

# DANMARKS NATIONALBANK

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## DISCUSSION: "MACRO-FINANCIAL IMPLICATIONS OF CLIMATE CHANGE AND THE CARBON TRANSITION" BY FREDERICK VAN DER PLOEG

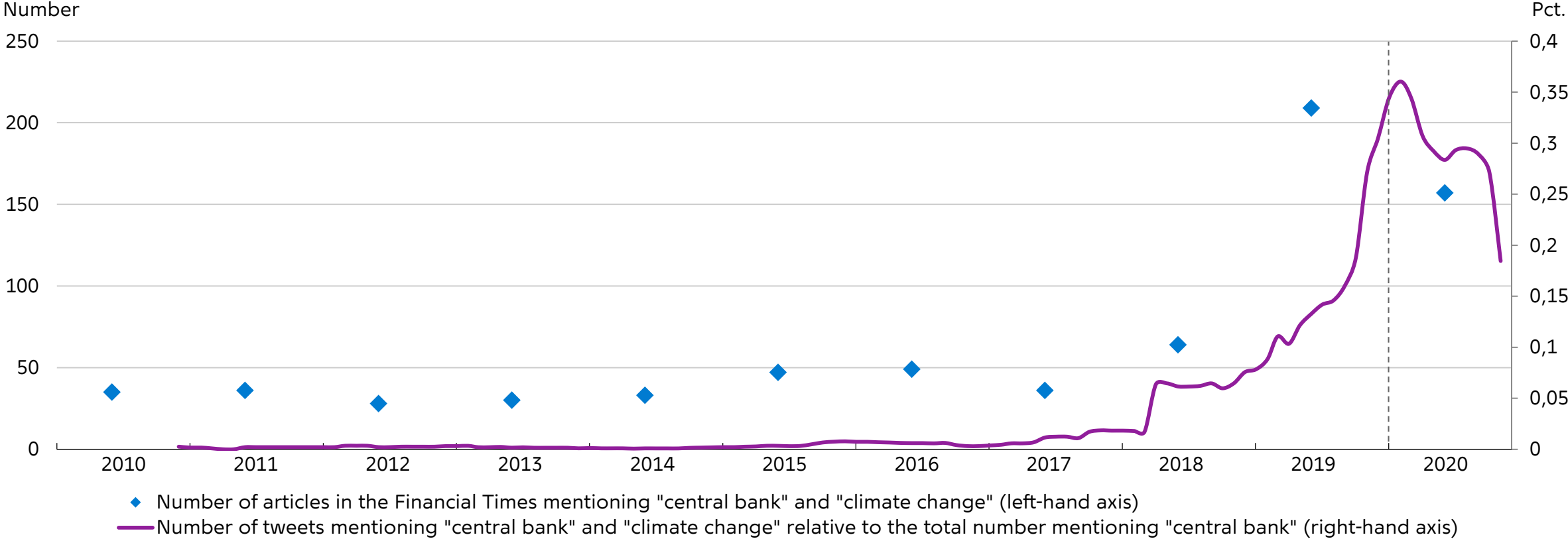
Signe Krogstrup, Member of Board of Governors, Danmarks Nationalbank



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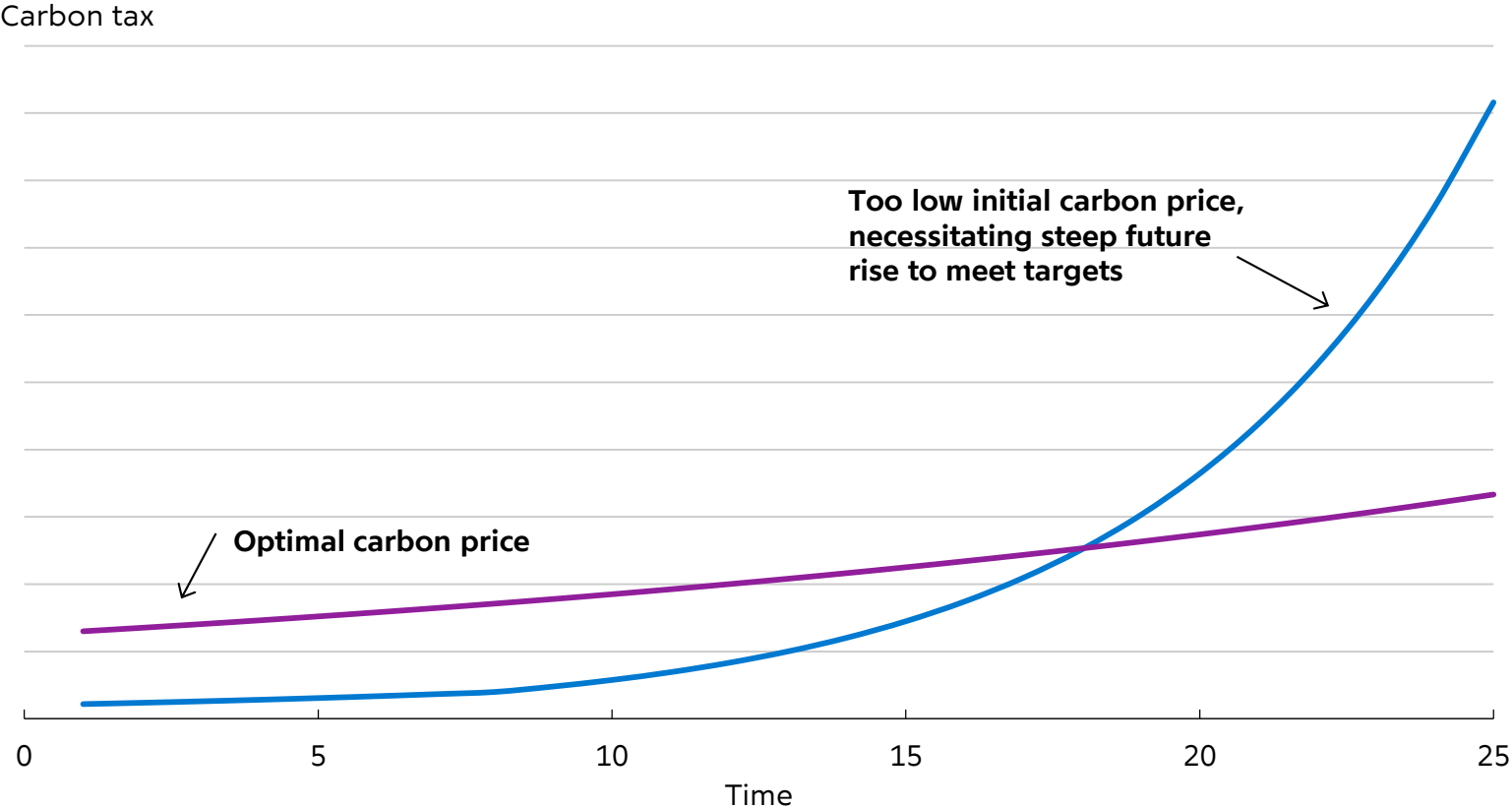
# Central banks and climate change

The phrases "climate change" and "central bank" in the Financial Times and on Twitter



Note: The search was conducted on November 9. Year 2020 only covers publication until this date.  
 Source: Danmarks Nationalbank based on the search engine on Financial Times' website and based on Twitter.

# The price of carbon path and risks to financial stability

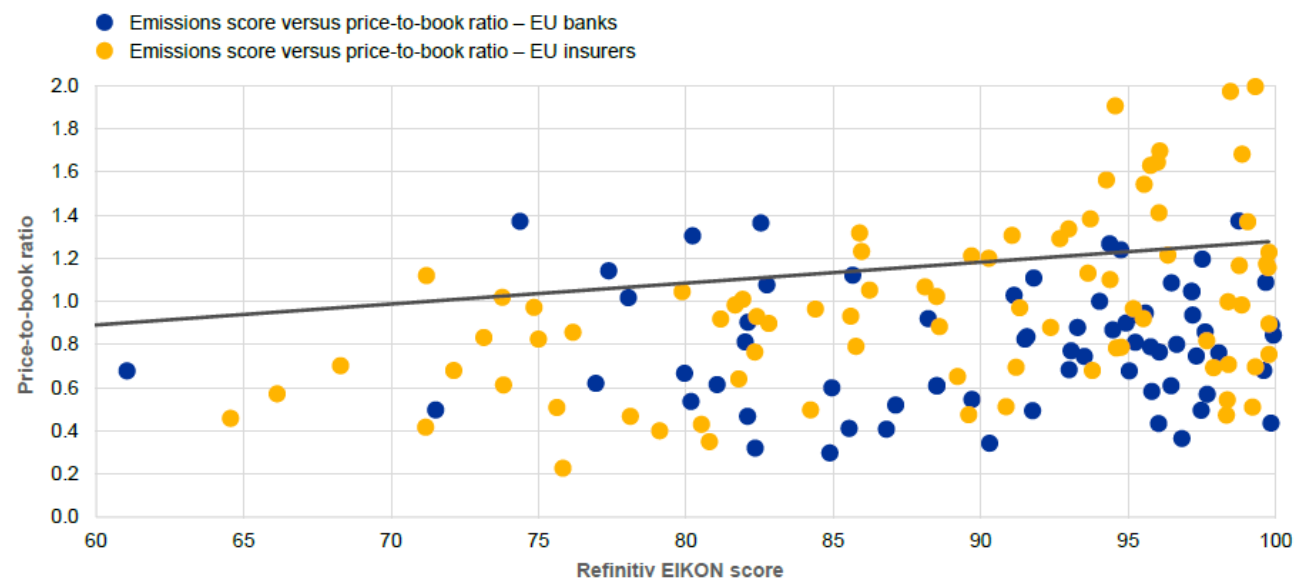


Note: The figure is meant as a conceptual illustration  
Source: Danmarks Nationalbank

# Pricing of climate risks in financial markets

## Financial market pricing of climate risk: Environmental score and the price-to-book ratios of European banks and insurers

(indices)



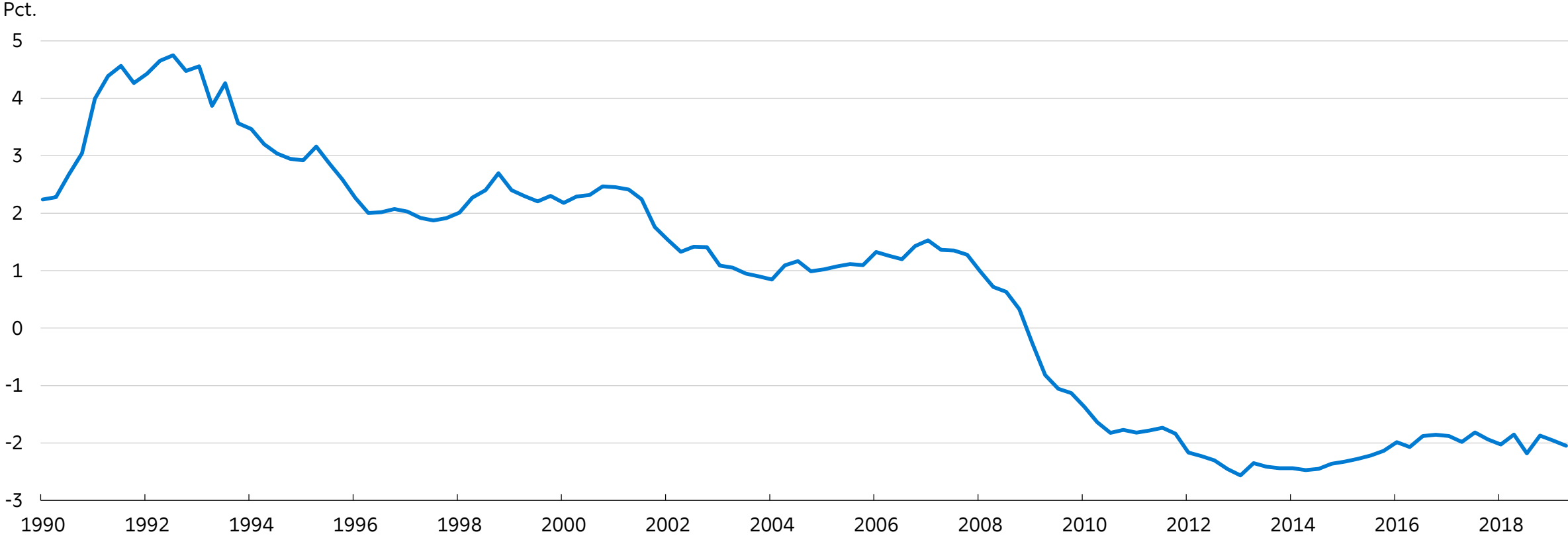
Sources: Bloomberg, Refinitiv EIKON, S&P Global Market Intelligence and Dealogic.

Note: The sub-sample used in the estimation consists of 16 EU insurers and 12 EU banks. Standard errors are clustered and robust. An Arellano-Bond estimator is used, and controls include institution-specific variables (e.g. RoE, total debt, EBITDA, total expenses, total assets, dividend payout ratio, NPL ratio, Tier 1 capital ratio, solvency coverage ratio and premium growth when applicable) and market-specific variables (e.g. stock market volatility, long-term bond yields and GDP forecasts).

Note: Figure taken from Positively Green: Measuring climate change risks to financial stability. Report by the ECB and the ESRB, June 2020.

# Climate change and the natural real interest rates

Estimate of the natural real interest rate in Denmark (1990-2019)



Note: The figure plots the central estimate of the natural real interest rate in a DSGE model of the Danish economy  
Source: Updated estimate from Pedersen (2015)

# Macro financial policies in the transition

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MONETARY  
POLICY



FISCAL  
POLICY



FINANCIAL  
POLICY



# Thank you!

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