EUROPEAN CENTRAL BANK

EUROSYSTEM

Press release

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Joint ECB/ESRB report shows uneven impacts of climate change for the EU financial sector

- Financial stability vulnerabilities from climate change concentrated in certain regions, sectors and firms, with evolution of risks conditional on effective and timely transition to low carbon economy
- Granular exposure mapping of climate hazards to financial risk reveals vulnerability to river flooding widespread across countries, compounded by wildfire, heat and water stress risk in some regions
- Transition risk resulting from financial market repricing has cross-sector impact and varies within sectors owing to differences in emissions efficiency
- Long-term scenario analyses suggest timely and orderly macroeconomic policies to tackle climate-related risk can reduce financial stability risks, notably for highest greenhouse-gas emitting sectors

The European Central Bank (ECB) and the European Systemic Risk Board (ESRB) today published a joint report that takes a closer look at how a broadened set of climate change drivers affects millions of global firms and thousands of financial firms in the European Union (EU). It maps out prospective financial stability risks and contributes by further developing the analytical basis for more targeted and effective policy action.

The report tackles measurement gaps and, building on previous work in this field, establishes a detailed topology of physical and transition risks arising from climate change across regions, sectors and firms. It also applies a scenario analysis with long-dated financial risk horizons to capture prospective financial losses resulting from the timeliness and effectiveness of climate policies and technologies.

“These findings underline the crucial and urgent need for climate policies and economic transitions, not only to ensure that the targets of the Paris Agreement are met, but also to limit the long-run disruption to our economies, businesses and livelihoods,” said Christine Lagarde, President of the ECB and ESRB Chair.

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The report's granular mapping of financial exposures to climate change drivers finds three forms of risk concentration. First, exposures to physical climate hazards are concentrated at the regional level. The analysis shows, for example, that river floods will be the most economically significant widespread climate risk driver in the EU over the next two decades compounded by strong vulnerability to wildfires, heat and water stress in some regions. Around 30% of the euro area banking sector's credit exposures to non-financial companies are to firms that are subject to a combination of these physical hazards.

Second, exposures to emission-intensive firms are concentrated not only across but also within economic sectors. Exposures to highly emitting firms occupy 14% of collective euro area banking sector balance sheets. While mainly concentrated in the manufacturing, electricity, transportation and construction sectors, they also vary considerably within sectors – suggesting scope for financial market repricing as widely varying emissions intensities narrow.

Third, exposures to climate risk drivers are concentrated in specific European financial intermediaries. Around 70% of banking system credit exposures to firms subject to high or increasing physical risk over the coming decades are concentrated in the portfolios of just 25 banks. At the same time, scope for financial market repricing associated with transition risk will be particularly large for investment funds, where more than 55% of investments are tilted toward high emitting firms and estimated alignment with the EU Taxonomy stands at only 1% of assets. While direct holdings by insurers of climate sensitive assets may be manageable, risks could be amplified by cross-holdings of investment funds of around 30%.

Long-term scenario analysis for EU banks, insurers and investment funds suggests that credit and market risk could increase as a result of a failure to effectively counteract global warming. In the projected scenario modelling what would happen in the event of an insufficiently orderly climate transition, physical risk losses – particularly for high emitting firms – would become dominant in around 15 years. This could lead to a decline in global GDP of up to 20% by the end of the century should mitigation prove to be insufficient or ineffective.

As work continues on more accurately measuring and modelling climate risk, the advances described in this report should provide valuable evidence to inform the broadening climate debate in the public and private sector alike.

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