SPEECH

Governor Signe Krogstrup's speech at Danmarks Nationalbank's conference on Climate change and the green transition - implications for the financial sector

DANMARKS NATIONALBANK

19 June 2025

CHECK AGAINST DELIVERY

CLIMATE RISKS AND FINANCIAL STABILITY – STAYING THE COURSE AMID UNCERTAINTY

Good morning, and welcome to Danmarks Nationalbank.

It is a great pleasure to host this conference and to welcome so many of you here today, colleagues, partners, and stakeholders, to share perspectives on the evolving risks that climate change poses to the financial sector.

Climate agenda competing for attention in a complex global risk environment

Let me begin by acknowledging the broader context in which we meet. The global economy and financial system face multiple challenges and high uncertainty, stemming from geopolitical tensions and trade fragmentation to cyber risks and structural shifts.

These pressing concerns rightly command our full attention. But for that reason, they also risk overshadowing challenges such as climate change which are perceived as longer-term. This happens at a time when climate policies face stronger headwinds in some parts of the world. This may slow the global energy transition and speed up climate change and the associated risks.

Rather than looking away, the many concurrent challenges should reinforce our commitment to addressing them in a risk-based, prioritized manner. Here, climate change belongs to the group of risks we need to assess and address. Much like a wave on the horizon, we may not know

its exact shape or timing, but we can be confident of its arrival. In some countries, it is already a first-order concern.

That is why I am particularly pleased we are convening today: To maintain focus on climate-related financial risks, and to continue sharing knowledge on how best to address them.

Climate risks are intensifying and the transition remains uneven

The physical risks of climate change are becoming increasingly evident. Last year was the warmest on record globally, surpassing the previous record set in 2023. Projections suggest that global temperatures will remain elevated in the coming years. Europe is the fastest warming continent. Across the globe, extreme weather events are happening more often and becoming more severe.

The economic impact of these events is already substantial. Global losses from natural catastrophes continue to trend up. The majority of these are uninsured. Estimates of expected global GDP losses due to climate change are uncertain and vary across methods and models. But they tend to be revised upward over time. An often-cited recent example is the model-based long-term projection from the Network for Greening the Financial System, NGFS, which suggests GDP losses of up to 15 percent by 2050.

The transition remains too slow to reach the Paris goal of containing global temperatures to 1.5 to 2 degrees. Yes, clean energy adoption is increasing globally. But the use of fossil fuel-based energy is rising as well.

It is possible to design and implement ambitious climate policies, however, and there are encouraging examples. In China, fossil fuels now make up less than half of total installed power capacity. In the EU, our Emissions Trading System is expanding in scope and ambition, and having a real impact on incentives.

In Denmark, we are on our way to meet national climate goals. One of the key tools is our broad-based carbon taxation, which now also includes agricultural emissions. But Denmark is small, and our emissions will not dent global weather. Globally, only about a quarter of emissions are currently subject to carbon pricing.

In short, despite important efforts and examples of success, climate risks are still increasing, and so are the eventual costs of adaptation.

Climate-related risks are relevant to central banks
So let me now turn to why we care about climate risks in central banks, and, more specifically, what we are doing at Danmarks Nationalbank.

It is important to emphasize that *governments* are in charge of climate policy for energy transition, and for mitigation and adaption strategies. The tools to achieve these political goals are fiscal, regulatory and structural policies; not monetary. There is broad consensus that a uniform carbon pricing scheme is the most cost-effective instrument to reduce emissions and incentivize private investment and consumption behavior. These are political decisions.

However, climate-related risks fall squarely within the purview of central banks. Climate change — and policies to address it — can affect core objectives of price and financial stability. This makes climate change relevant for most central banks, depending on the precise scope of their mandates.

This was not always considered the case, and central banks have had to learn new competencies for how to assess climate risks. But we are maturing, as our conference today illustrates. We are now at a stage where climate risks can be, and are, incorporated systematically into our analyses and operations, prioritised alongside all other relevant risks.

At Danmarks Nationalbank, our mandate comes in three parts: ensuring stable prices, maintaining safe and efficient payments, and safeguarding financial stability. Climate change affects all three. Let me highlight five areas of our climate-related work:

- **Scenario analysis and risk assessment** — to understand the macroeconomic and financial stability implications of climate change and inform our policy advice.

- **Data collection and publication** — to support transparency and assessment of climate-related financial exposures.

- **Responsible investment practices** — including integration of climate considerations in the management of FX reserves and regular reporting of the carbon footprint.

- **Operational emissions tracking** — to reduce the footprint of our own activities.

Beyond our own mandate, but as the government debt manager of the state:

- **Issuance of green bonds** — on behalf of and with instruction from the Ministry of Finance.

To do this work, we closely collaborate with external partners. These include the ECB, the European Banking Authority (EBA), the NGFS, as well as many of you in this room.

Use of scenarios is key to understanding transmission of climate risks to the financial system

Let me say a few words about two central issues in assessing climate risks that are on our agenda, namely scenario analysis and data gaps. These issues will also be main themes at today's conference.

Following the Great Financial Crisis, stress tests and scenarios have become cornerstones of risk management in the financial sector.

Scenario analysis has also turned out to be highly useful for climate risk analysis. It helps us understand how climate-related risks might evolve and how the economy and the financial system might be affected.

But making scenarios for events based on science is complex. One month ago, the NGFS released new short-term scenarios. These offer a useful standardized and scientifically robust global framework to analyze the potential near-term impacts of climate policies and climate change.[1]

There are important regional and local differences that need to be tweaked into such standardized scenarios. And some regional institutions are developing tailor-made scenario analysis. An example is the Fit-for-55 climate scenario analysis conducted last year by the three ESAs together with the ECB.[2] We may hear more about this at the conference today.

Danmarks Nationalbank has also carried out our own tailor-made local scenario analysis. Last year, we published a mapping of potential climate-related events and their associated risks over the next decade for Danish credit institutions.[3] We have also collaborated with the Danish Research Institute for Economic Analysis and Modelling, DREAM, to develop a new

[1] See The Network of Central Banks and Supervisors for Greening the Financial System (NGFS), Short-term scenarios, May 2025 (*link*).
[2] See the European Supervisory Authorities and the European Central Bank, Fit-For-55 climate scenario analysis, November 2024 (*link*).
[3] See Niels Framroze Møller and Martin Oksbjerg, The most significant financial risks from climate change and green transition, *Danmarks Nationalbank Analysis*, no. 6, April 2024 (*link*).

methodology to assess the impact of the transition for the Danish economy and banks.[4] We will hear more about this later today.

In our scenario work, we have mainly focused on transition risks. But in future work, I expect physical climate risks to gain a more prominent role in scenarios. Physical risks are materializing, and the ever-increasing global carbon emissions may speed things up. Acute physical risks such as droughts and floods require more attention. The impact varies by location and severity, but they can affect sectors like agriculture or real estate, and in turn, the value of collateral held by banks. Here, insurance coverage will be an important consideration when assessing the impact on the financial sector.

Data gaps have historically been a major challenge, but there has been significant progress in recent years

Let me now turn to data gaps. Poor data availability and quality have long challenged climate risks.

Central banks and supervisors have a role to play in overcoming this obstacle. We can collect and publish data and ensure transparency in our assessments. Financial institutions also play a role. Banks can and should always ask their customers to share the information necessary. It is the responsibility of banks to detect, manage and disclose risks properly, including climate change risk.

We also need to use new data from existing sources. At least in Denmark, there is potential to make greater use of existing data sources for climate risk assessment. An example is data from the Technical University of Denmark. Researchers have developed highly detailed, nationwide flood scenarios in case of storm surges.[5] Storm surge is a central physical climate risk here in Denmark. In Danmarks Nationalbank we combine this with micro-level housing data to assess the impact on collateral values. This can in turn help assess financial risk related to storm surges.

While some data is out there to be used, there is clearly a lack of standardized comparable data on climate risks. More and better data are needed. The EU has introduced sustainability reporting requirements that may help address data gaps. The EU Omnibus Package, proposed earlier

[4] See Søren Straarup Jensen, Jonas Deis-Bach, Marcus Mølbak Ingholt and Martin Oksbjerg, New methodology for assessing economic and financial risks of the green transition, *Danmarks Nationalbank Economic Memo*, no. 11, November 2024 (*link*).

[5] See Kaspersen, Halsnæs, Sunding, Mik-Meyer and Drenck, Skader ved stormfloder i Danmark, *DTU Management,* april 2025 (*link* – in Danish only).

this year, aims to simplify requirements. The goal is a worthy one, namely to reduce administrative burdens. But it has sparked debate over its potential impact on data availability. It is important that simplification does not come at the expense of systemic climate risk assessments. We need to follow this closely.

This conference focuses on collaboration to assess and handle climate-related financial risks

This brings me to our aim of this conference, namely collaboration on climate-related financial risks and how to assess these.

Risk assessment and risk management is familiar to us in the financial sector. We assess business cycle risks, liquidity and solvency risks, and macro-financial dynamics. In that light, climate risk assessment is not fundamentally different.

But climate risks are more complex and challenging in a number of ways. For one, we have no historical data to base our expectations on. Another complexity is the relationship between emissions, climate change, and the economy.

We all – central banks, regulatory agencies, financial institutions – can learn from each other on how to handle these challenges. And we can share best practices.

This conference is an opportunity to do exactly that. We have speakers from central banks like the ECB and the Bank of England, as well as representatives from the banking sector.

But because few of us understand the physics of climate change or the engineering of the green transition, we have to engage and learn from science as well. On that note, I am glad that we also have representatives from outside the financial sector today, including our next speaker Katherine Richardson from the University of Copenhagen.

Main messages

Before I give the word to Catherine, let me conclude:

First, the urgency of climate-related risks is increasing. Climate risks should be assessed and prioritized alongside other key risks we are currently faced with.

Second, scenario analysis and reliable data are key for our ability to assess and address climate risks. Both need to be refined.

Finally, collaboration across institutions and countries is key for good climate risk analysis. The risks arising from climate change are global and multidisciplinary. Learning from each other and collaborating is not only useful — it is necessary.

With that, I very much look forward to hearing from our speakers today and engaging with all of you on this important work. Thank you.

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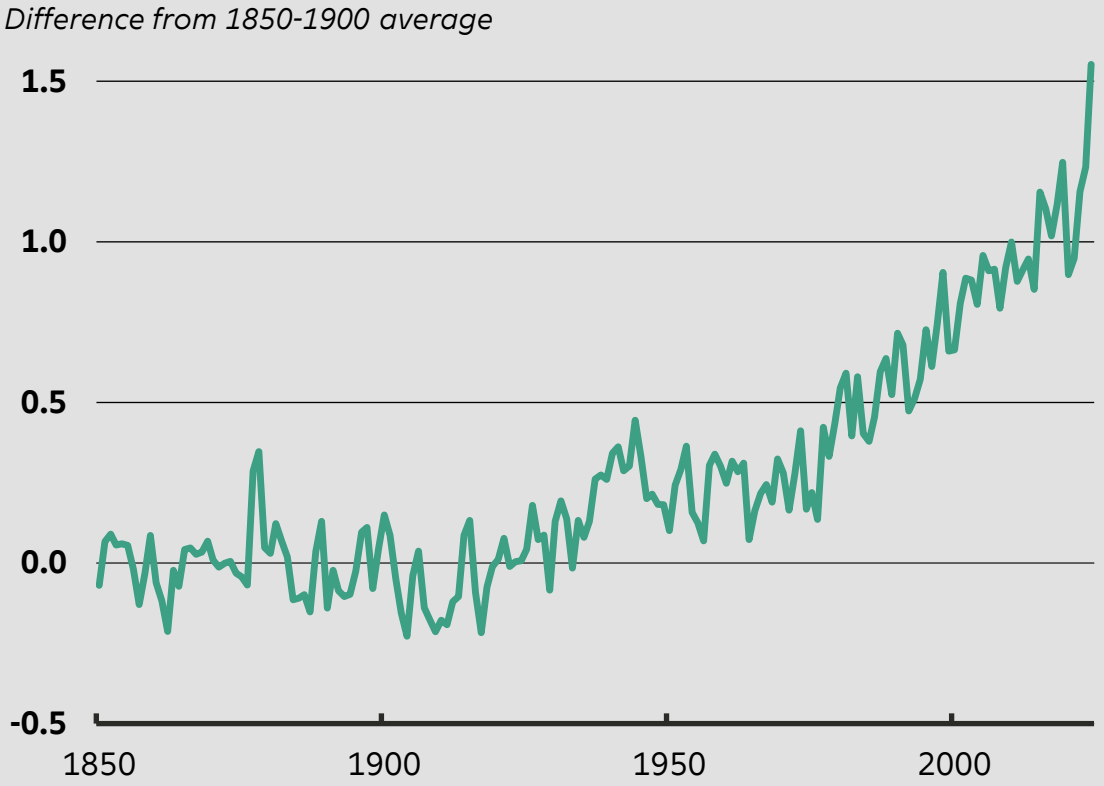
Climate risks and financial stability – staying the course amid uncertainty

Governor Signe Krogstrup
Conference on Climate Change and Green Transition, Danmarks Nationalbank, 19 June, 2025

Climate agenda competing for attention in a complex global risk environment

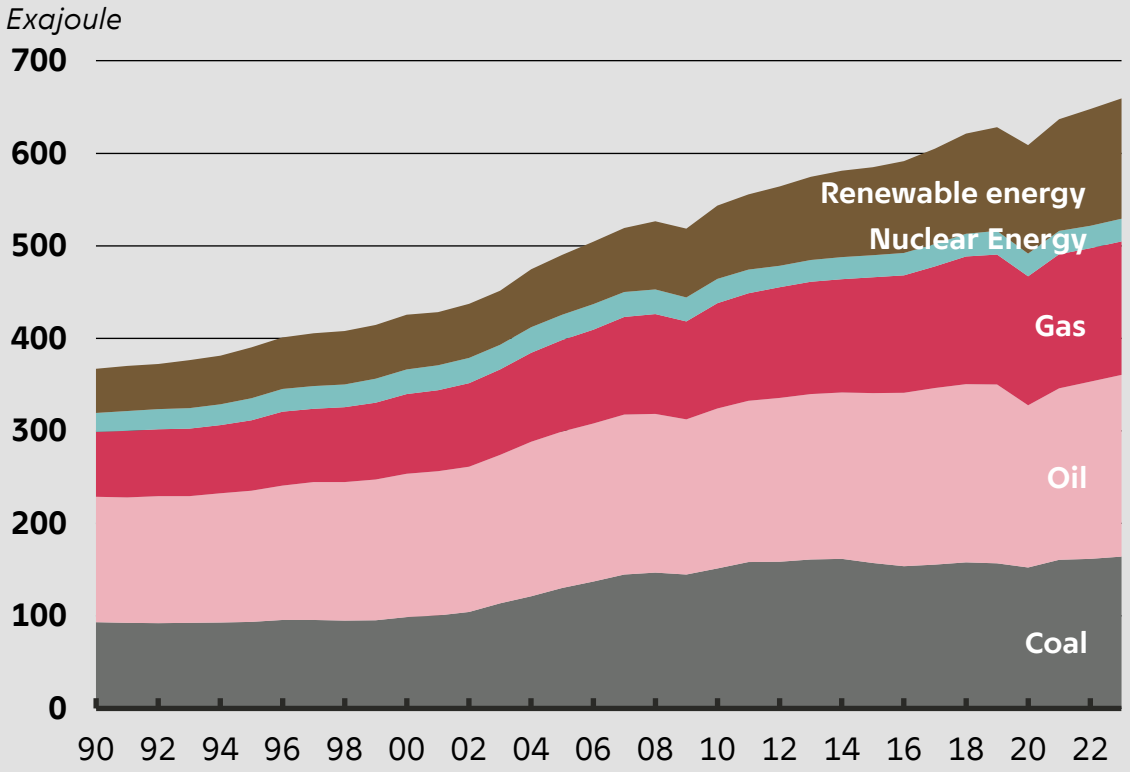
Climate risks are intensifying, and the transition remains uneven

Global mean temperatures continue to rise



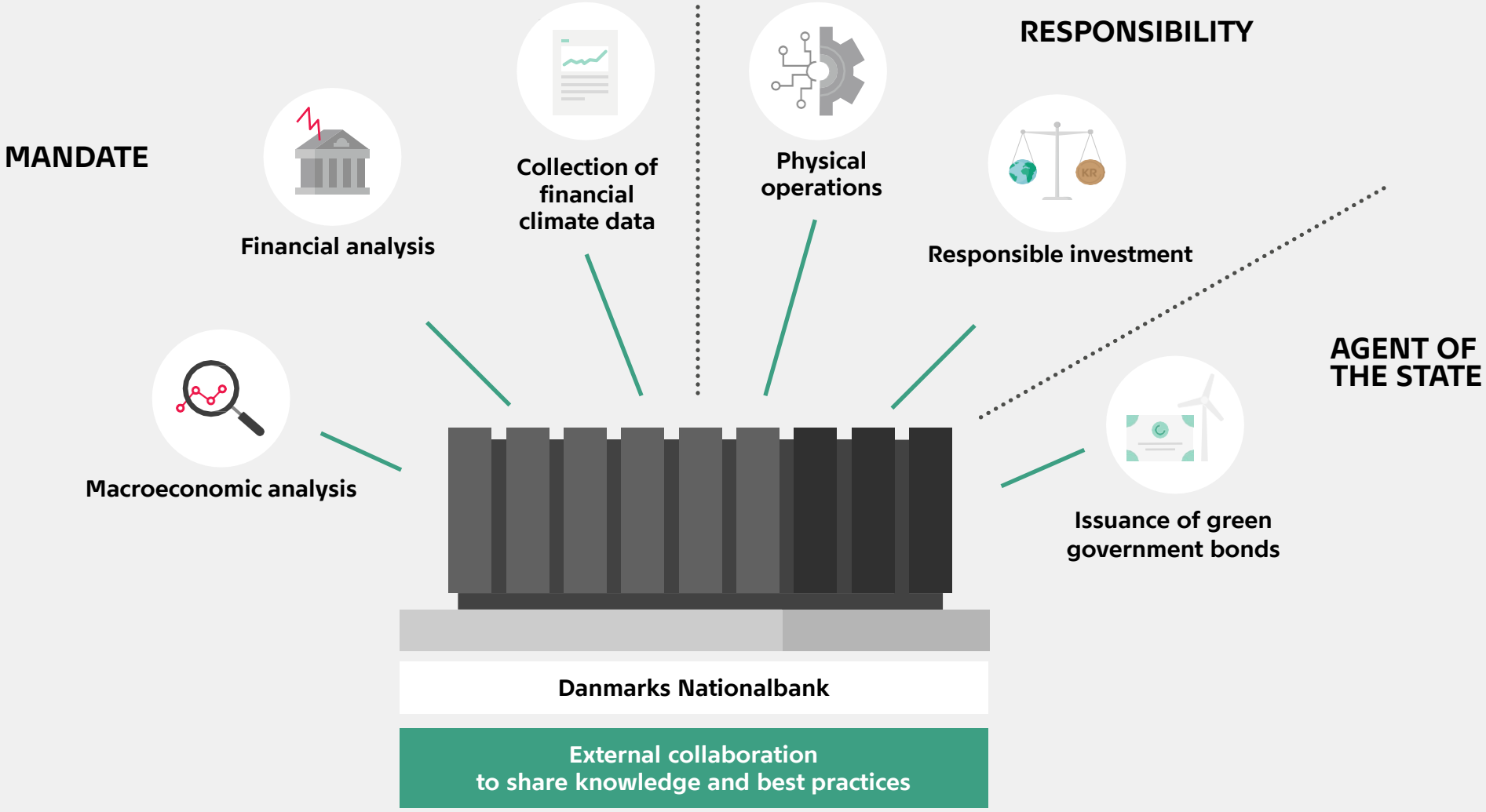
Source: World Meteorological Organization

Global energy supply remains largely fossil-based

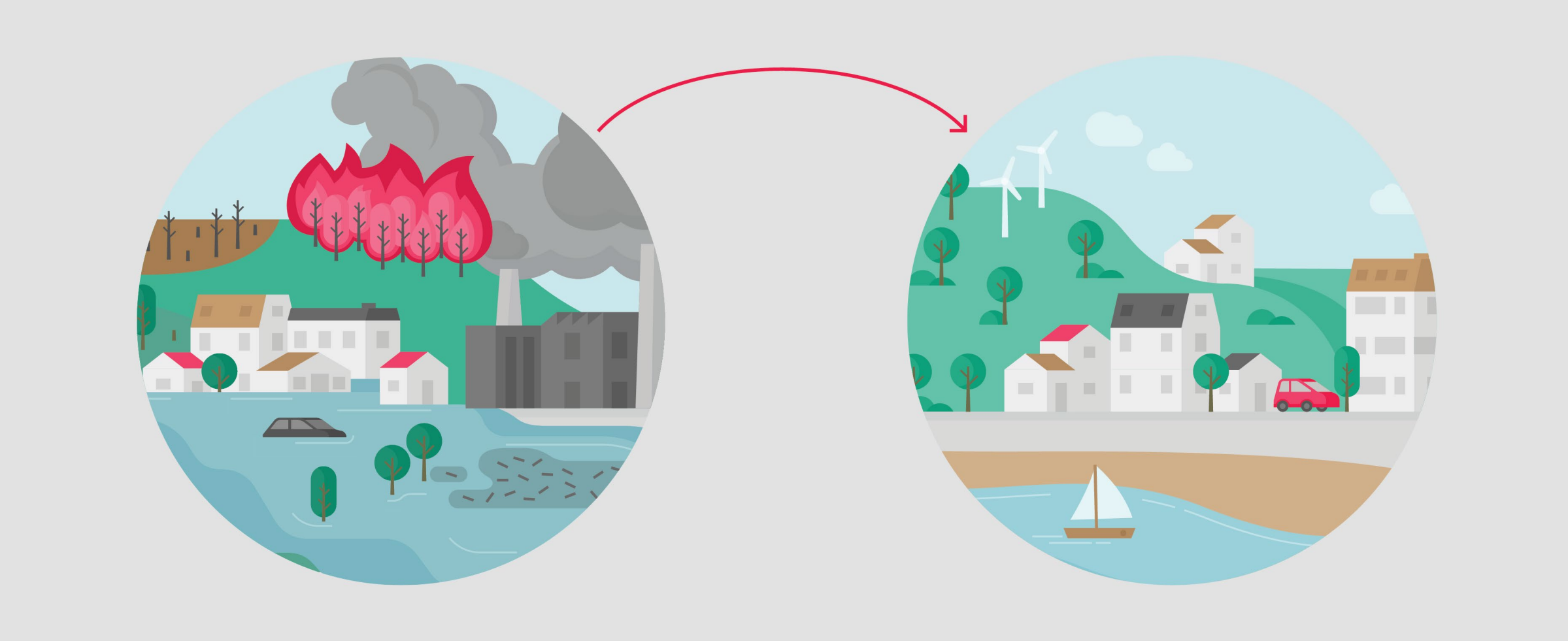


Source: Macrobond

Climate-related activities in Danmarks Nationalbank



Scenarios are key to understand climate-related risks and their implications



Data gaps are still a major challenge, but there has been significant progress in recent years

An example of valuable data, combining scientific and financial information

Scientific

Highly detailed, nationwide flood scenarios from the Technical University of Denmark

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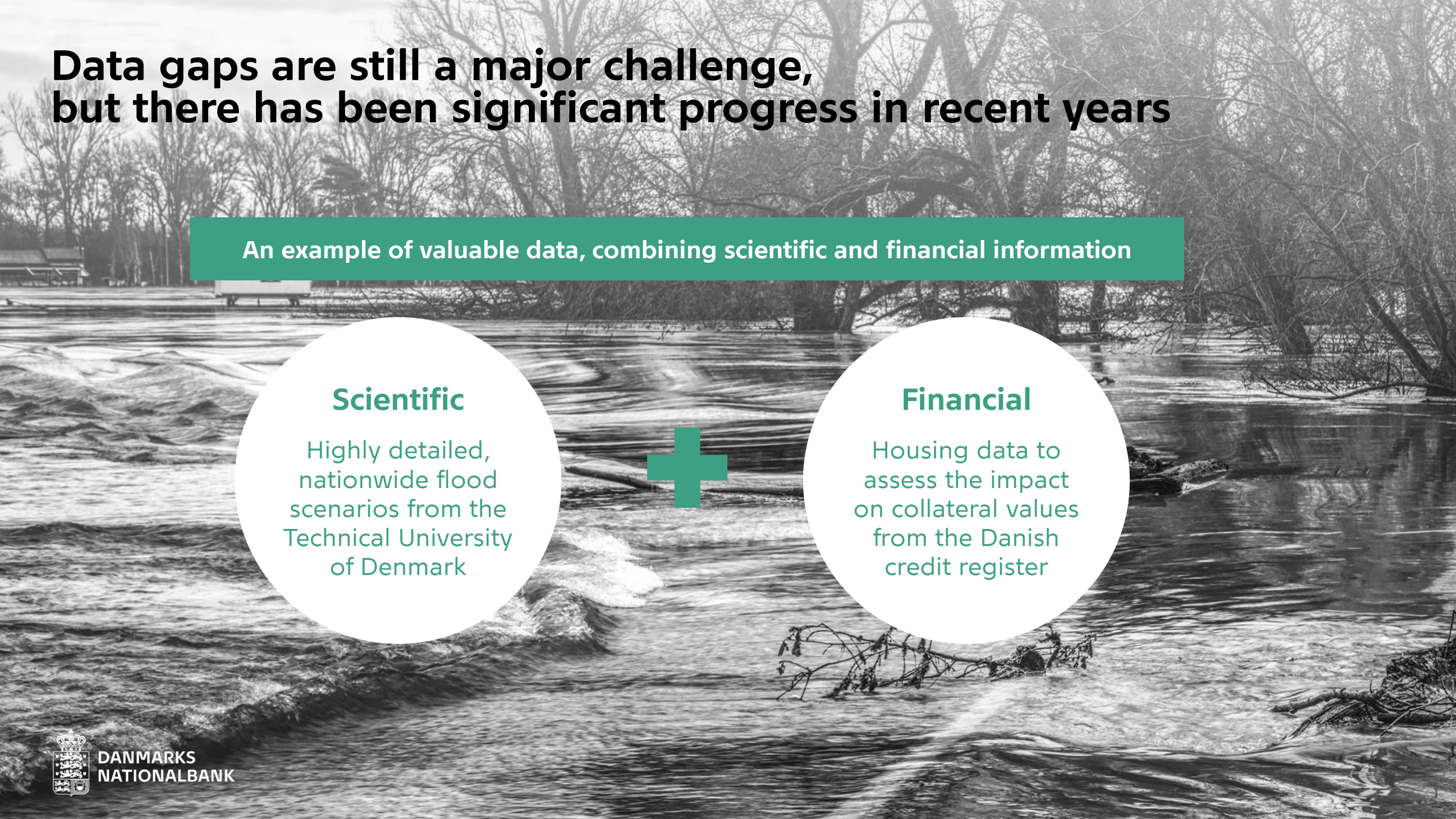
Financial

Housing data to assess the impact on collateral values from the Danish credit register



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Main messages

1

Climate risks are becoming increasingly urgent – risks should be assessed alongside other key risks

2

Scenarios and data are key to understand climate-related risks

3

Collaboration across institutions is necessary, as climate risks are global and multidisciplinary

Thank you!