POLICY BRIEF
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Southern Africa – Towards Inclusive Economic Development

Climate change implications for central banks in emerging and developing economies

by Channing Arndt, Christopher Loewald, and Konstantin Makrelov

Climate change poses significant risks and challenges. Many of these have implications for price and financial stability and thus fall within the mandates of central banks. These risks and challenges are likely to be more pronounced for central banks in developing and emerging economies. Domestically, central banks should support efforts that allow for relatively low and consistent inflationary expectations and maintain macroeconomic stability. These basics help to keep borrowing costs low, which supports green investments, because initial costs are often high while operating costs are low. Central banks also have an important role in generating and disseminating information related to climate risks. Globally, central banks should act collectively to develop new policy approaches and financial mechanisms that can mitigate climate change risks to their economies.

FINDINGS

Climate outcomes are diverging from historical norms, notably in terms of variance and the range of potential outcomes, and can be expected to continue to do so for at least the next two to three decades, independently of mitigation policies pursued.

Augmentation of risks posed by extreme events, due to their greater frequency and/or intensity, should be of strong interest to central banks.

Asset markets will anticipate these implications of climate change and price them in today.

Adaptation policies can help to facilitate stability.

Mitigation policies are necessary to prevent catastrophic climate change and should reduce the climate-related risks and challenges that central banks must monitor and contain; however, the structural transformation required for effective mitigation also presents challenges in terms of shifts in the structure of production, stranded assets, and related pressures on firm balance sheets.

Why should the impact of climate change matter to central bankers?

Climate change may have far-reaching and irreversible consequences, physically, socially, and economically. At a macroeconomic level, relative price adjustments of various kinds – energy costs, pricing of externalities, insurance premiums, growing demand for more energy-efficient products, among others – will be pronounced.

The breadth of policy risks faced by central banks in dealing with climate change and its consequences is becoming increasingly apparent. Emerging and developing economies, with their relatively heavy reliance on weather-dependent sectors such as agriculture and frequently less resilient economic structures, are likely to suffer more adversely.

A rising frequency of natural disasters, combined with increasing temperatures and less dependable rainfall patterns, is likely to increase the volatility of prices in the economy. These impacts, combined with mitigation policies, are likely to generate short- and long-term changes in relative prices. Especially in developing and emerging economies, central banks are likely to face more volatile output and inflation, hindering their ability to maintain price stability and growth.

Monetary policy interventions

Central banks have a pivotal role to play in confronting climate change. Monetary policy frameworks should seek to maintain macroeconomic stability while supporting sustainable growth and development. The transparency and technical clarity offered by inflation-targeting frameworks offers substantial benefits for central banks, notably in emerging and developing economies, as they seek to confront climate change and facilitate appropriate movements in relative prices.

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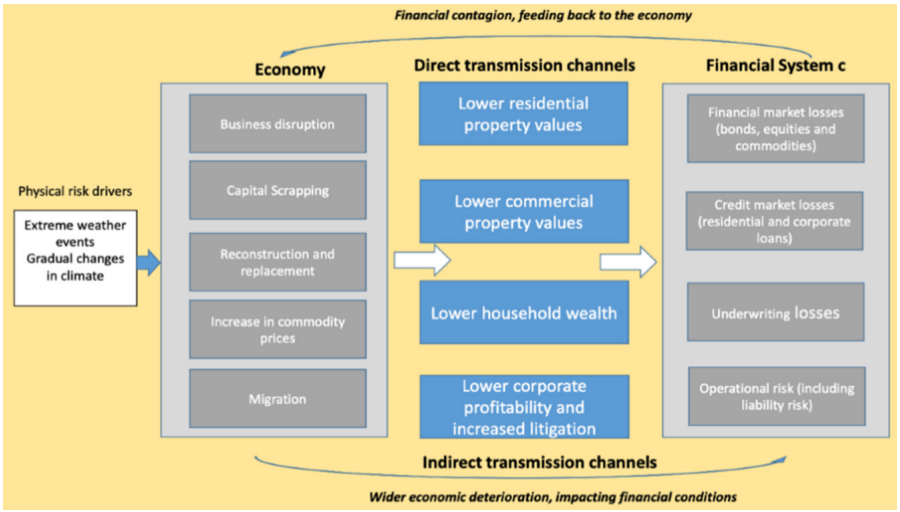
Figure 1: Fron physical to financial risks



Source: NGFS (2019)

Central banks can reduce market interest rates by reducing inflation expectations and the inflation risk premium, thus reducing the social discount rate. As noted, this supports greener investment. Central banks can also incentivize green investments through measured and well-considered green asset-buying programmes. Central banks can incentivize financial institutions to use green assets as collateral when borrowing from the central bank, thus limiting the bias toward government bonds.

Financial regulation interventions

Implementing changes to certain macroprudential tools can facilitate the greening of the economy by improving relative price signals without compromising financial stability. Requiring financial institutions to account for climate risk in the calculation and measurement of financial sector risk as part of their Basel III requirements is a positive step, with the potential to both enhance the stability of the financial system and improve relative price signals in the economy. Green asset classes provide an attractive alternative to foreign investors, one which also enhances the stability of the financial system.

Many of these actions will require the establishment of internationally accepted norms for green assets. Central banks in emerging and developing economies should also support efforts to develop customized classifications of green assets and activities.

Improving information generation and provision

Increasing disclosure of climate risks may also facilitate more effective mitigation and transition plans for emerging and developing economies. Central banks should seek to standardize governance and policy approaches and practices on climate-related disclosures. Traditional risk assessment models based on historic patterns have been rendered less useful, given the novelty and uncertainty of climate change risks. Therefore, a key priority is to develop new modeling frameworks that combine current central bank models with integrated assessment models and incorporate more detailed financial sector dynamics. Forward-looking, sector-specific risk assessment models that incorporate scenario analyses are therefore required.

Broader collaboration and coordination

The refinement and adoption of integrated modeling frameworks can be costly and resource-intensive. The availability of administration and financial data poses a major challenge to these modeling efforts. Hence, for many emerging and developing economies, there is a compelling logic for developing broad collaborations between central banks, research agencies and networks, government, private sector and civil society in order to facilitate knowledge- and information-sharing amongst all role players. Interventions will only be effective if policy action is effectively coordinated amongst national and international institutions.

This brief is based on WIDER Working Paper #133/2020, Climate change and its implications for central banks in emerging and developing economies by Channing Arndt, Christopher Loewald, and Konstantin Makrelov

RECOMMENDATIONS

Central banks should play a role in assuring disclosure and generating and disseminating information related to climate change risks.

To accomplish this, new analytical frameworks need to be adopted and mastered by central banks to better analyse the implications of climate change impacts, adaptation policies and mitigation policies to the economic and financial sectors.

Collaborations between central banks and with other institutions can help reduce data gaps and improve analytical capabilities for improved policy-making.