SPEECH

What is special about climate-related and environmental risks?

Introductory remarks by Isabel Schnabel, Member of the Executive Board of the ECB, at the Legal Conference organised by the European Central Bank on “The incorporation of environmental considerations in the supervision of prudential risks”

Frankfurt am Main, 5 September 2023

This year has been a record year in many respects. July was the world’s hottest ever month, seeing the hottest day ever recorded, while ocean temperatures hit all-time highs. We have experienced heatwaves, droughts, floods, gigantic hail and record low levels of sea ice formation in Antarctica. Climate scientists attribute these records to human-made climate change, exacerbated by the arrival of El Niño.

Not only do these events cause extensive damage to the environment and result in enormous human suffering, but they also adversely impact the macroeconomy, giving rise to significant financial risks.[1]

Dealing with financial risks is the core task of prudential supervision.

Climate-related and environmental risks (C&E risks) are now an important focal point for supervisors.[2] The topic of today’s panel discussion – the legal aspects of the incorporation of environmental risks in prudential supervision – could therefore not be more apt or timely.

I am thrilled to be chairing an all-female panel on this important topic with three distinguished speakers, each of whom I will introduce before they speak.

In my short introductory remarks, I would like to explain why C&E risks merit special supervisory attention from an economic perspective.

There are three main reasons. First, their size, global dimension and non-linearity, which imply large downside tail risks. Second, the irreversible nature of climate change and environmental degradation, and the corresponding time criticality for taking action. And third, the lack of knowledge and data on these risks.

Size, global dimension and non-linearity

The sheer size of C&E risks justifies giving them special attention. Climate change constitutes an existential threat, implying large downside tail risks.

According to the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), up to 13% of global GDP would be at risk by the end of the century, even before accounting for the potential consequences of severe weather events, sea-level rise and wider societal impacts from migration or conflict.[3]

Physical climate risks tend to be correlated globally, as evidenced by today's simultaneous occurrence of extreme weather events, limiting the scope for diversification and creating systemic risks for the financial sector. The economic consequences of physical climate risks could be mitigated by closing the large climate insurance protection gap. In the EU, only a quarter of losses caused by climate-related catastrophes are insured, giving rise to additional risks to the macroeconomy, financial stability and public finances.[4] At the same time, financial sector risks are not confined to physical climate risks; the sector is also exposed to transition risks emanating from changes in policies around the globe in response to climate change.[5]

Lastly, the existence of tipping points may give rise to strong non-linearities. Small changes can have much larger effects than observed historically, making predictions highly uncertain.

Irreversibility and time criticality

A second distinct feature of C&E risks is that if they materialise, the effects are often irreversible. Therefore, taking action is time critical to slow down global warming and the degradation of the environment.

An orderly climate transition is more likely if decisive action is taken at an early stage. In an orderly transition, a sudden repricing of assets can be avoided and financial intermediaries are able to gradually rebalance their investment portfolios and build up buffers that can absorb potential future losses.[6]

Moreover, in contrast to other risks, C&E risks have an important feedback mechanism, which accentuates time criticality. Not only does climate change affect the risks on financial intermediaries' balance sheets, but the financing of climate or environmentally unfriendly activities also amplifies C&E risks, creating externalities.

Lack of knowledge and data

A third important feature of C&E risks is that the data available and the knowledge we have about them remain limited. We know that climate change and biodiversity loss are already unfolding rapidly but we still lack knowledge about their precise timing and potential tipping points. This means that we must work with scenarios with an unknown probability of occurrence.

Economic models of climate change are typically calibrated on historical data, which means they have difficulties in accounting for non-linear dynamics that have never been observed. They may therefore underestimate the economic fallout. The use of scenarios, as done in macroeconomic climate stress tests, provides a useful way forward. But such scenarios may need to be enriched by socioeconomic factors, such as the risk of violent conflict or mass migration.[7]

Even for known risks, the data are limited. Private and official data providers are working intensively to close the data gaps. To make progress on this front, there is an urgent need for further disclosure initiatives based on the double materiality principle.[8]

In view of the existing data and knowledge gaps, it is very likely that climate-related and environmental risks are currently underpriced. Some risks may not be priced at all, as confirmed by recent research.

[9] Rating agencies have only just started to incorporate climate risk into their models.

According to our bottom-up climate stress test, most banks under European banking supervision insufficiently consider climate-related risks in their credit assessments.[10] At the same time, various initiatives on the supervisory front show that banks are making progress in their management of C&E risks, although the trend is not uniform and laggards remain in all areas.[11]

Market mispricing of C&E risks can only be mitigated if more information on those risks becomes available, especially via comprehensive disclosures. In this respect, we still have a long way to go.

To conclude, climate-related and environmental risks merit special attention owing to their size, global dimension and non-linearity, the irreversible nature of the damage they can cause, the resulting time criticality of action, as well as knowledge and data gaps.

I am now curious to hear how the incorporation of environmental considerations in the supervision of prudential risks is seen from a legal perspective.

So let me turn to our first speaker, Suzanne Kingston.

Since January 2022, Suzanne has been a Judge at the General Court. Before that she was a Senior Counsel practising at the Irish bar. Moreover, she looks back on a distinguished academic career, teaching law at prestigious universities such as the University College Dublin, Columbia University and Cambridge University, among others, and received a prestigious ERC grant on how to make nature laws more effective.

So, we are very much looking forward to hearing your insights.

Our second speaker is Juliana Bolzani.

Juliana is senior counsel at the International Monetary Fund, working at the Fiscal and Financial Unit of the Legal Department, which provides legal advice to member countries on the design and implementation of legal reforms. Before joining the IMF, she worked as a lawyer at the Central Bank of Brazil. She is a specialist on central bank independence and the evolution of central banks' legal mandates, and she has also written about greening central banks' balance sheets.

We are very curious to hear your views.

Our final speaker is Veerle Colaert.

Veerle holds the chair for financial law at KU Leuven University and is co-director of the Jan Ronse Institute for Company and Financial Law. Additionally, she is the chair of the Securities and Markets Stakeholders Group advising the European Securities and Markets Authority, and she is a member of the Belgian Resolution Authority. One of her many research interests is sustainable finance.

Great to have you here – the floor is yours.

1.

According to "back of the envelope" calculations performed (see Allianz (2023), "Global boiling: Heatwave may have cost 0.6pp of GDP", 4 August), the recent heatwave may have caused losses of around 0.6 per cent of GDP in the United States, southern Europe and China in 2023.

2.

See Elderson, F. (2021), "The role of supervisors and central banks in the climate crisis", keynote speech at the 31st Lisbon meeting between the central banks of Portuguese-speaking countries, 19 October.

3.

NGFS (2021), "Second vintage of climate scenarios for forward looking climate risks assessment", 6 July.

4.

For example, if losses are not covered by insurance, the speed at which households and firms can resume their activities is reduced, slowing economic recovery. Additionally, the financial position of governments may be weakened if they need to provide relief to cover uninsured losses. See ECB (2023), "Policy options to reduce the climate insurance protection gap", *Discussion Paper*, ECB, April. See also Rousová, L., Giuzio, M., Kapadia, S., Kumar, H., Mazzotta, L., Parker, M. and Zafeiris, D. (2021), "Climate change, catastrophes and the macroeconomic benefits of insurance", *Financial Stability Report*, EIOPA, April.

5.

Empirical estimates suggest that financial institutions' exposures to climate transition risk are meaningful. See Berner, R., Engle, R. and Jung, H. (2021), "CRISK: Measuring the Climate Risk Exposure of the Financial System", *Staff Reports*, No 977, Federal Reserve Bank of New York, September.

6.

Breckenfelder, J., Maćkowiak, B., Marqués-Ibáñez, D., Olovsson, C., Popov, A., Porcellacchia, D. and Schepens, G. (2023), "The climate and the economy," *Working Paper Series*, No 2793, ECB, March. Batten, S., Sowerbutts, R. and Tanaka, M. (2016), "Let's talk about the weather: the impact of climate change on central banks," *Working Paper Series*, No 603, Bank of England, May.

7.

See Basel Committee on Banking Supervision (2021), "Climate-related risk drivers and their transmission channels", April, for an overview of the macro- and microeconomic transmission channels through which the banking system is exposed to climate change.

8.

For supervisory expectations, including in relation to disclosure, see ECB (2020), Guide on climate-related and environmental risks, November.

9.

For example, it was shown for the United States that physical risks, other than heat stress, are not priced. See Acharya, Viral V., Johnson, T., Sundaresan, S. and Tomunen, T. (2022), "Is Physical Climate Risk Priced? Evidence from Regional Variation in Exposure to Heat Stress", *Working Paper*, No 30445, National Bureau of Economic Research, September.

10.

See ECB (2022), 2022 climate risk stress test, July.

11.

See Elderson, F. (2023), "Climate-related and environmental risks – a vital part of the ECB's supervisory agenda to keep banks safe and sound", introductory remarks at the panel on green finance policy and the role of Europe organized by the Federal Working Group Europe of the German Greens, 23 June; af Jochnick, K. (2022), Climate risks for banks – the supervisory perspective, ECB, September.