

# Scaling up Green Finance: The Role of Central Banks

Call for Papers – Submission Deadline: 9 September, 2018  
Conference, 8 – 9 November, 2018  
Venue: Deutsche Bundesbank, Berlin

## Background

The transition to a low-carbon economy requires shifting trillions from brown to green activities. Several reports estimate that more than USD 90 trillion will be needed to adapt our infrastructure in a way that is consistent with the 2°C scenario. Given that the horizon of materialisation of climate risk is narrowing, the need to change scale is becoming more pressing for all actors. Also, central banks are playing an increasingly important role in efforts to mainstream green finance. The newly founded Network for Greening the Financial System (NGFS) is therefore bringing together central banks and supervisors that are willing to contribute to the scaling-up of green finance.

To accelerate the mainstreaming of green finance and provide room for discussion, the NGFS and the Council on Economic Policies are jointly organising a conference on “Scaling up Green Finance: The Role of Central Banks”. Researchers from academia, central banks, and other institutions are welcome to contribute to the discussion on 8 – 9 November, 2018 in Berlin, hosted by the Deutsche Bundesbank.

## Topics

Papers on the following topics will be greatly appreciated, but papers on related issues will also be considered:

### – Greening the activities of central banks

Should central banks incorporate environmental, social and governance (ESG) criteria into their core activities? If so, what are possible approaches for integrating ESG criteria, notably climate risk aspects, into their monetary policy operations, e.g. their asset purchases and collateral frameworks? To what extent would such integration be in accordance with current central bank mandates?

### – Understanding and monitoring the market dynamics of green finance

What are the drivers of capital flows into green finance? What data would be needed to gain insight into the relevant dynamics of the financial sector? How do markets react to policy signals? How are green financial innovations driving the market?

### – Central banks as catalysts for greening the financial system

How can central banks support the mainstreaming of green finance? What market barriers currently exist on the supply and demand side?

## Submission and Dates

Papers should be submitted by 9 September to

*[monetary@cepweb.org](mailto:monetary@cepweb.org)*

Preference will be given to completed papers, but preliminary versions will also be considered.

- 9 September, 2018: Submission deadline
- 5 October, 2018: Participant selection
- 1 November, 2018: Deadline for final papers
- 8 – 9 November, 2018: Conference

## Programme Committee

- Laurent Clerc, Banque de France
- Rafael del Villar, Banco de Mexico
- Paul Fisher, University of Cambridge
- Emanuel Mönch, Deutsche Bundesbank
- Pierre Monnin, Council on Economic Policies

# Carbon Quantitative Easing: Scalable Climate Finance for Managing Systemic Risk

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## ABSTRACT

The climate crisis brings complex challenges for economists, policy makers, and politicians. In recent years the mandates of central banks, which tend to promote ‘sector neutrality’, have been scrutinised for not supporting a low-carbon transition. Here we propose that the mandates of central banks can be expanded based on a revision to the ‘standard model’ for externalised costs. The expanded model is comprised of two kinds of cost: the first is the Social Cost of Carbon (SCC), and the second is the Risk Cost of Carbon (RCC). The RCC is a relatively new concept, and it may be described as the monetisation of climate-related systemic risk. The RCC is equivalent to the cost of ‘preventative insurance’ against unwanted climate change. For example, the RCC can be estimated for the objective of avoiding 2°C of global warming with a 67% chance of success.

The RCC links to a game-changing monetary policy that can provide scalable climate finance and manage systemic risk. The policy is called a Global Carbon Reward, and the financial mechanism involves a long-term program of ‘carbon quantitative easing’ (CQE) and currency trading. CQE requires a currency instrument—called a Central Bank Digital Currency (CBDC)—to act as an international unit of account for carbon (i.e. 100 kg of CO<sub>2</sub>-e mitigated). A policy framework for internalising the SCC and the RCC into the economy is discussed in terms of barriers to change, social principles, market neutrality, and environmental and social governance (ESG). A recommendation is given for financial regulators to research the macroeconomics of CQE, and to consider a new macroprudential role for central banks in response to climate change.

## Keywords

Climate change, central bank, systemic risk, social cost, quantitative easing, risk cost, externality, market failure, insurance, hypocognition

# Carbon Quantitative Easing: Skalierbare Klimafinanzierung für systemische Risikosteuerung

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## ABSTRACT

Die Klimakrise bringt komplexe Herausforderungen für Ökonomen, politische Entscheidungsträger und Politiker mit sich. Die Mandate der Zentralbanken, welche üblicherweise Sektorneutralität verfolgen, sind in den letzten Jahren zunehmend auf den Prüfstand gestellt worden, da sie den Übergang auf eine CO<sub>2</sub>-arme Wirtschaft nicht unterstützen. Wir empfehlen hier, dass die Mandate der Zentralbanken erweitert werden können auf der Grundlage einer Überarbeitung des Standardmodells für ausgelagerte Kosten. Das erweiterte Modell besteht aus zwei Arten von Kosten: erstens die sozialen Kosten von Kohlenstoff (SCC) und zweitens das Kostenrisiko von Kohlenstoff (RCC). Das RCC ist ein relativ neues Konzept, welches als Monetarisierung des klimabezogenen systemischen Risikos bezeichnet werden könnte. Das RCC ist vergleichbar mit den Kosten einer Vorsorgeversicherung gegen unerwünschten Klimawandel. Zum Beispiel könnte das RCC zur Vermeidung der Erderwärmung von 2°C mit einer Erfolgsaussicht von 67% beziffert werden.

Das RCC stellt eine wegweisende Geldpolitik dar, die skalierbare Klimafinanzierung und Risikosteuerung liefern kann. Die Richtlinie heißt Global Carbon Reward und die finanzielle Strategie umfasst ein langfristiges Programm von strategisch-quantitativer Lockerung namens *carbon quantitative easing* (CQE) sowie einen Devisenhandel. CQE benötigt ein Währungsinstrument—die Central Bank Digital Currency (CBDC)—um als internationale Rechnungseinheit für Kohlenstoff (d. h. 100 kg CO<sub>2</sub>-Äq. gemildert) zu dienen. Politische Rahmenbedingungen, welche die SCC und das RCC mit in die Wirtschaft aufnehmen, werden erörtert hinsichtlich von Barrieren im Zusammenhang mit Veränderung, sozialen Kriterien, Marktneutralität sowie Umweltmanagement und Sozialpolitik (ESG). Eine Empfehlung für Finanzaufsichtsbehörden besteht darin, die makroökonomischen Vorteile von CQE zu untersuchen und eine neue Rolle für Zentralbanken zu erwägen, um eine makroprudenzielle Regulierung der Wirtschaft zu gewährleisten.

## Keywords

Klimawandel, Zentralbank, systemisches Risiko, soziale Kosten, quantitative easing, Kostenrisiko, Externalität, Marktversagen, Versicherung, Hypokognition

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