



EUROPEAN CENTRAL BANK

EUROSYSTEM

Climate change, climate protection and inflation

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and 35th SUERF Colloquium

The views expressed in this presentation do not necessarily reflect those of the ECB

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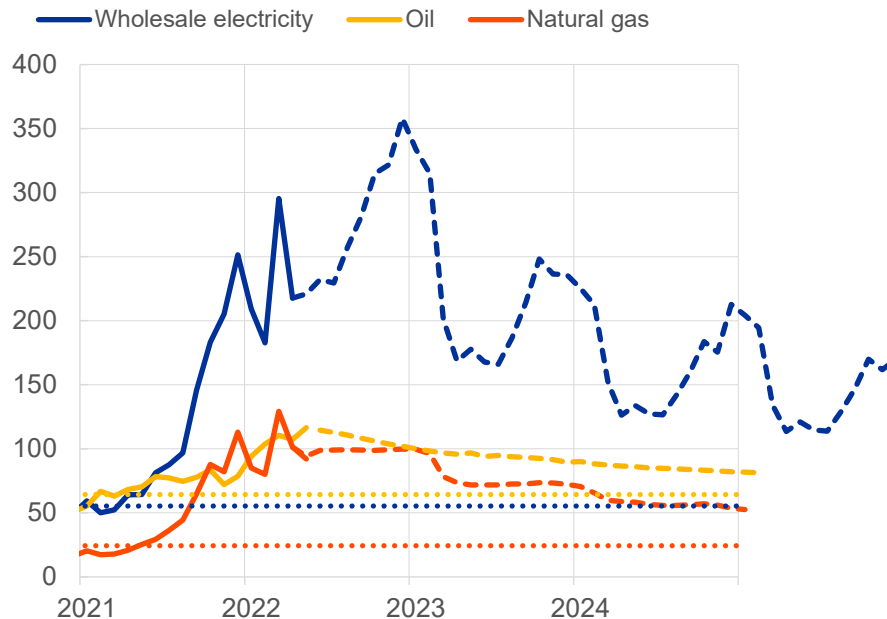


- Climate change and policies affect the outlook for price stability through their impact on macroeconomic indicators, financial stability, and the transmission of monetary policy.
- Both climate change and its mitigation can impact relative prices and inflation.
- Climate change shocks – especially if materializing in form of simultaneous extreme events and compound risks – may prove increasingly difficult to react to.
- The transition may add pressure on inflation, but there is uncertainty about magnitude and timing. These pressures are likely to ease or even reverse in the longer run.

Energy markets are already under pressure from the pandemic and war in Ukraine

Energy commodity spot and futures prices

(Oil price in USD/barrel, gas and electricity prices in EUR/MWh)



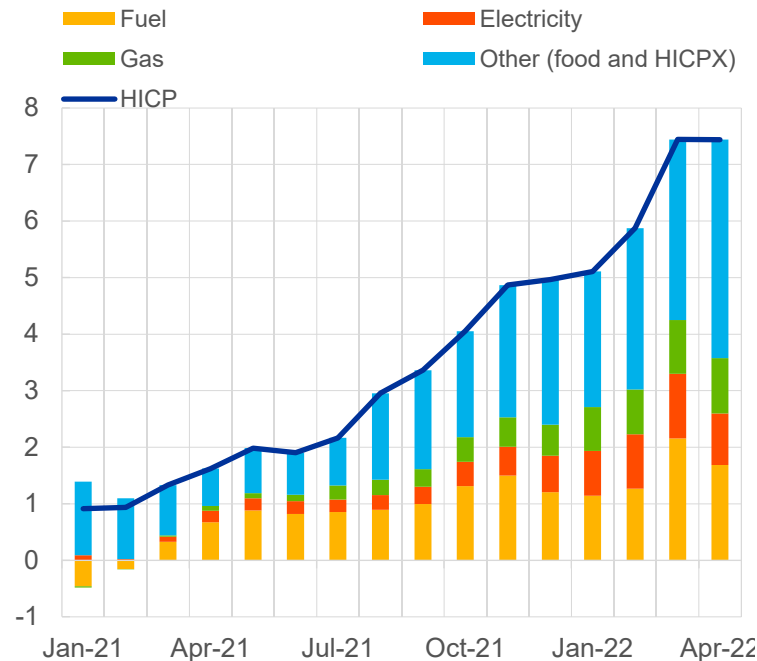
Sources: Refinitiv.

Note: 10-day averages of futures price curves up to 16 May 2022. Future prices are dashed. Averages from 2014 to 2020 are added as dotted lines.

Latest observation: 17 May 2022

Developments in HICP and energy components

(percent and percentage point contributions)



Sources: Eurostat and ECB calculations.

Latest observation: April 2022.

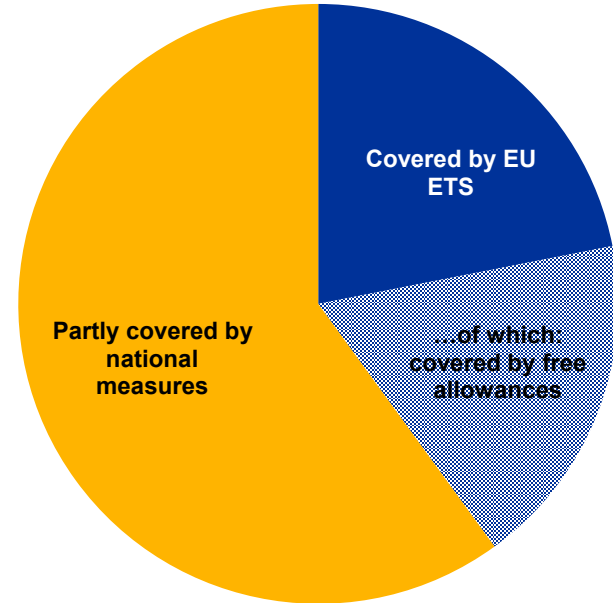
To date limited contribution of climate policies to inflation...

Developments in ETS prices (units in legend)



Sources: Refinitiv, ECB calculations
Latest observation: 17 May 2022

EU emissions covered by ETS (percent)

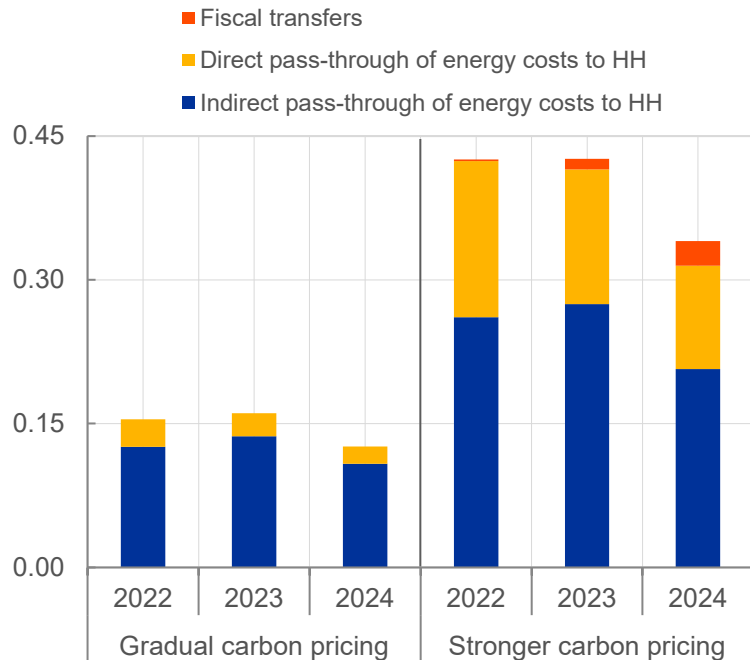


Sources: ECB calculations, based on European Environment Agency and European Commission.

Notes: Share of free allowances based on 2021 data, obtained by the ratio of free allowances and total emissions under the EU ETS. The illustration does not consider proposed EU policies under the "Fit for 55" package.

Estimated impact of increases in carbon taxes on HICP

(percentage points)

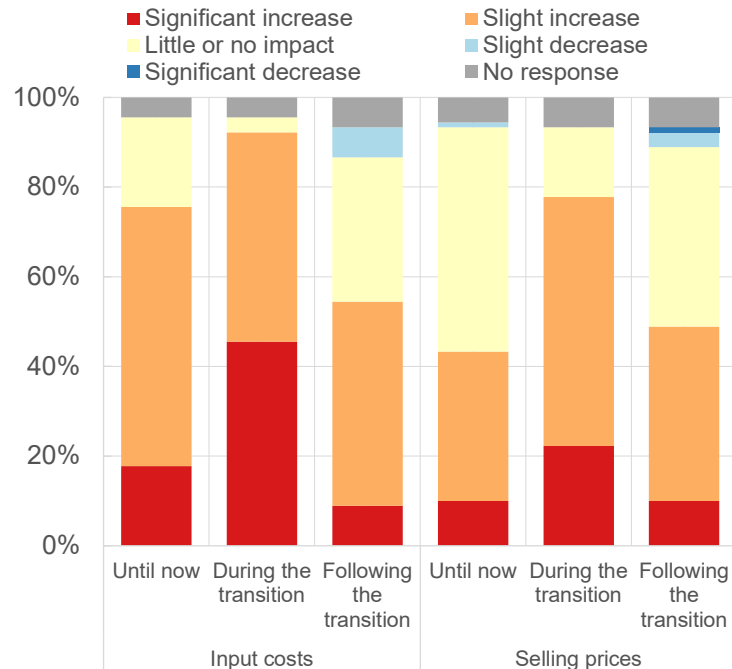


Sources: ECB-staff calculations and NCMC simulations.

Notes: Simulations conducted under a 'projection update mode' without endogenous interest rate, exchange rates and trade response. Expectation formation is backward-looking ('learning').

Overall impact of climate change and climate policies on input costs and selling prices

(share of total responses)

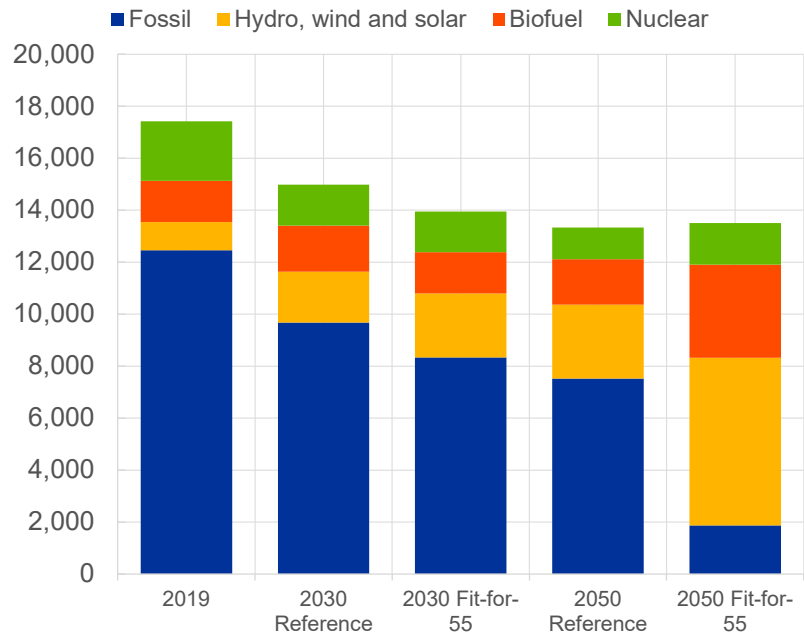


Source: ECB, based on special survey in the context of the ECB's contacts with non-financial companies. ECB, 2022 (forthcoming)

Notes: 90 respondents in total. The respondents consist of large and mostly multinational companies engaged in a wide range of non-financial business sector activities. Firms were asked to compare to a hypothetical baseline without climate change.

...but a successful transition may lead to downward pressures on inflation in the long run

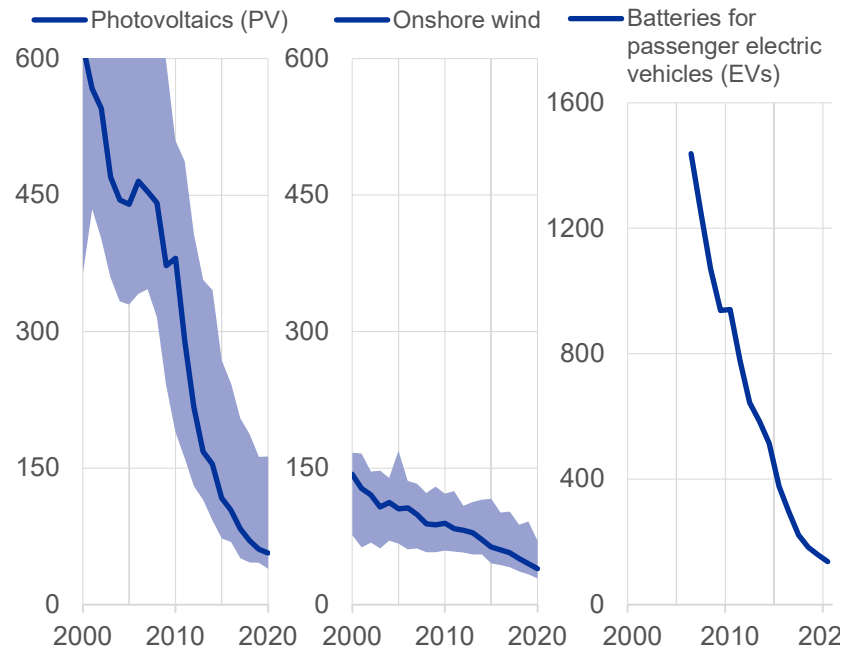
Projected energy consumption and mix in the EU (TWh)



Sources: ECB staff calculations based on European Commission data/[Energy Scenarios explorer](#).

Notes: Scenarios include a reference with current policies, and the "Fit for 55 MIX" scenario. "Fossil" includes gas, oil, coal and waste.

Costs for renewables (\$2020/MWh, \$2020/kWh)



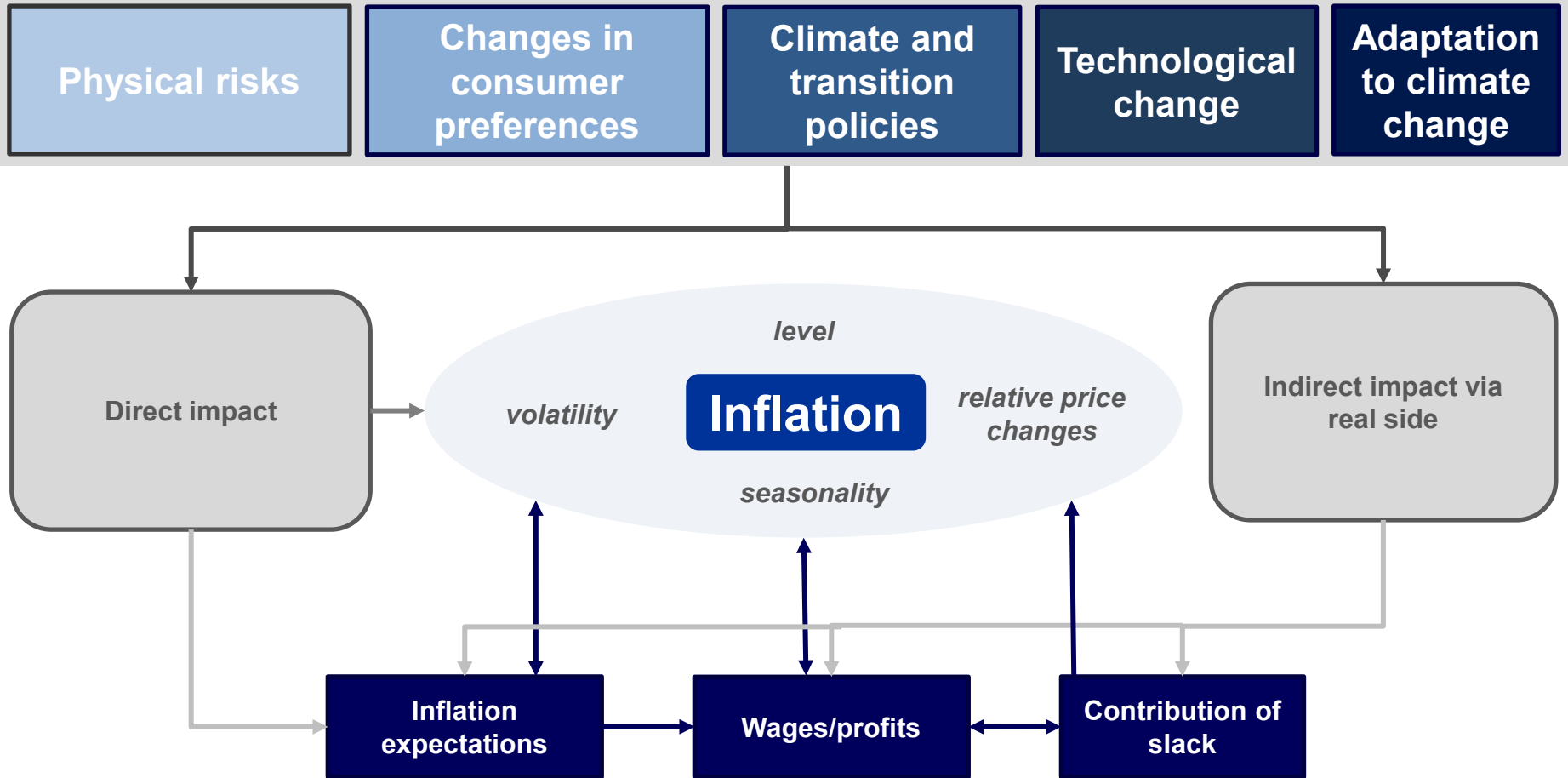
Source: [IPCC](#)

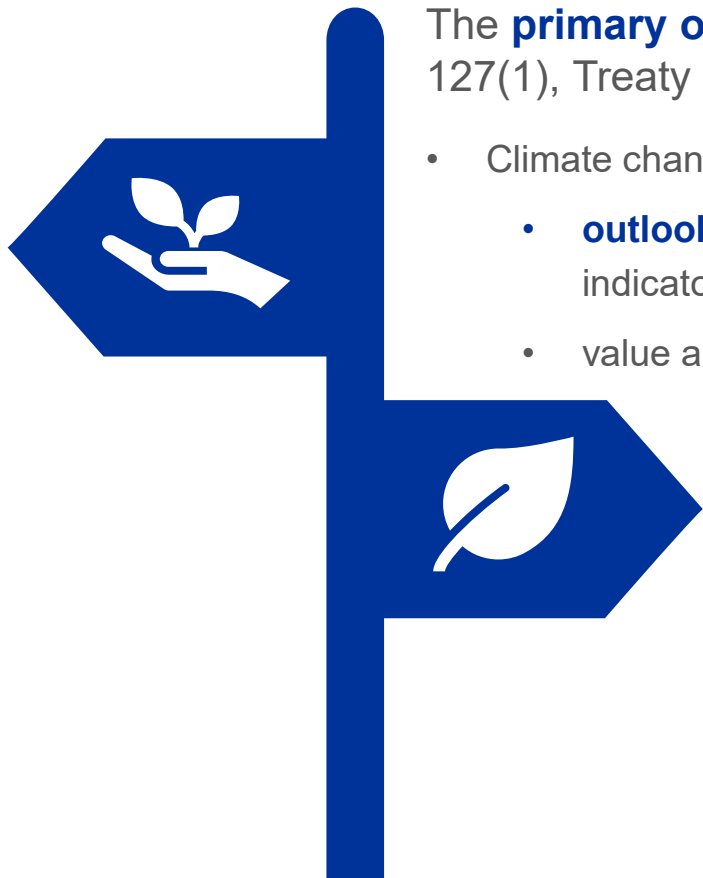
Notes: Photovoltaics and onshore wind are costs and Batteries for passenger electric vehicles is Li-Ion battery packs.

Latest observation: 2020

Many thanks!

Climate change, climate policies and inflation: the channels





The **primary objective** of the ECB is **to maintain price stability** (Art 127(1), Treaty on the Functioning of the European Union)

- Climate change and policies affect
 - **outlook for price stability** through their impact on macroeconomic indicators, financial stability, and the transmission of monetary policy
 - value and risk profile of the **assets on the Eurosystem's balance sheet**

Without prejudice to the objective of price stability, the ESCB shall support the **general economic policies in the Union** with a view to contributing to the achievement of the objectives of the Union (Art 127(1) TFEU, Art 3 Treaty on European Union)

- Union objectives include a high level of **protection** and improvement of the **quality** of the **environment**



Climate change and the green transition **impact** macroeconomic indicators such as inflation, growth and employment, financial stability, and the **transmission of monetary policy**



Climate change affects the value and risk profile of assets on Eurosystem balance sheet, thereby leading to **greater climate-related financial risk**



Euro area financial institutions are exposed to **transition** and **physical risk** (via loans and securities) through **firms, households** and **governments**

Economic analysis

The ECB will ensure that climate change and mitigation policies are accounted for in its macroeconomic models, staff projections and risk assessments, and will assess their impact on monetary policy transmission

Banking supervision

Supervisors integrate risks emerging from climate change and environmental degradation in supervision, in order to ensure that banks are able to manage these risks properly.



Monetary policy

The ECB will include climate change considerations in monetary policy operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases

Financial stability

The ECB identifies, measures and assesses the risks posed to the financial system by climate change, also to inform public debate, market participants and policy makers