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# Central Banks And Climate Change

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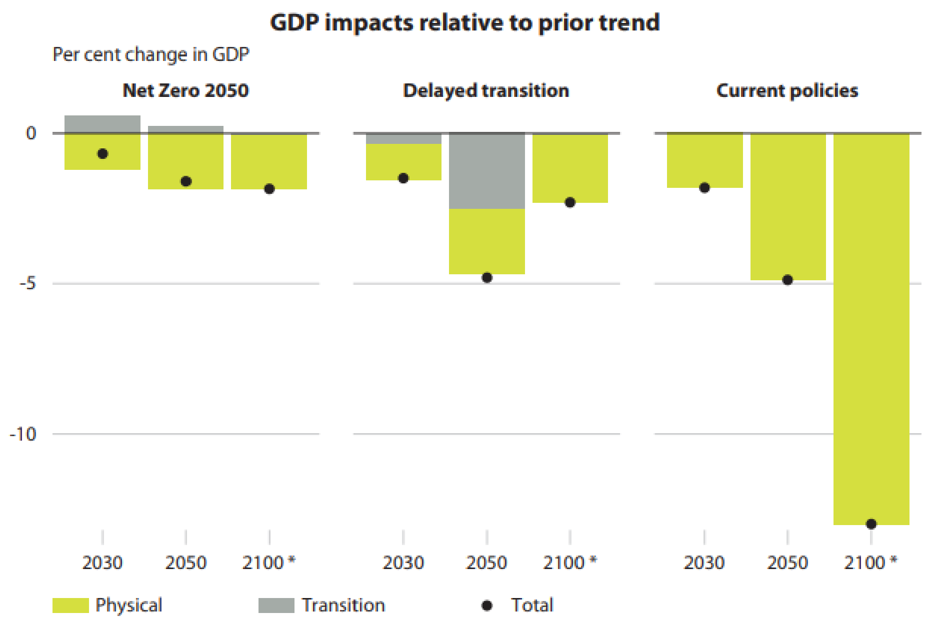
## Why Are Central Banks Increasingly Focusing on Climate Change?

The "Network for Greening the Financial System" (NGFS) now counts more than 100 members - including the largest central banks, suggesting climate change is no longer trivial for monetary policy makers. Potential disruptions from climate change arise from two dimensions: 1) Physical risks – that is damaging weather events related to hotter temperatures, and 2) Transition risks – costs arising from climate policies to green the economy. The NGFS work has recognized those risks have implications for financial stability and monetary policy, the bread and butter of central banks.

In terms of financial stability, the soundness of the financial system may be affected by climate change, when balance sheet holdings are concentrated in areas affected by the increase in damaging weather events (such as storms, floods, wildfire and droughts) or chronic physical risk (e.g. sea level rise and changing temperature patterns). At the same time, if transition is stepped up, banks' balance sheets could be affected by "stranded assets", i.e. "brown" assets such as fossil fuels that will no longer be used as the economy shifts to greener production processes could see a sharp drop in value.

More generally, climate related shocks are also likely to affect growth and inflation dynamics, and thus the conduct of monetary policy. To start with, if the financial system is in a weaker position, as a result of physical risks or stranded asset related losses, this could impair the transmission of monetary policy through the credit channel. Second, there are clear impacts on price stability. As physical risks become more frequent and severe, output and inflation dynamics are likely to become more volatile. Similarly, a quicker transition to net zero via higher carbon pricing or stricter regulations can trigger output fluctuations, when firms need some time to adjust to new constraints and lead to price shocks as demand for new materials and products outstrips supply, potentially challenging central banks' ability to deliver on their price stability mandate. Finally, moving to a hotter planet or a greener economy are both likely to represent large structural changes in the macroeconomic environment. These changes could affect the economy's neutral rate, the unobservable equilibrium interest rate that guides central banks' monetary policy setting. On the one hand, in a world of higher temperatures, labor productivity is likely to be lowered by heatwaves, capital accumulation could be impaired by recurrent climate events that may damage infrastructure, while households and firms may choose to retain more precautionary savings to respond to those shocks. These dynamics would weigh on the neutral rate. On the other hand, the transition to net zero, by triggering sizeable green innovation, could also spur more rapid productivity gains, increasing the neutral rate.

Chart: NGFS scenarios shows climate change can affect economic output




Source: IIASA NGFS Climate Scenarios Database, NiGEM based on REMIND. IAM data and damage estimates from Kalkuhl & Wenz (2020).

Conscious of these implications, central banks have already taken steps to integrate climate change in their assessments. For now, most of the focus is on research and supervision. As such, over the past few years, the Bank of England (BoE), the European Central Bank (ECB) and the Banque de France have all started to conduct "top-down" climate risk-related stress test on the institutions they supervise. This type of scenario analysis helps assess the financial sector's vulnerability to climate change, foster higher disclosure, and encourage banks to account for environmental risks. The ECB has also launched a "bottom-up" climate risk stress test in 2022, with the results due in July.

In a second stage, central banks may consider more active policies to foster the transition to net zero - such as “green quantitative easing”, “green targeted lending operations” or “green collateral”, which would give more advantageous terms to “greener” companies or governments. However, there is still a debate on whether using those tools would breach the “market neutrality” principle of central bank policies (i.e. avoid distorting relative prices) and be more akin to redistributive policies that belong to governments. As such, if the central bank starts favoring “green” assets, this would likely change existing relative prices in the market. At the same time, it can also be argued that firms eligible to central banks’ bond purchases are themselves not representative of the economy and with a bias to “brown assets” (Papoutsi, M, M Piazzesi and M Schneider (2022), “How unconventional is green monetary policy?”, Stanford University). Adding to that, although some taxonomies do now exist (e.g. the EU Green Taxonomy), there is no “global green benchmark” to date, which means central banks could potentially run into issues of green washing. Second, it could be difficult for central banks to address the long-term problem of climate change with its cyclical policies, especially as the corporate bond buying program is just a small part of its total purchases

While increasing their monitoring of climate-related risks, central banks stress that governments should be the primary actor of transition. Large investments are needed to transition to greener production processes and build infrastructure that is resilient to climate risks. Meanwhile taxes, regulation or even nudges can provide incentives for companies and households to shift their behaviors and help mitigate climate change.

This report does not constitute a rating action.