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Monetary policy and climate policies: implications for Europe

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It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred Number of land & coastal regions (a) and open-ocean regions (b) where each climatic impact-driver (CID) is projected to increase or decrease with *high* confidence (dark shade) or *medium* confidence (light shade)



BAR CHART LEGEND
Regions with high confidence increase
Regions with medium confidence increase
Regions with high confidence decrease
Regions with medium confidence decrease

LIGHTER-SHADED 'ENVELOPE' LEGEND

The height of the lighter shaded 'envelope' behind each bar represents the maximum number of regions for which each

CID is relevant. The envelope is symmetrical about the x-axis showing the maximum possible number of relevant regions for CID increase (upper part) or decrease (lower part).

ASSESSED FUTURE CHANGES

Changes refer to a 20–30 year period centred around 2050 and/or consistent with 2°C global warming compared to a similar period within 1960-2014 or 1850-1900.

Source: IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis, Cambridge University Press, p. 34 fig. 9.

Climate Policies and Monetary Policies in the Euro Area – main comments

- Climate policies should change relative prices they do not have to cause a change in the overall price level
- The model estimates the effects on variables relevant to central banks, in particular inflation, and shows that the monetary policy response matters for both output and price dynamics
 - Further research: Models that include large scale asset purchases, targeted lending and collateral policies
- The model takes the physical science seriously by incorporating chronic climate risks such as sea-level rise and crop yield changes
 - Further research: Models where transitions risks and physical risks interact

Relative price change or an overall increase in the price level?



Note. Annual percentage change and percentage points respectively.

Sources: Statistics Sweden and the Riksbank.

Climate change and the monetary policy response

- Climate change is a threat to price stability
 - Empirical research on extreme weather events already shows significant effects on inflation through their **impact on food and energy prices** (Heinen et al. 2019; Parker, 2018, Kim et al 2021)

 High volatility makes forecasting more difficult and increases the risk of policy mistakes

• Credibility problem vis-à-vis households and firms when facing large difference between headline and core inflation

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Should central banks care about climate change?

- Climate change is a threat to price stability
- We need to better model, analyse and prepare for difficult tradeoffs in setting monetary policy
- Central banks have an obligation to consider the risks posed by climate change to our economies and act in accordance with their individual mandates

