SPEECH

The transition towards a low-carbon economy: What supervision can contribute

Speech by Claudia Buch, Chair of the Supervisory Board of the ECB, ESM/CEBRA conference "The Role of Central Banks and International Financial Institutions in the Transition Towards a Low-Carbon Economy"

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Thank you very much for the invitation to speak at this conference on the role of central banks and international financial institutions in the transition to a low-carbon economy.

Climate change affects banks' balance sheets despite operating on different time scales. The effects of climate change are very long-lasting but can be very disruptive once tipping points are reached. Climate change is driven by the accumulation of greenhouse gases in the atmosphere where carbon dioxide has been building up since the onset of the industrial revolution. Bank balance sheets turn over much faster. The average maturity of a bank loan is roughly nine years, the average maturity of banks' liabilities less than three years. Yet, banks' balance sheets are like a chain that links the past to the future: Banks' assets reflect economic structures of the past, and are thus affected by climate-related risks, banks' new lending provides opportunities to support investments into a sustainable future.

Climate-related risks are thus highly relevant for banks already today. Transition risks such as those related to decisions on climate policies or increases in carbon prices can affect the valuation of banks' assets. Climate-related natural catastrophes, such as wildfires and flooding, directly affect the operations and financial conditions of banks and their customers. If banks do not account for these risks, their business models and their ability to lend may be disrupted.

So what role do supervisors have in the transition to a low-carbon economy? Let me make three points today.

First, climate and nature-related risks affect the economy and thereby banks' balance sheets. Up until several years ago, banks hardly had systems in place to manage these risks. Information on the climate-related footprint of their customers has been sparse. In line with its mandate, supervision must ensure banks address these risks in a sound manner. Better reporting on climate- and nature-related risks complements the efforts of banks and supervisors. Meanwhile, significant progress has been made in terms of risk management and availability of data.

Second, addressing climate change and managing the transition to a low-carbon economy needs to involve all stakeholders. Banks have an important role in managing the climate-related risks they are exposed to, and supervisors need to ensure that all relevant risks are addressed. But actions of banks or supervisors are no substitutes for good climate policies.

Third, managing the climate transition requires broad societal consensus and dialogue about policy objectives, policy instruments, and the indicators measuring progress towards these objectives. Central banks and supervisors have an important role to play in providing information about risks in the financial system and the progress being made in addressing these risks. We need a good infrastructure to monitor and assess the evidence. The CEBRA conference programme reflects these priorities by fostering dialogue on the role of central banks and supervisors in considering climate risks, using analytical tools in analysing climate policies, and enhancing data availability.

The economic impact of climate change on banks

The latest scientific evidence on climate change is daunting.[1] Continued emissions of greenhouse gases since the industrial revolution have led to about 1.2 degrees of global warming. And, unless action is taken now to lower emissions, temperatures will increase further and surpass the 1.5 degree threshold that governments committed to with the Paris Agreement in 2015.[2]

Climate change and nature degradation are already causing massive damage to the economy.[3] If nothing is done, global economic output could be several percentage points lower in the period up to 2050 than under alternative scenarios of timely and globally coordinated climate action, with massive social and human costs.[4] And the risks that are currently unfolding are just the tip of the iceberg in terms of what we can reasonably expect in a world that is subject to 3.1 degrees of global warming, which is the current baseline scenario according to the United Nations Environment Programme.[5] Loss of biodiversity would additionally have considerable costs.[6]

Banks' balance sheets mirror the economic costs of climate change through the provision of funding to all sectors of the economy. Broadly speaking, climate-related and environmental (C&E) risks come in two forms for banks: physical and transition risks.[7] In addition, climate-related litigation has increased in recent years. Around the world, some 560 new cases have been filed since 2021, with corporations and banks increasingly being targeted.[8] While none of this creates new risk categories, banks are affected through the traditional risk categories such as credit, market, operational, or reputational risk.

Physical risks stem from acute climate-related events. These include wildfires, floods and droughts, but also changes in precipitation, extreme weather variability, ocean acidification and desertification. Physical risks can directly affect credit risk through exposure to mortgages on homes built in areas prone to wildfires or flooding. Similarly, operational risks increase if floods or fires materially damage banks' IT infrastructure or the vault and safety boxes of customers at local bank branches.

Transition risks are inherent in the adjustment to a less carbon-intensive economy**.** Policy and regulatory changes or technological advances, but also changes in social norms, can affect business models of corporates and impose costs on households.[9] If the price for carbon rises, for example, costs would, on impact, increase for banks' corporate customers with high carbon emissions. While this would be an intentional outcome from the point of view of climate policies, as it would steer behaviour of both banks and corporations, loan defaults may increase as a result. The transition to a net zero economy can thus affect the risk profile of bank loans.

This year's "Fit for 55" climate scenario analysis provides insights into the vulnerability of the financial sector to transition risks. It assesses the impact of three scenarios in line with the EU's target of reducing net greenhouse gas emissions by at least 55% by 2030. The ECB has explored this in collaboration with the European Supervisory Authorities (ESAs) in a EU-wide cross-sectoral climate stress test for the financial system.[10] A baseline scenario assumes the implementation of the Fit-for-55 package. Two adverse scenarios add transition risk where investors shed assets of carbon-intensive firms due to price corrections triggered by a sudden reassessment of transition risks, in the same macroeconomic environment or in combination with other macroeconomic stress factors. In the baseline scenario, banks record annual losses of around 0.7% of affected exposures over an eight-year horizon, which is similar to results of previous stress tests. Those losses come from firms that need to invest in reducing their carbon emissions and hence have fewer profits and more debt and, as a result, are more likely to default on their loans. However, additional adverse macroeconomic developments could substantially increase banks' losses. Overall, these findings suggest that the risk of stranded assets would not be a major constraining factor when deciding to raise the relative price for carbon.

One important channel through which households are affected by climate change is the impact on mortgages. The ECB has therefore examined whether residential mortgage rates in high climate risk areas are influenced by this risk.[11] Climate-related risk is starting to be priced into mortgages, with loans secured by real estate in high climate risk areas being more expensive than loans with the same characteristics in safer regions. These differences are small, however, are relatively small, which may suggest that climate-related risk is being underpriced by banks.

The exposure of banks to climate-related risks would be muted if sufficient insurance protection was available and used. Yet, more frequent and severe climate risk events are making it more difficult to insure properties. Only about a quarter of climate-related catastrophe losses are currently insured in the EU. In some countries, the figure is less than 5%, and in certain parts of the world it is already virtually impossible to obtain insurance.[12] Climate change is expected to cause this insurance protection gap to widen. This would increase the burden for governments, both in terms of macroeconomic risks and fiscal spending to cover the uninsured damage.

A widening insurance protection gap may have negative implications for the financial system and the availability of credit. Financial institutions may reduce the provision of credit in regions which are materially exposed to physical risk. Risks to financial stability may increase if many financial institutions are simultaneously affected by adverse shocks.

The role of banks and supervisors in the transition towards a low-carbon economy

The European Climate Law requires carbon neutrality in the EU by 2050. With the Fit for 55 package, Europe has committed to reducing emissions by 55% by 2030, compared with the levels recorded in 1990. Policymakers can use various tools to reach this goal. Ultimately, emitting carbon dioxide needs to become more expensive relative to other sources of energy production in order to internalise negative externalities for the climate. Subsidies for research and development may be considered if

private firms underinvest into new technologies that have positive externalities.[13] Accompanying social policies can ensure a just and fair transition, so that vulnerable groups are not unduly burdened.

While there is broad societal consensus on the need to address climate change, people disagree about how to allocate the costs of the climate transition, including social costs.[14] In the long run, the economic benefits of a timely transition far outweigh the costs, especially when compared with alternative scenarios of acting too little too late.[15] In the short run, however, transition costs can be sizeable. Consumers can be affected by rising prices for consumption goods which have no obvious substitutes, the modernisation of the housing stock is costly, which imposes cost on owners and may lead to an increase in rents, and companies are faced with higher investment costs and energy prices.

Addressing climate change requires a debate on concrete targets, policy measures, and the role of different stakeholders. Society needs to discuss how best to combine different policy instruments. Decisions need to be taken at the political level. Central banks and supervisors are not, and do not intend to be, policymakers. In this sense, central banks and supervisors are “policy takers” of the decisions taken by elected governments.[16]

At the same time, we need to address the implications of climate policies within our mandates.

Moreover, by fulfilling their mandates, central banks can complement climate policies.[17] A stable overall price level makes it easier for market participants to extract the correct relative price signals and act upon them. Climate risks must be priced on the financial markets; this sets the right incentive for market participants to engage in economic activities that help reduce emissions. In this sense, price stability and financial stability support climate policies. Changes in finance alone cannot address negative climate externalities and may actually have unintended consequences. Without addressing general equilibrium effects and without changing relative prices, shifting financial sources to low emitters could even delay decarbonisation.[18]

So what can prudential supervisors do to address C&E risks? The guiding principle of supervisors is to ensure that no material risks are left unaddressed.[19] Banks must identify and adequately manage the risks they are exposed to. Like any other material source of risk, this also holds true for risks stemming from climate change and nature degradation.

These risks are “known unknowns”. C&E risks are not novel, nor are they “black swan” events that are impossible to prepare for. These risks are material, and they will materialise. Their exact magnitude is not clear, however, and their nonlinear nature makes it difficult to predict concrete outcomes. At the same time, real estate and stock prices do not fully reflect climate related risks, with possible negative implications for adaptation and mitigation and a potential sharp repricing when risks materialise.[20]

Insufficient resilience against C&E risks may impair the functioning of credit markets. If C&E risks unexpectedly materialise and cause losses, banks that do not have sufficient capital buffers may have to deleverage and restrain lending. And if banks have insufficient information about C&E risks, they may refrain from lending to exposed borrowers in the first place. Firms may then lack the necessary funding to finance the transition to cleaner production processes, and households in areas that are highly exposed to extreme weather events may lack the funding to invest in adaptation measures.

In order to improve banks' resilience to C&E risks, the ECB has put a multi-year strategy in place. Since 2019, when less than 25% of banks were working on C&E risk management, we have taken several steps to strengthen their ability to do so. In 2020, we published a guide setting out supervisory expectations.[21] By the end March 2023, banks were expected to be adequately assessing the materiality of C&E risks and by December 2023 they were expected to be taking these risks into account when it comes to their internal governance, strategy, and risk management. Most banks have made significant progress. But those that fail to timely remediate shortcomings can, following an escalation process, incur a penalty payment for every day that they fail to comply with requirements. In this area, the ECB has stepped up its supervisory action by also making use of enforcement tools to make sure that banks are remedying deficiencies.

Encouragingly, banks are making progress in addressing climate-related and environmental risks. After the thematic review in 2022, the majority of banks had already implemented the institutional framework for managing C&E risks, and good practices were observed across the spectrum. Some banks, for example, have started to strengthen their capital base and have adapted their management processes to reflect the materiality of these risks. And in some banks, management bodies are supported by dedicated committees, including with independent directors who bring relevant knowledge and experience to the table.

The key challenge for banks in addressing C&E risks is the lack of relevant historic data and the forward-looking nature of the risk. Still, several tools can be used to support forward-looking risk assessments. For example, within the IFRS 9 provisioning framework, prudential overlays can be used to capture risks that are not adequately covered by provisioning models relying on historical data. Another example is scenario analysis, for example through assessing risks from misalignment with decarbonisation pathways as shown in a report published earlier this year.[22] By the end of this year, we expect banks with material C&E risks to reflect them in the baseline and adverse scenarios of their stress-testing frameworks. Banks need to include plausible baseline and adverse scenarios that are in line with scientific evidence.

At the same time, investment into a good information infrastructure needs to continue**.** While there are still issues with finding granular and reliable data, the situation has improved. Sustainable finance legislation has helped to define the measurement of exposures, and reporting of the corporate sector has improved.[23] This is an important input into the risk management of banks, and banks have made significant efforts to improve their information systems. Banks employ a variety of approaches to gather the information needed for risk management and disclosures, including client questionnaires, counterparty disclosures, third-party data providers, and estimations based on public sources. Impending EU legislation to enhance the corporate disclosure regime will further support banks by ensuring that critical information for their own disclosures and risk assessments becomes more readily available.

Supporting societal dialogue on climate and nature policies

Central banks and supervisors have an important role to play in supporting the societal dialogue on climate and nature policies. They can provide information about risks in the financial system and the

progress being made in terms of addressing these risks. ECB Banking Supervision included addressing C&E risks among its supervisory priorities for 2023-2025. Moreover, the ECB's climate and nature plan 2024-2025 identifies three focus areas from a monetary policy and banking supervision perspective.

The first area looks at financial needs related to the transition towards a green economy. The ECB assesses investment needs for the green transition and their funding, analyses the macroeconomic consequences arising from the transition, and explores implications for monetary policy. The transition requires investments into new technologies and firms. Banks cannot provide this financing alone, as the investments are often long-term and risky. The transition thus requires capital market financing, pointing to the need to further develop equity markets and promote the capital markets union.

The second area examines the physical impact of climate change and the costs of adaptation, including the cost of insurance protection. The ECB and the European Insurance and Occupational Pensions Authority have worked together to outline potential policy actions to enhance catastrophe insurance and reduce this protection gap.[24]

The third area covers the implications of nature and biodiversity loss for the economy. Financial risks stemming from climate change and biodiversity loss are closely intertwined. Nevertheless, measuring the latter comes with challenges, as there is no single metric such as carbon emissions. We therefore need to advance our understanding of nature-related financial risks that stem from biodiversity loss.[25]

Real estate is one of the sectors affected by physical and transition risks.The availability of data to support physical and transition risk analysis is crucial, yet granularity of data is an issue. The revised Energy Performance of Buildings Directive, which includes common requirements for setting up national databases on the energy performance of buildings, is an important development that should help narrow the data gap.[26] In the spirit of the Directive, further work is needed to ensure adequate data management and increase the reliability and consistency of climate-related real estate data across the European Union. This supports banks in managing all material risks. Until a comprehensive European database of all buildings in the EU has been established, we thus strongly encourage all efforts to improve data availability and welcome the successful strategies that some banks have implemented to address data gaps.

Transition plans are an important element of risk management.[27] These include intermediate milestones from now until 2050, including indicators that allow banks to monitor and act upon any risks arising from possible misalignment with their transition paths. The revised CRD VI includes a new legal requirement for banks to prepare prudential plans to address C&E risks. It gives supervisors the mandate to assess these plans.

Central banks have an important role to play in providing reliable data and analysis that supports a fact-based societal debate on climate policies. The ECB thus provides and shares a growing set of climate-related indicators to improve understanding and management of climate risks and opportunities.[28] These indicators, developed collaboratively with EU national central banks, include sustainable finance statistics and analytical tools for carbon emissions and physical risks. Updated regularly with methodological enhancements, these indicators support analysis of risks affecting

monetary policy, price stability, and financial stability while aiding the transition to a greener economy. Recognising the complexity of this work, we invite researchers to collaborate with us in refining these indicators and exploring their potential to address the challenges of climate change.

Summing up

Sound balance sheets are a key foundation of a more sustainable future. As prudential supervisors, our role is to ensure that banks manage climate-related and environmental risks well and that they have sufficient capital buffers in place. This has broad societal benefits by enhancing financial stability. We engage closely with European banks to ensure that they address C&E risks as part of their overall risk management and governance. And these joint efforts are paying off: banks have improved their risk management, but further progress is needed.

Action taken by supervisors and banks alone is no substitute for good climate policies. All parts of society and its institutions have a role to play in addressing climate change. Our attention to climate-related and environmental risks when fulfilling our mandate contributes to an overall societal response. By acting within our mandate, by ensuring that banks are sound and safe, we provide an important foundation for a stable financial system that can support the green transition.

Central banks have an important role to in providing good data and analysis to facilitate a fact-based societal debate and evidence-based policymaking. The immediate effect of changes in climate policies are not immediately observable. Intermediate indicators, including information on C&E risks, are thus needed. Different policy tools are needed to address climate change, and their effectiveness needs to be assessed. All this requires good underlying data.

Our own work must be evidence-based, too. Generally, assessing the effects of regulation and supervision, both in terms of intended effects and potentially unintended side effects, is important. Moreover, we need to continue assessing how material exposures to C&E risks for banks are, and whether banks are sufficiently resilient to these risks. Impact assessments need to be methodologically sound – that's why I appreciate the opportunity of conferences like this where supervisors and researchers come together, so that we continue having the best analytical tools at our disposal.

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18.

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