



# HOW TO ASSESS CLIMATE RISKS IN THE NORWEGIAN BANKING SECTOR?

*CLIMATE CHANGE AND CENTRAL BANKING – A NORDIC PERSPECTIVE*

Haakon Solheim, 25 October 2021

# Outline

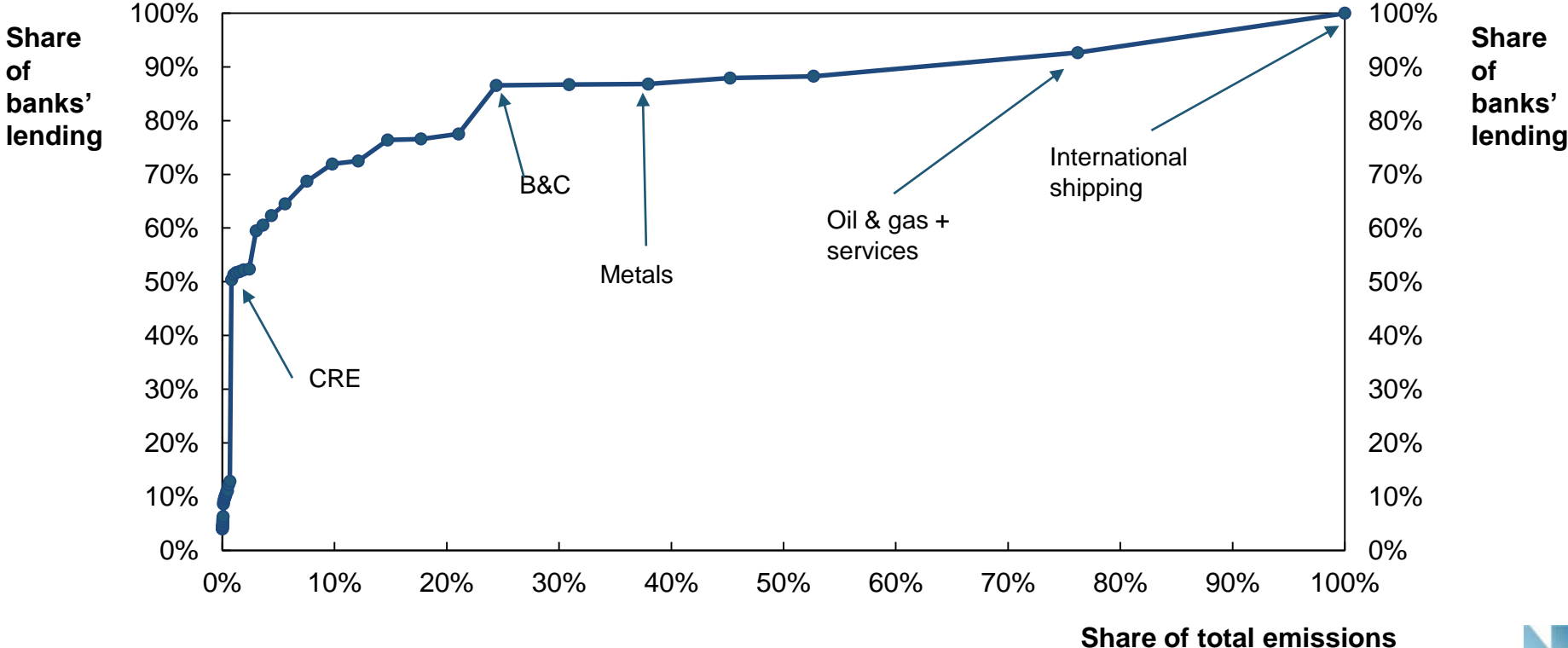
- Transition risk
  - Banks' exposure to loans to non-financial corporations (NFC) most affected by an increase in carbon taxes
- Physical risk
  - Share of banks' collateral in commercial real estate (CRE) exposed to high tides and flooding



# Most Norwegian emissions in sectors with limited bank loans

Lending as share of total lending to non-financial corporates.

Emissions in CO2-equivalents as share of total emissions. 2019



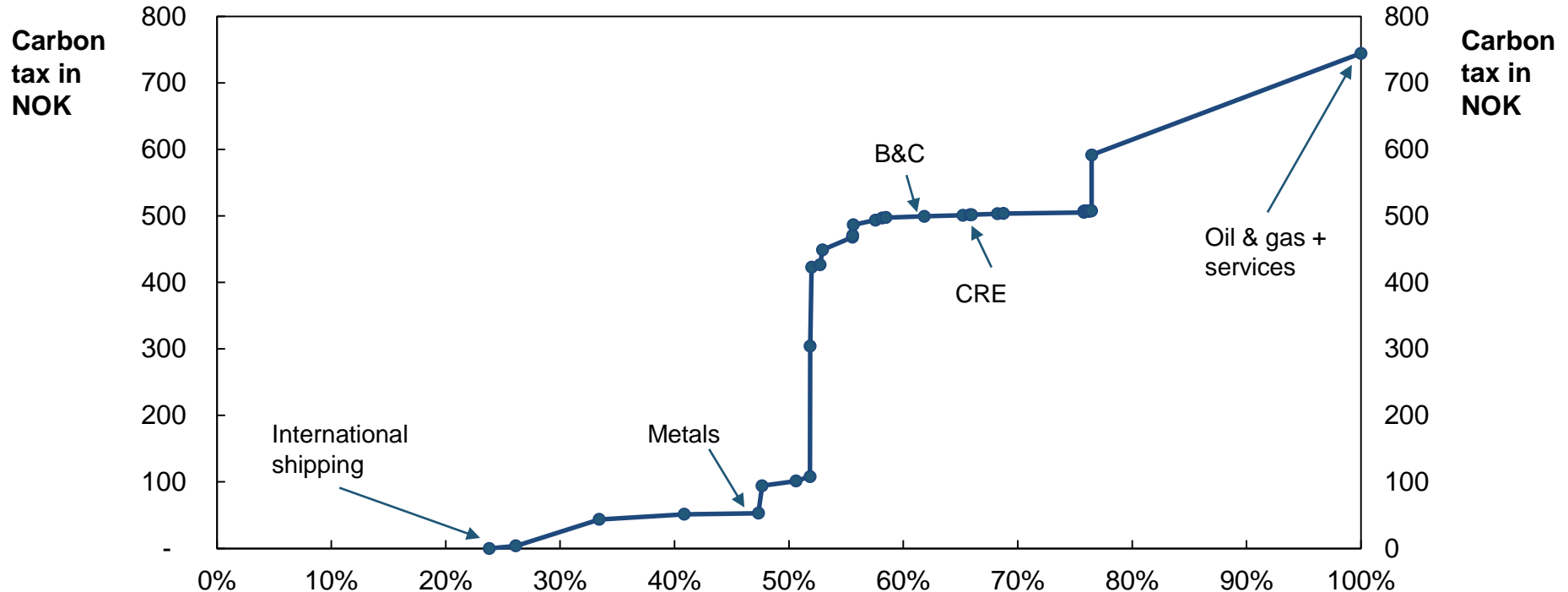
Sources: Finanstilsynet, Statistics Norway and Norges Bank



# Many Norwegian sectors still have low cost of carbon emissions

Average cost of carbon per ton CO<sub>2</sub>-equivalents.

Emissions in CO<sub>2</sub>-equivalents as share of total emissions. 2019



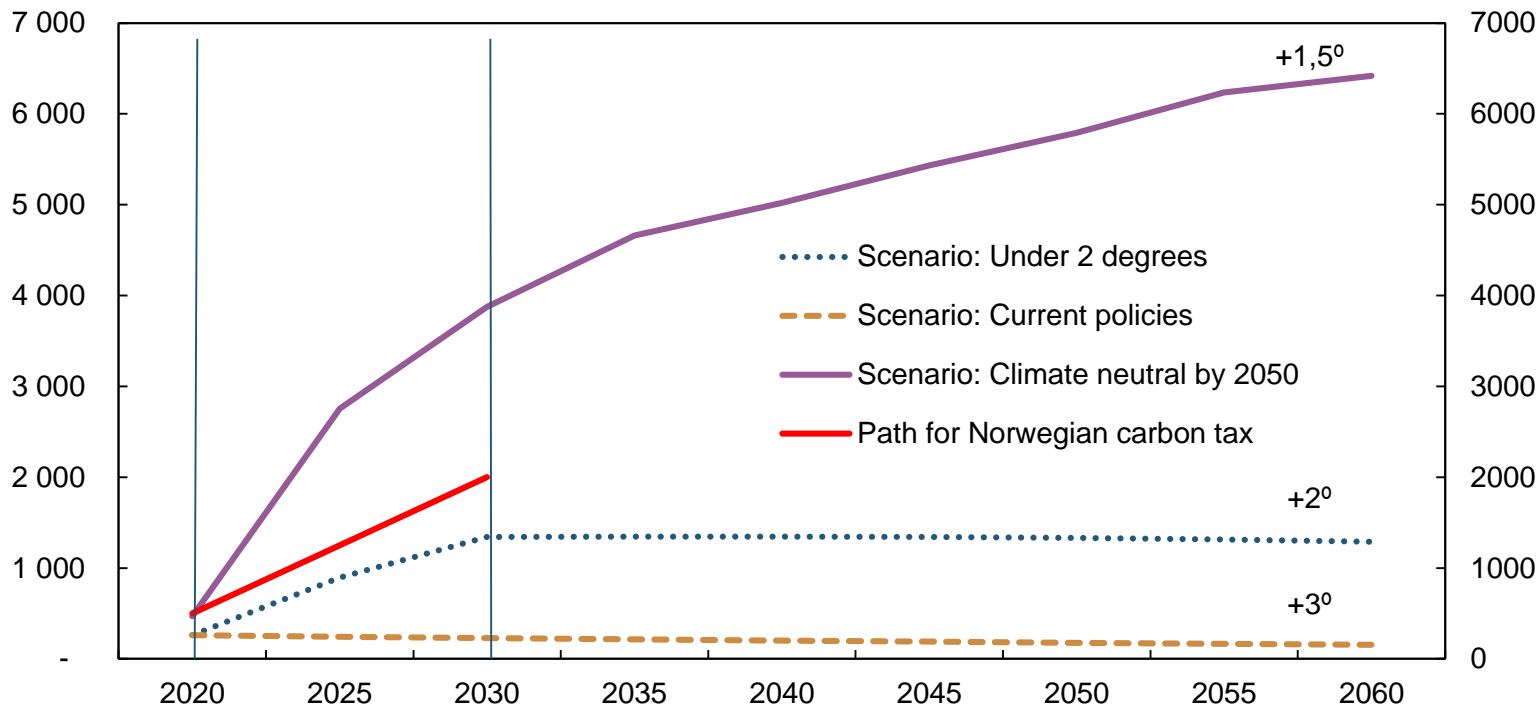
Sources: Energi og Klima, Ministry of Finance, Norwegian Environmental Agency, Statistics Norway and Norges Bank

Share of total emissions



# Carbon taxes are expected to rise

Paths for carbon tax under different goals for climate change from NGFS and as indicated by the Norwegian government. Carbon tax in NOK per ton CO<sub>2</sub> equivalents.

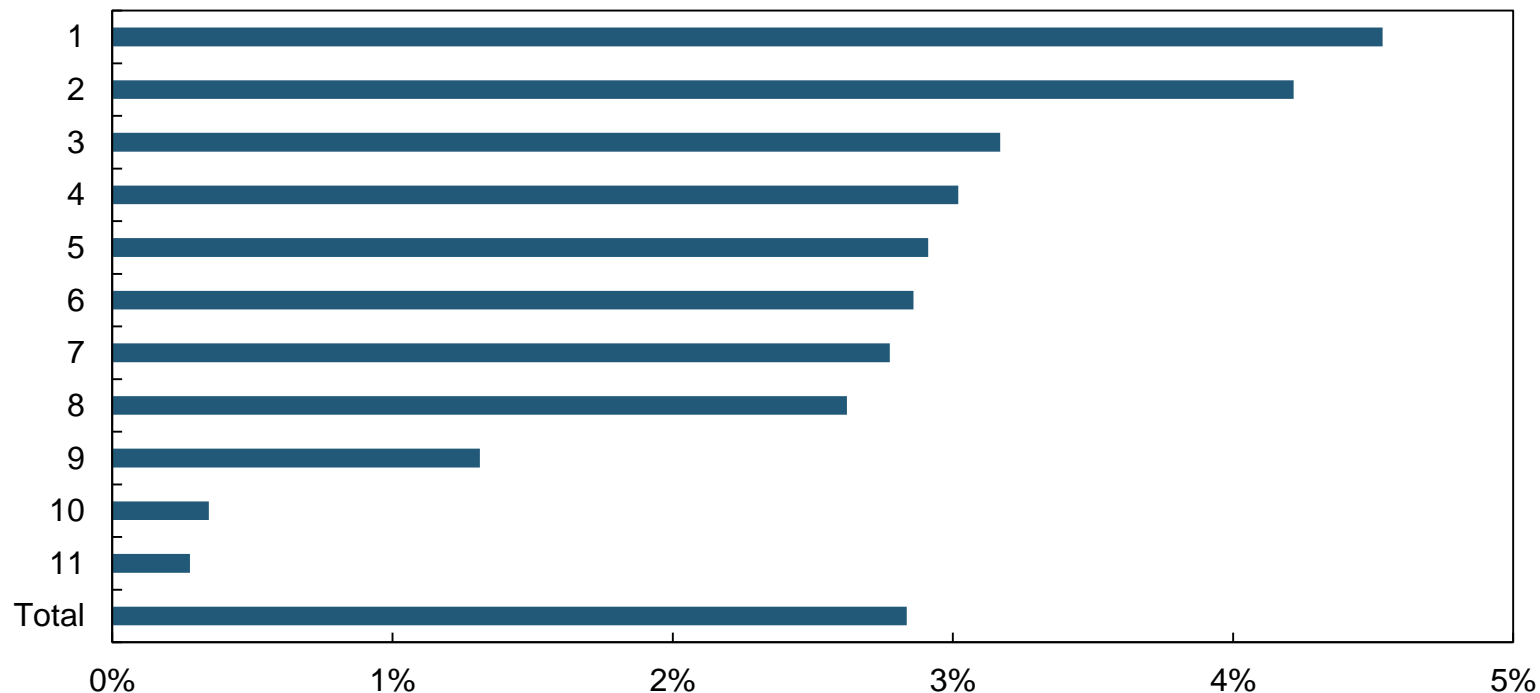


Sources: NGFS and Norges Bank



# Exposure to transition risk – large differences between banks

Exposure to increase in carbon tax from current level to NOK 2000. As share of production, weighted by banks' loan share. 2019

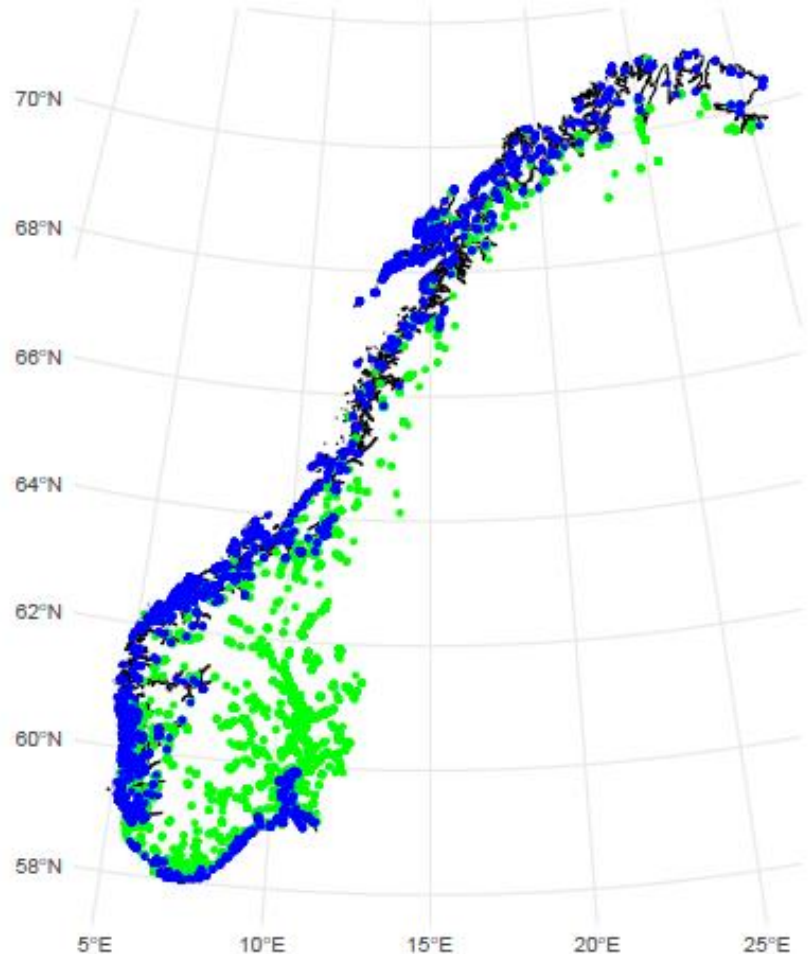


Sources: Energi og Klima, Finanstilsynet, Ministry of Finance, Norwegian Environmental Agency, Statistics Norway and Norges Bank



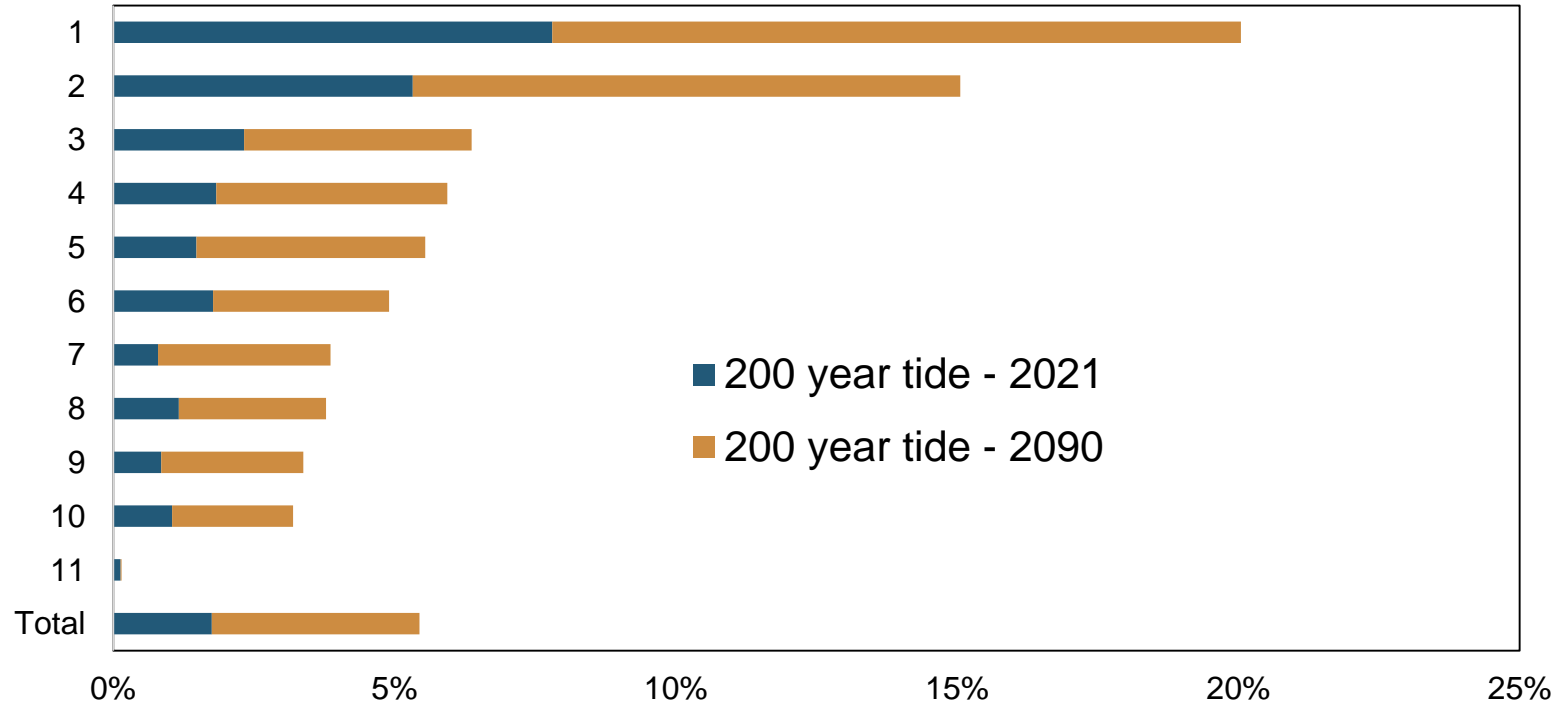
# Physical risk: CRE exposed to tides or flooding

- CRE in zone for 200-years tide in 2090
- CRE in zone for risk of flooding



# Norwegian CRE exposed to high tides

As share of total collateral by bank measured in square meters. Percent.







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