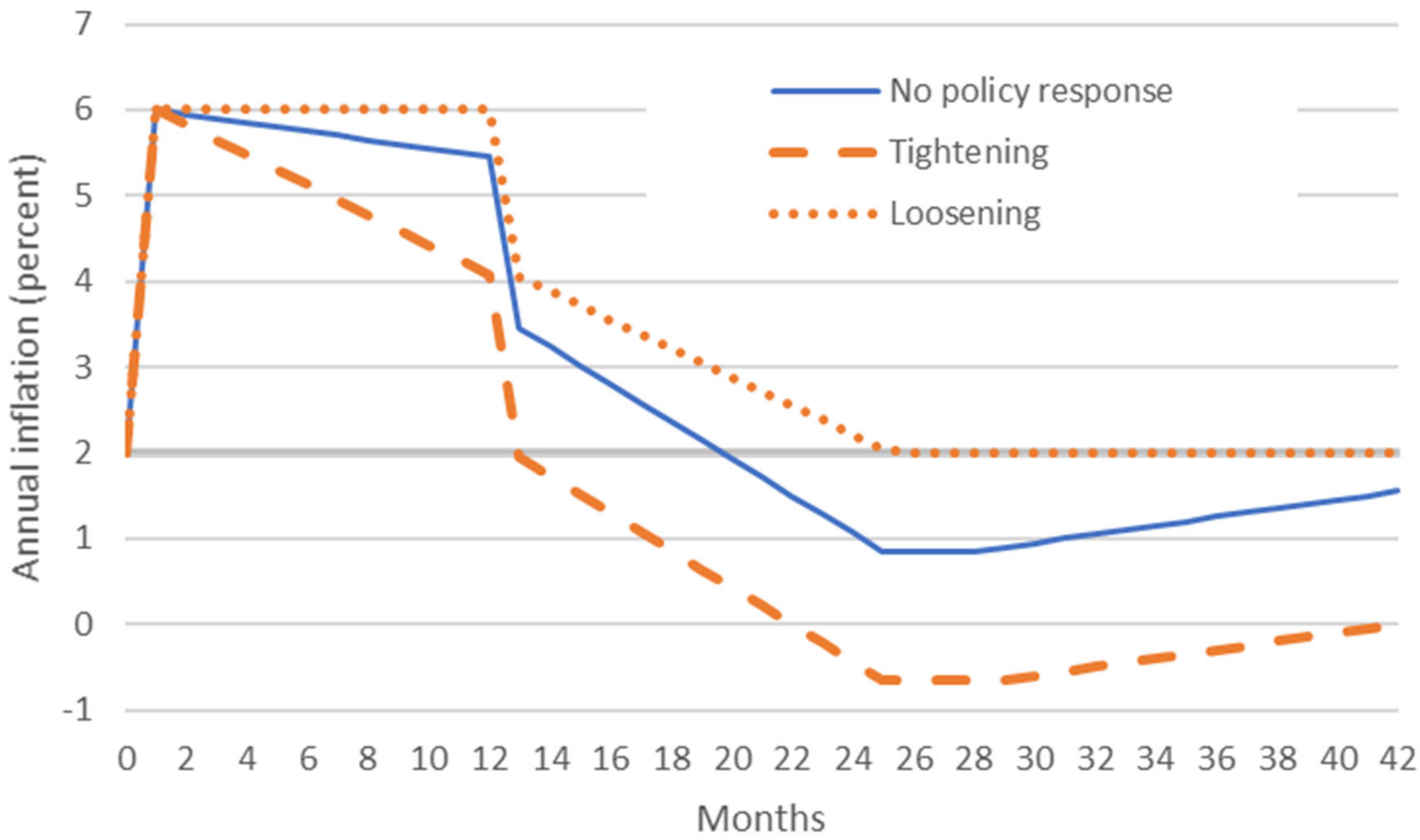
References: Guerrieri et al (2021), Guerrieri et al (2023), Auclert et al (2023), Fornaro and Romei (2022), Tenreyro (2022).

Chart 5: An energy shock in RANK and TANK models



Source: Chan, Diz and Kanngiesser (2022).

Chart 6: Managing an energy price shock

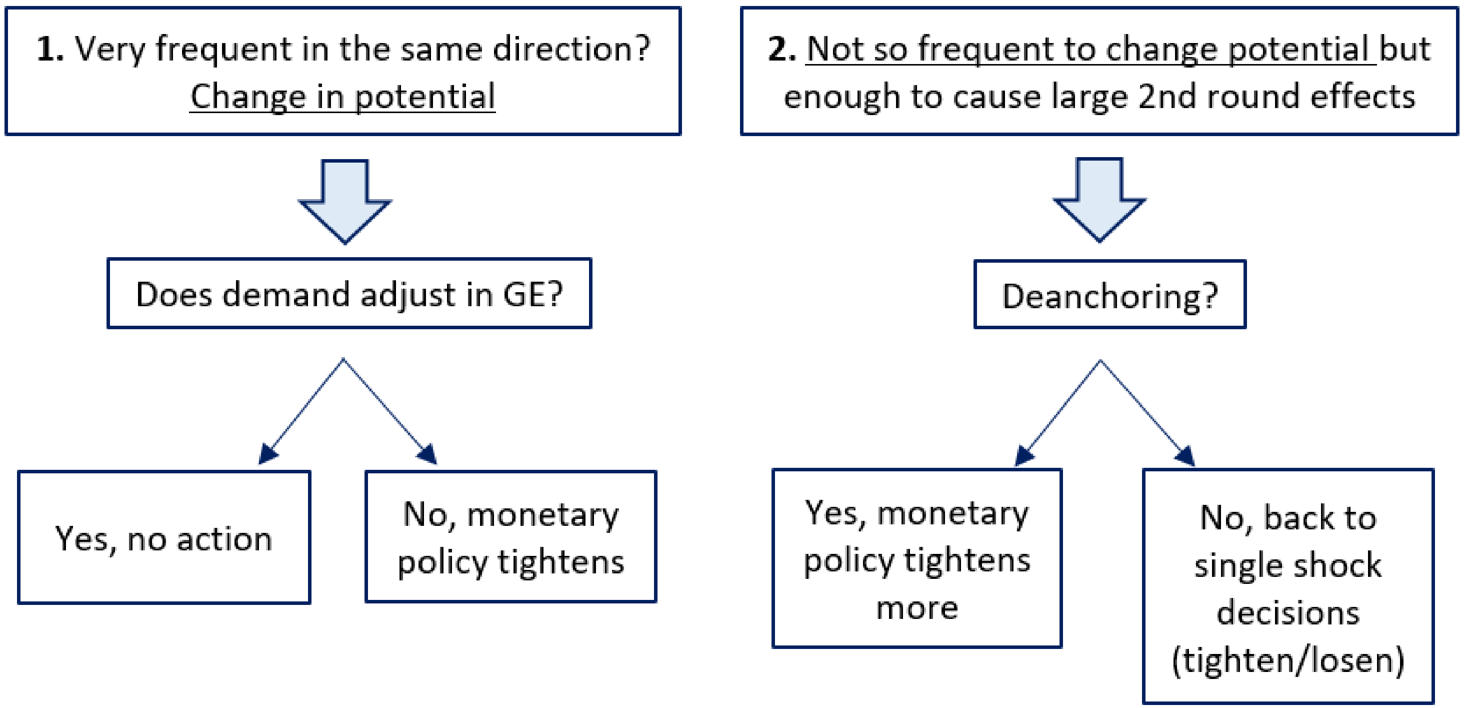


Summary: Optimal policy

Look through	• Single price level shock
Tighten	• Second-round effects (backward or forward looking)
Loosen	• Real-income effects on demand • Relative prices (efficiency)
Balance	• Quantitative question

Multiple shocks

- How should the policy response change if supply shocks became more frequent?



Expectations: determinants and economic impact

- What factors shape them? How does monetary policy affect expectations?

- How do expectations affect pricing and activity?

Long list of contributors to this literature (different papers and permutations): Coibion, Gorodnichenko, D’Acunto, Malmendier, Weber… (see references in paper).

Expectations: determinants

1. How do they form? Or what factors shape them?
   - Expectations tend to track spot inflation
   - High sensitivity to some volatile components of the basket (e.g., energy)

2. How does monetary policy affect expectations?
   - No systematic evidence of a direct impact from interest rates or QE on expectations
     - Households/firms more often than not respond that interest rate increases lead to higher inflation or costs!

   - Evidence supports standard (indirect) monetary policy effect via actual inflation and demand – current or future.

Expectations: economic impact

- How do expectations affect activity and pricing?

Activity:

- Higher inflation expectations may increase or decrease consumption and investment.
  - Real interest rate channel (boosting) versus real-income effect (depressing) activity.
- Impact seems to depend on whether inflation is demand or supply driven.

Pricing:

- Inconclusive evidence on the direct impact on pricing. (Challenging identification issues.)
- Insightful recent theoretical contribution on how expectations affect pricing decisions once we abandon Calvo-price setting (Werning, 2023)
  - As inflation increases, prices become more flexible and inflation expectations become less relevant for pricing (than spot or past inflation).

Chart 7: The role of HH inflation expectations in the transmission of a monetary policy shock

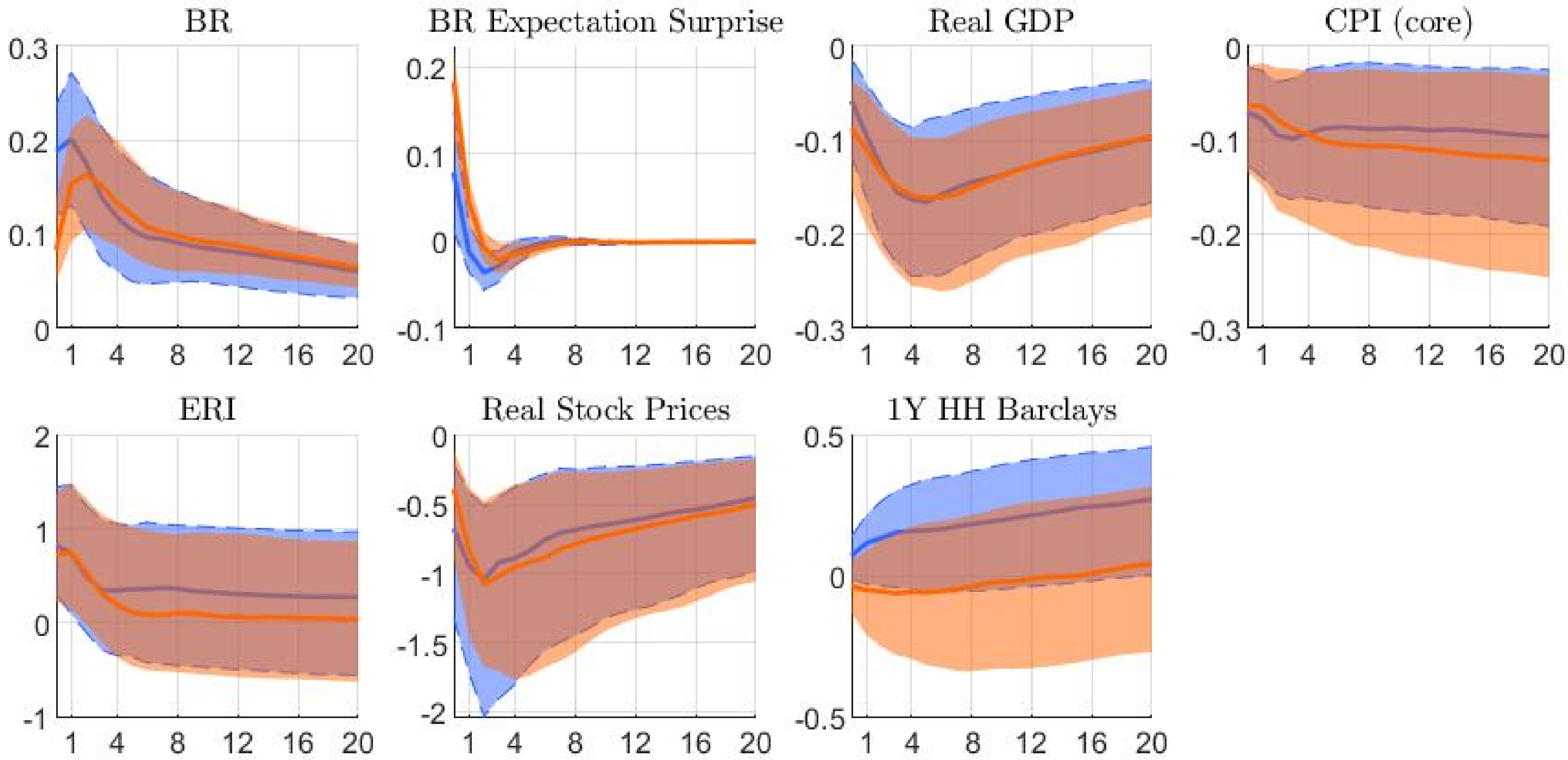
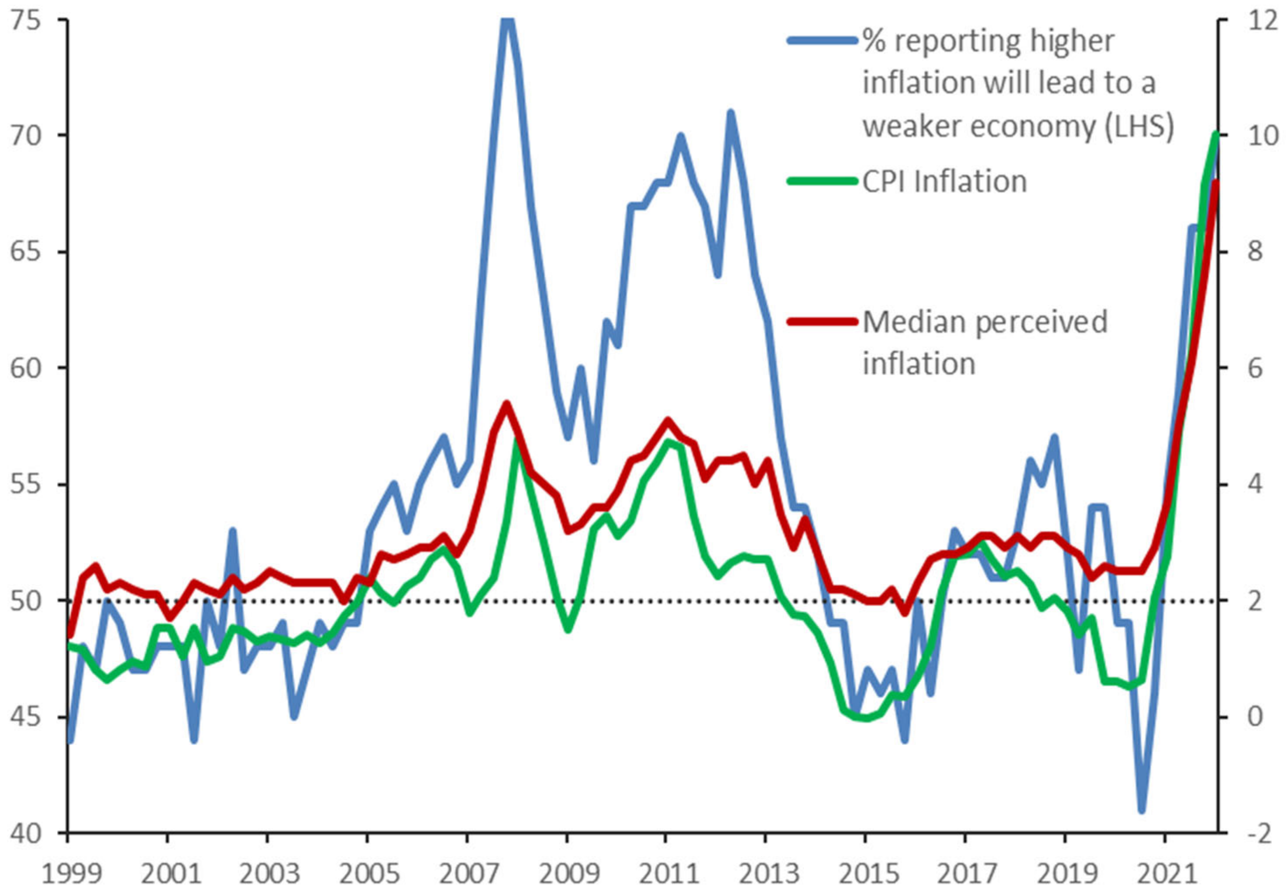


Chart 8: Household perceptions of the impact of faster price increases on the economy



Key Points

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