

How the Riksbank can contribute to climate policy

3 March 2020

S V E R I G E S R I K S B A N K

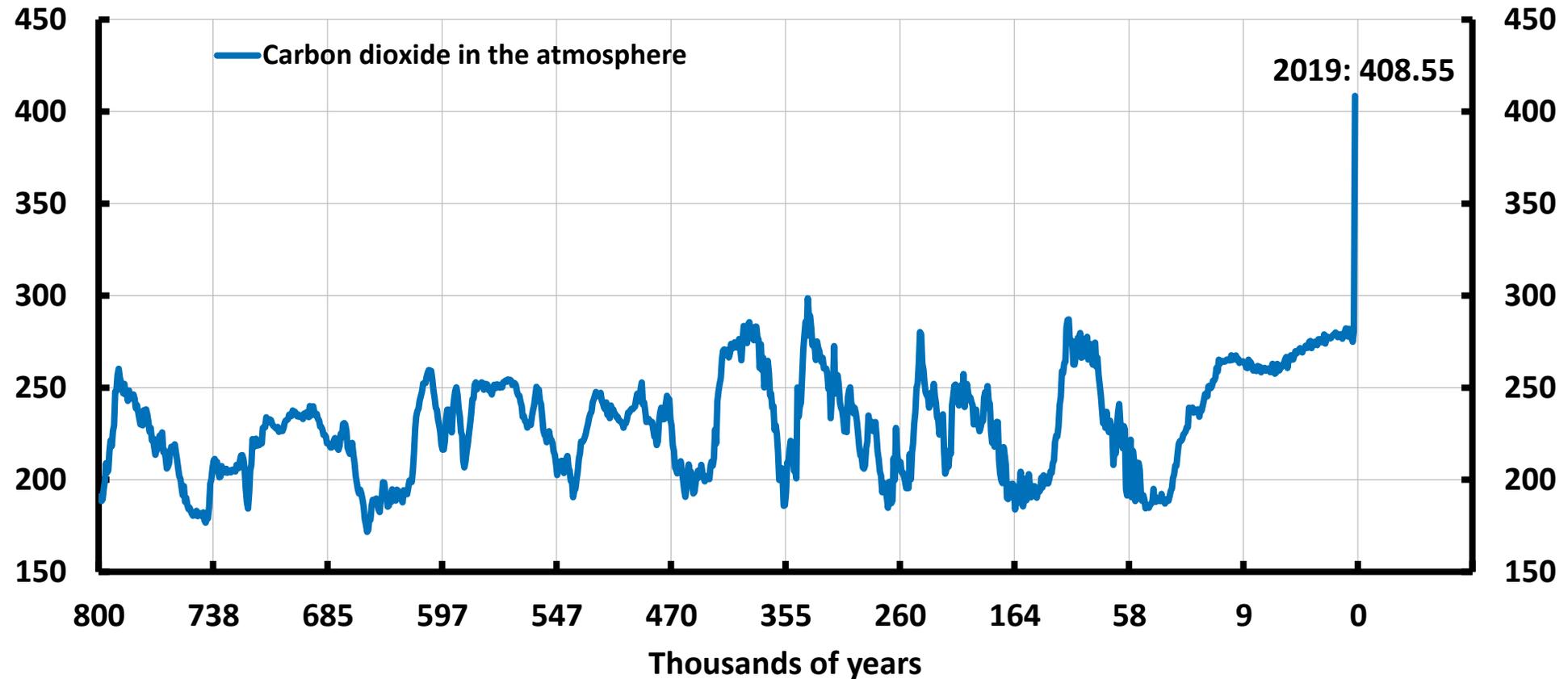
Anna Breman
Deputy Governor

Robur et Securitas – Strength and Security



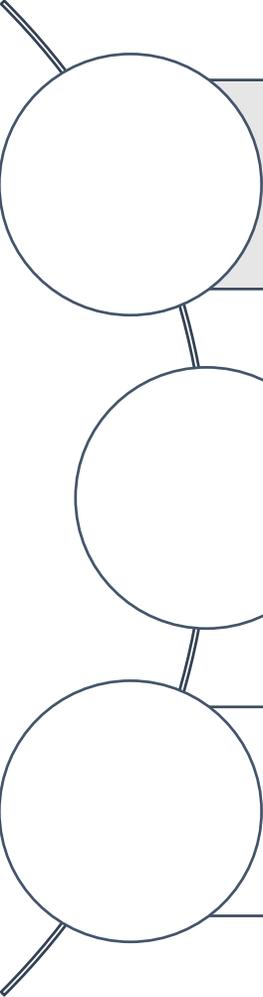
Carbon dioxide concentrations in the atmosphere over the last 800,000 years

Parts per million (ppm)



Carbon dioxide in the atmosphere over the last 800,000 years. Year zero represents 2019.

Source: Lüthi, D., et al., 2008 supplied by NOAA NCEI Paleoclimatology Program



The climate and its effect on the economy
and the financial system

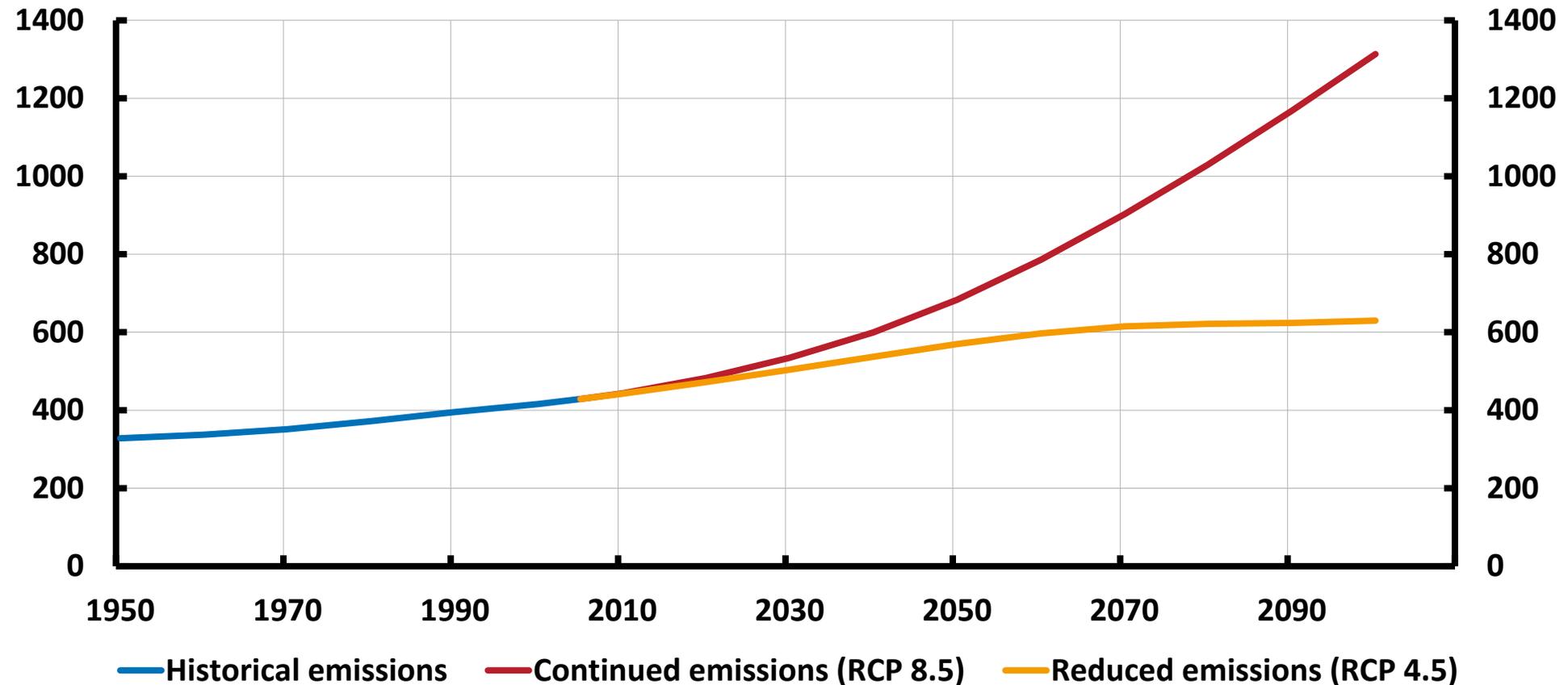
Climate-related risks can affect monetary
policy – three different scenarios

What can the Riksbank do to contribute to
more sustainable development

By how much will emissions increase?

– two scenarios

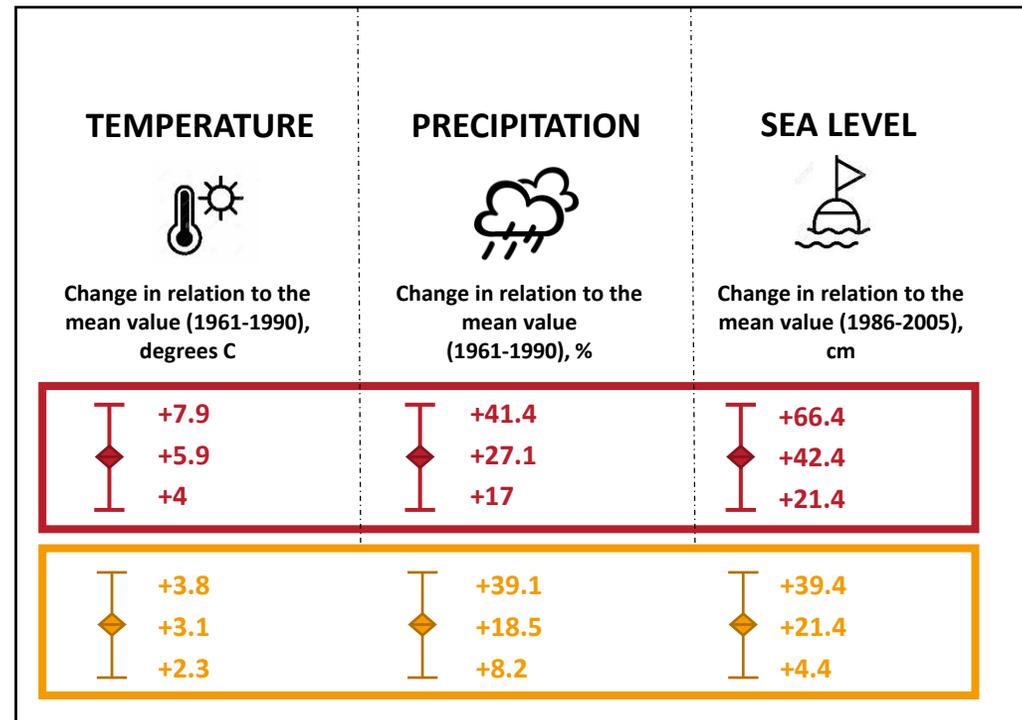
Parts per million (ppm)



The concentration of carbon-equivalent greenhouse gases in the atmosphere in two of the IPCC's scenarios, RCP 8.5 (continued carbon emissions) and RCP 4.5 (reduced emissions).

Source: RCP Database (Version 2.0.5)

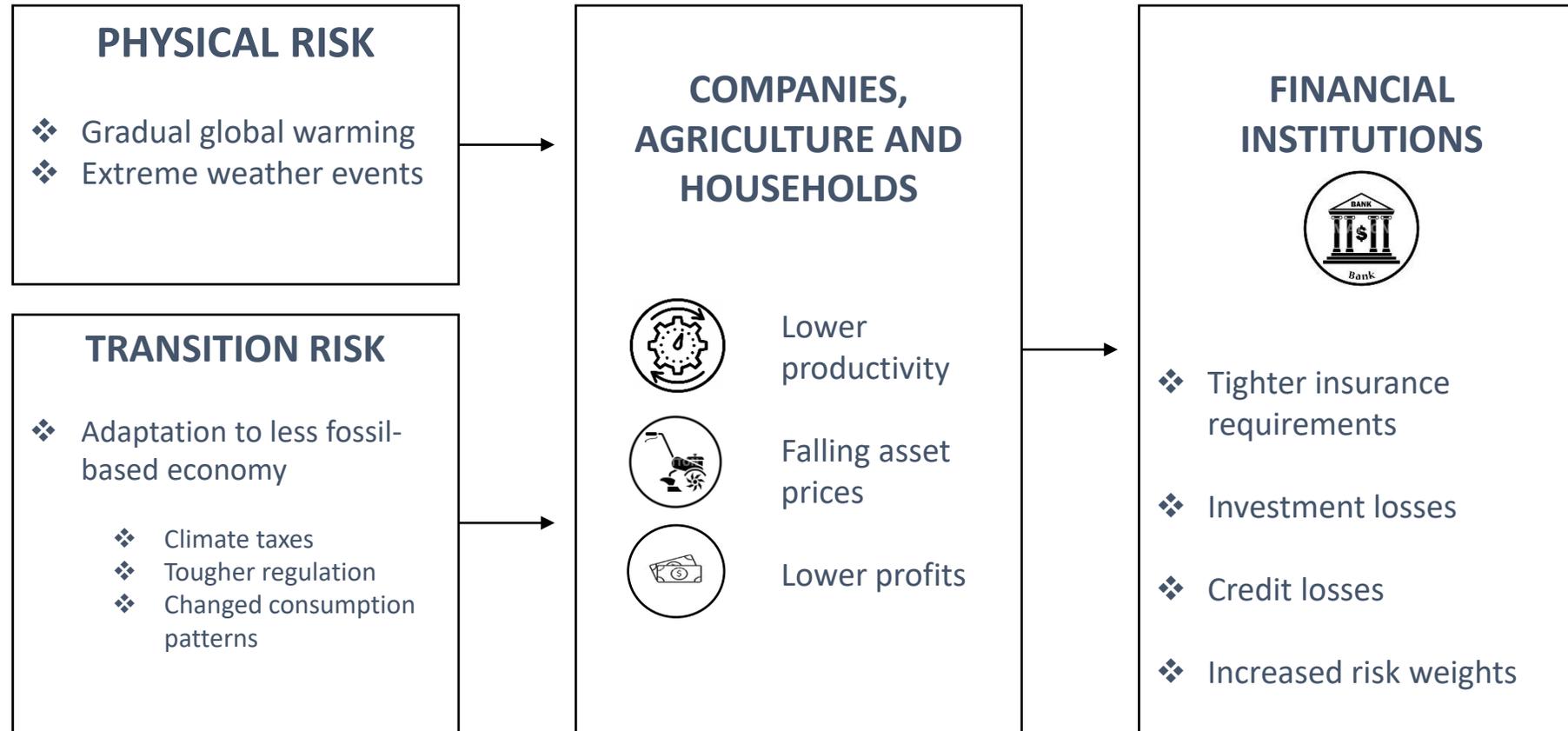
Substantial uncertainty over the effects of climate change



The graph shows the change in temperature, precipitation and sea level in the two IPCC scenarios. The figures illustrate the maximum, minimum and mean values.

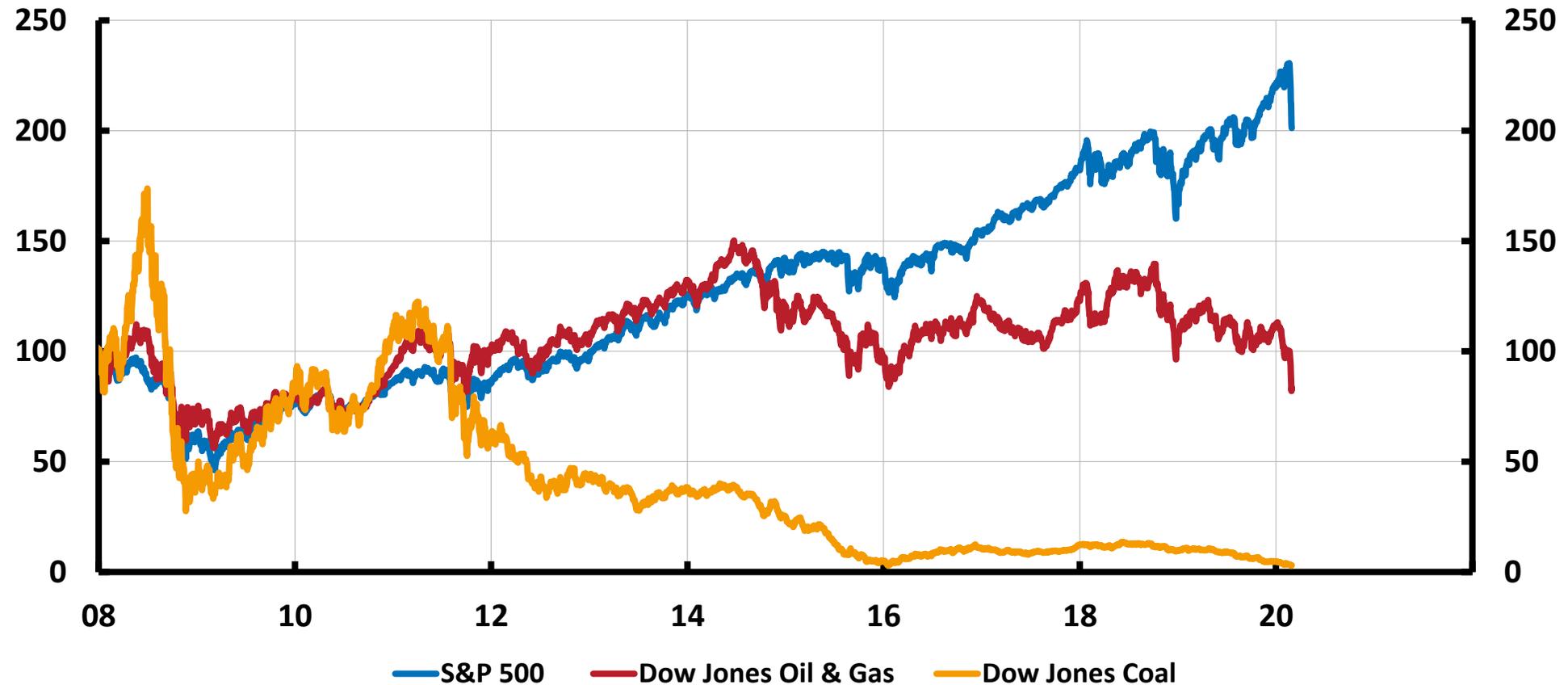
Sources: SMHI scenario data and SMHI Klimatologi no. 41.

Climate change affects the economy



Adaptation to a less fossil-based economy is already under way

Index 1 January 2008=100



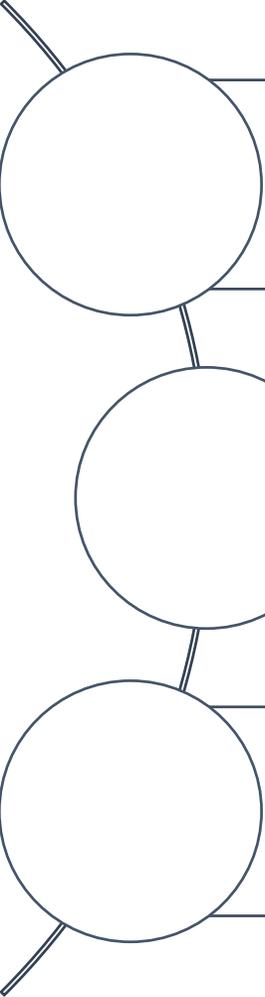
Source: Macrobond

Climate policy should be designed to avoid extreme outcomes

Climate system particularly complex – substantial uncertainty and risk for extreme outcomes with huge costs

Decisions shrouded in uncertainty – “Good decisions on average” or “avoid really bad outcomes”

Insurance perspective – we should insure ourselves so that we avoid and reduce the consequences of extreme outcomes



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Climate change can affect monetary policy – three scenarios

A temporary supply shock

A slow structural change

A severe economic crisis

The monetary policy toolbox is not exhausted

Liquidity support

- Loans to financial institutions to provide liquidity in a crisis

Policy rate

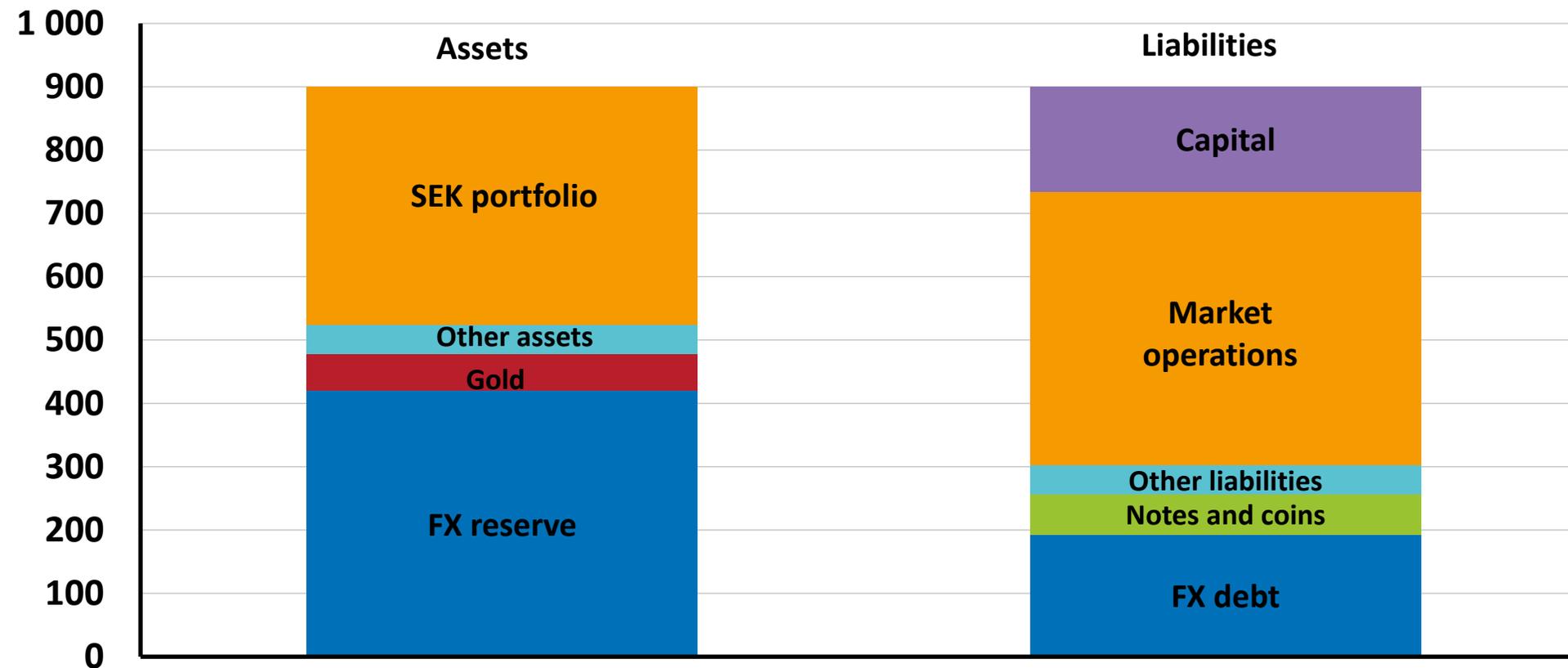
- But the interest rate is close to its *effective* lower bound

Other measures

- Purchase of housing and corporate bonds
- “Forward guidance”
- Loans to companies via banks
- Foreign exchange interventions

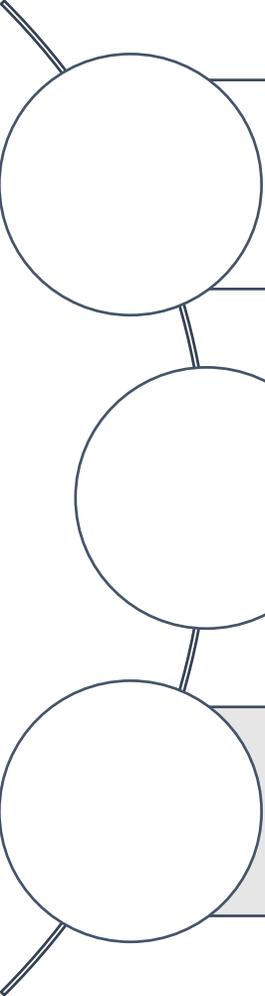
Purchase of government bonds swells the Riksbank's balance sheet

SEK billion



31 December 2019

Source: The Riksbank



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The Riksbank's role in climate work

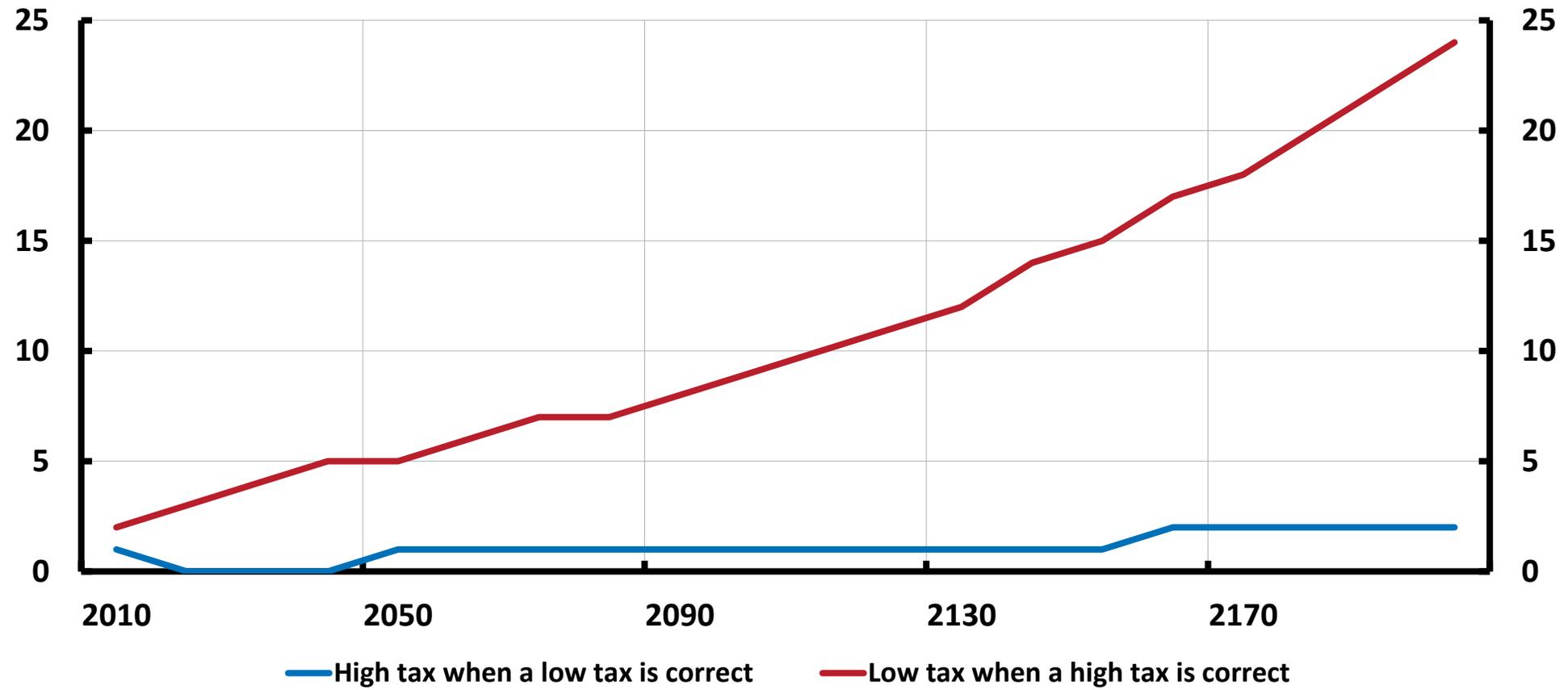
Research and analysis

Financial sector regulation

The Riksbank's balance sheet

Minor losses with a high carbon tax

Per cent



Source: Hassler, Krusell and Olovsson (2018)

The Riksbank's role in climate work

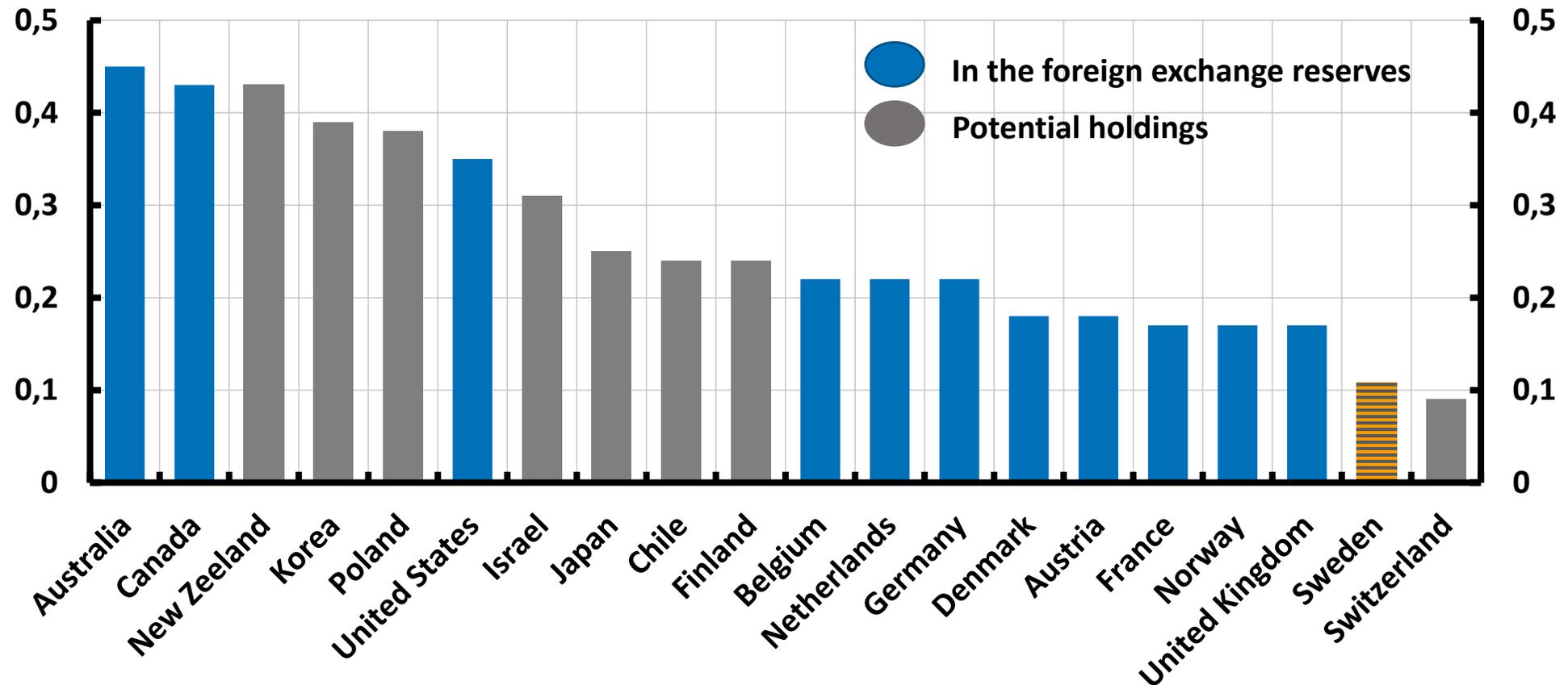
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How sustainable are the foreign exchange reserves?

Emissions as a share of GDP

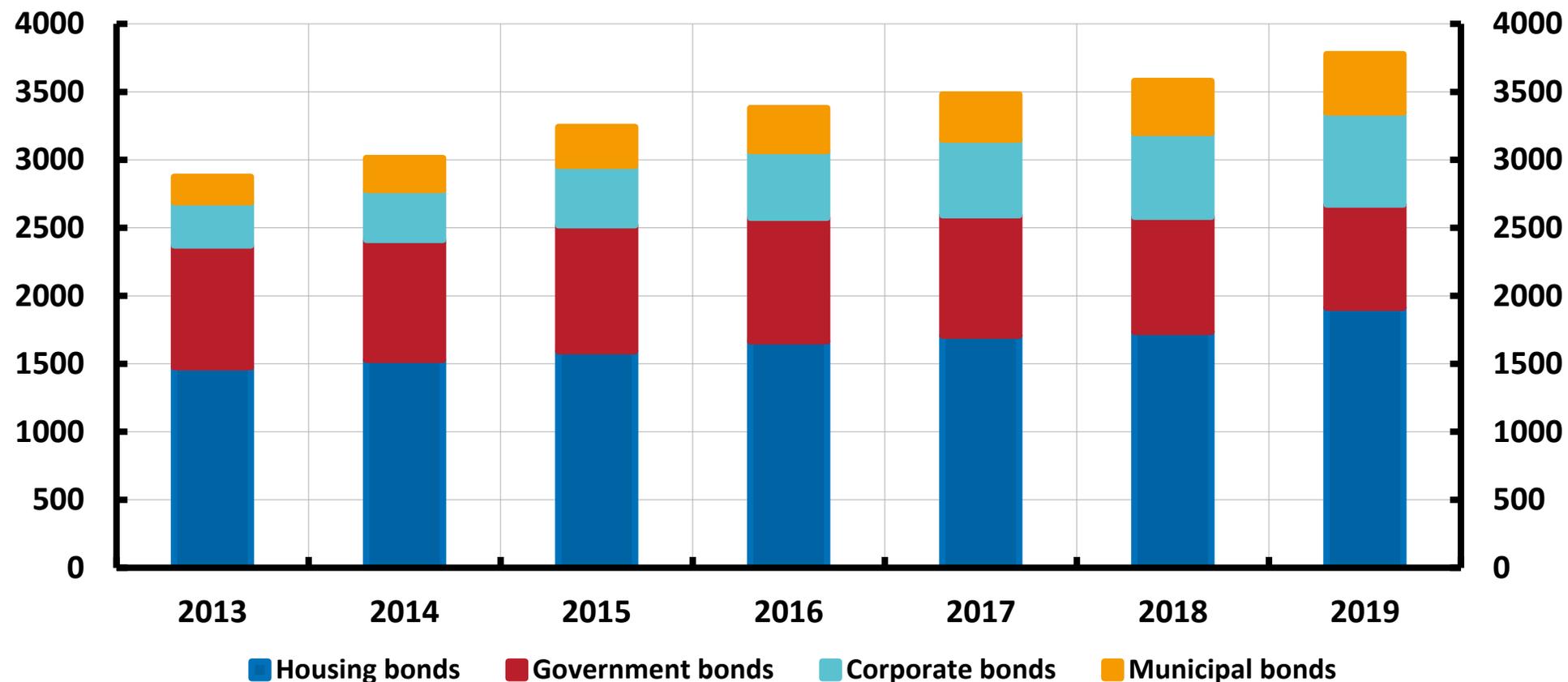


Direct greenhouse gas emissions, excluding uptake and emission of greenhouse gases from land use, GHG (kt CO₂e)/GDP (USD million).

Sources: UNFCCC, OECD and Climate Watch.

Scope to broaden bond purchases

Outstanding volume of bonds issues in SEK millions



Sources: SCB, Kommuninvest, Covered Bond Label and the Riksbank

Central banks need to take the climate issue seriously

From here strength
and security

- Independence of the Riksbank
- Focus on both business cycle and structural changes
- The Riksbank is taking the climate issue seriously

Global price on
carbon dioxide is the
highest priority

- Central banks can contribute the means within their mandates

The Riksbank's
contribution

- Research and analysis
- Cooperation with other authorities and international networks
- Continue work to review our assets

Thank you!