



OESTERREICHISCHE NATIONALBANK

EUROSYSTEM

# Consequences of the taxonomy for financing nuclear energy

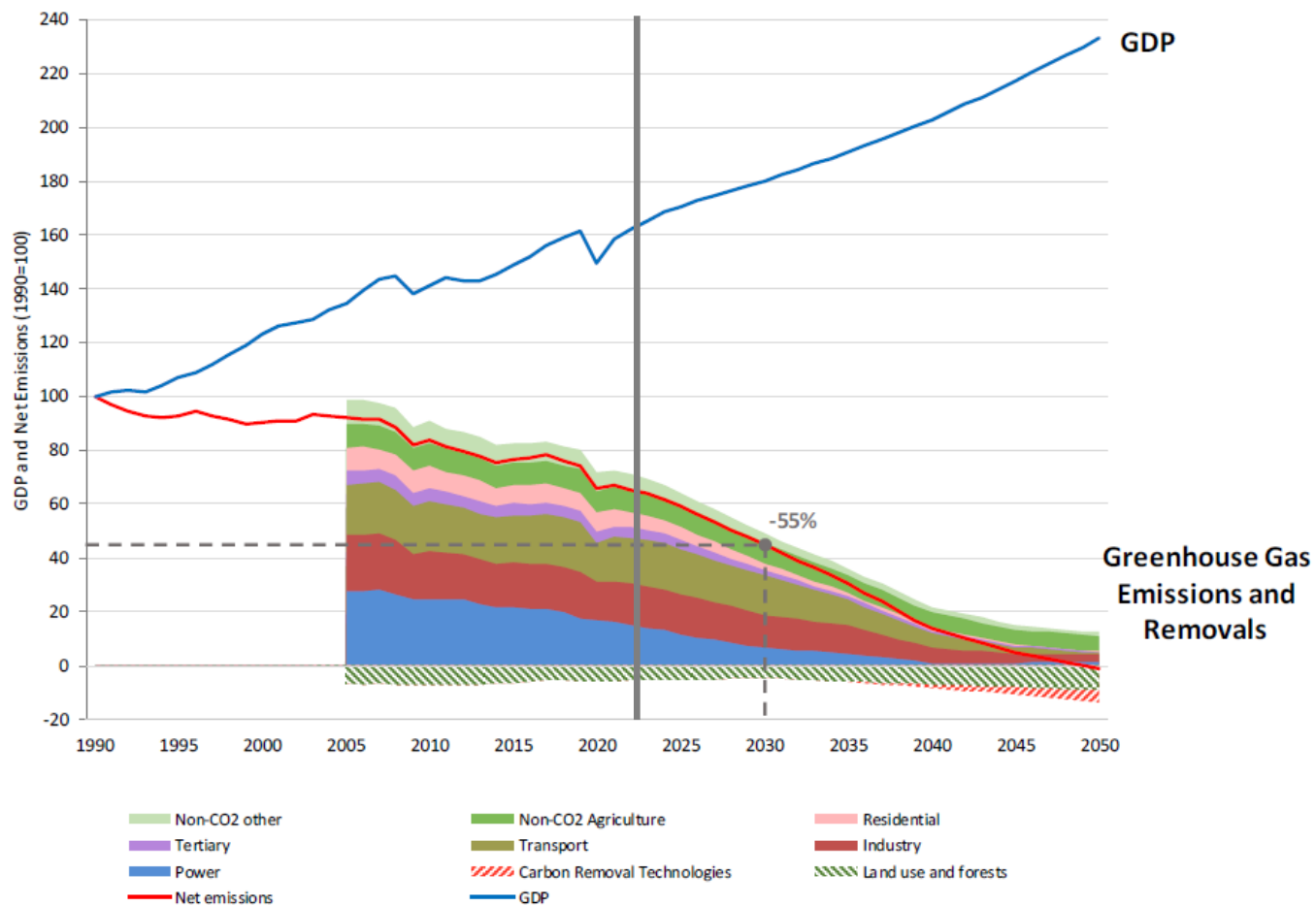
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# The EU's 2030 climate target



- The EU aims to reduce greenhouse gas emissions until 2030 compared to 1990 at least by 55%.
- By 2050, the EU should be carbon neutral.
- From 2021 to 2030 the EU will need to invest € 350 billion p.a. more to reach these goals.
- To finance these investments we will need to redirect funding from harmful economic activities to green projects.

Source: European Commission (2020)  
*“Stepping up Europe’s 2030 climate ambition”*

# Climate risk metrics

**CO<sub>2</sub>e intensity: emissions in tons per million Euro turnover**

name	country	industry	CO <sub>2</sub> intensity
Heidelberg Cement	DE	Materials, construction	14.997
Naturgy	ES	Energy, gas	7.022
OMV	AT	Energy, oil	5.904
Royal Dutch Shell	NL	Energy, oil	2.802
Volkswagen	DE	Automotive	1.514
Daimler	DE	Automotive	455
Siemens	DE	Electronics	19
LVMH	FR	Luxury	7

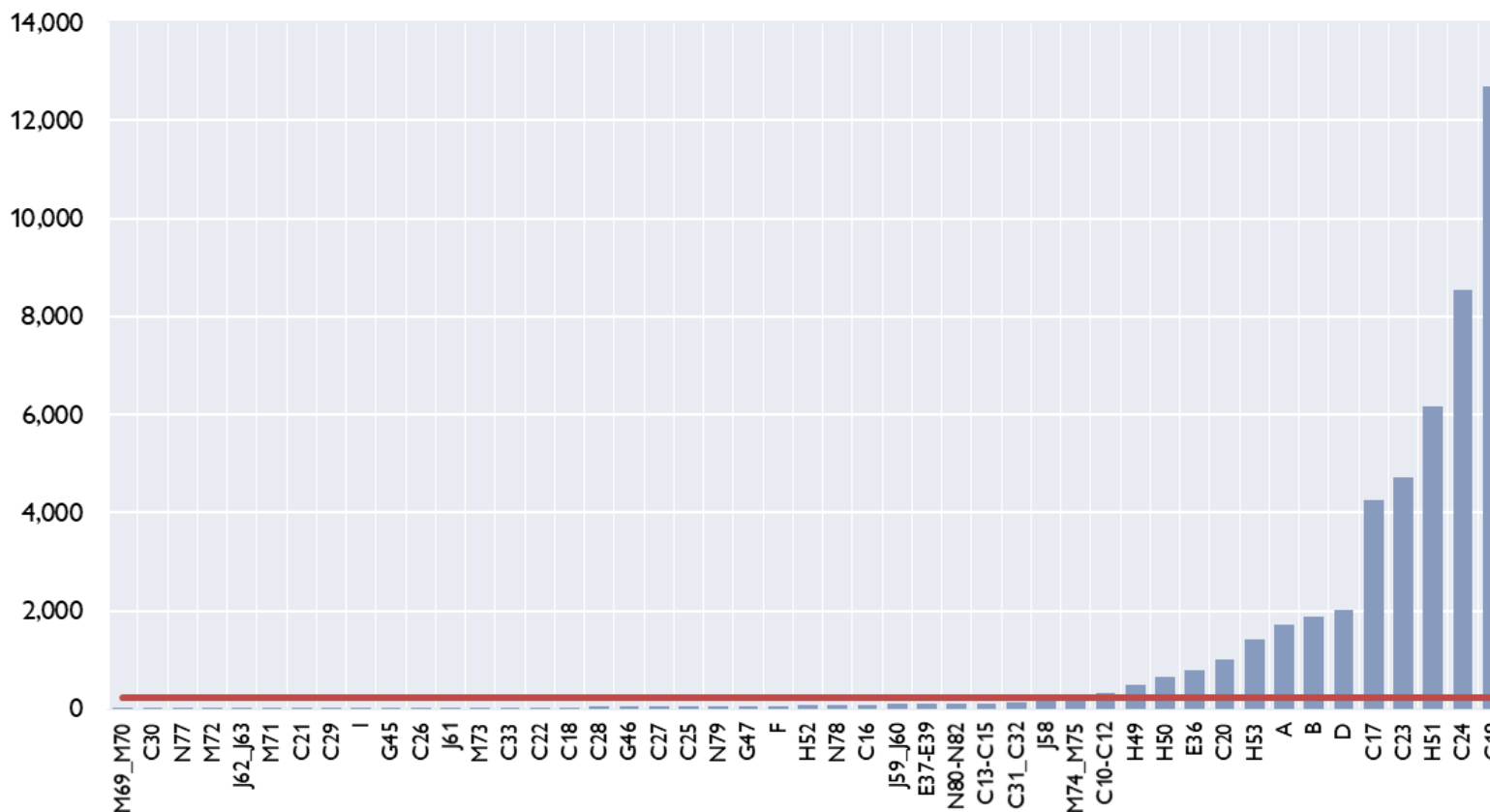
Source:  
Schoenmaker  
(2019)

*Weighted average carbon intensity:*  $\sum_{i=1}^n \left( \frac{\text{investment in firm}_i}{\text{total value of portfolio}} \times \frac{\text{emissions of firm}_i}{\text{revenue of firm}_i} \right) = 4.090 \text{ t/m}$

# Transition risk indicators for credit markets

## CO2 intensity of loans by sector

tons per mn EUR



Source: OeNB.

- Significant heterogeneity between sectors
- The “usual suspects” are way ahead of the weighted average (*red line in graph*)
- Firm-specific heterogeneity within sectors even higher

Source: OeNB (2020)  
*Financial Stability Report 40*

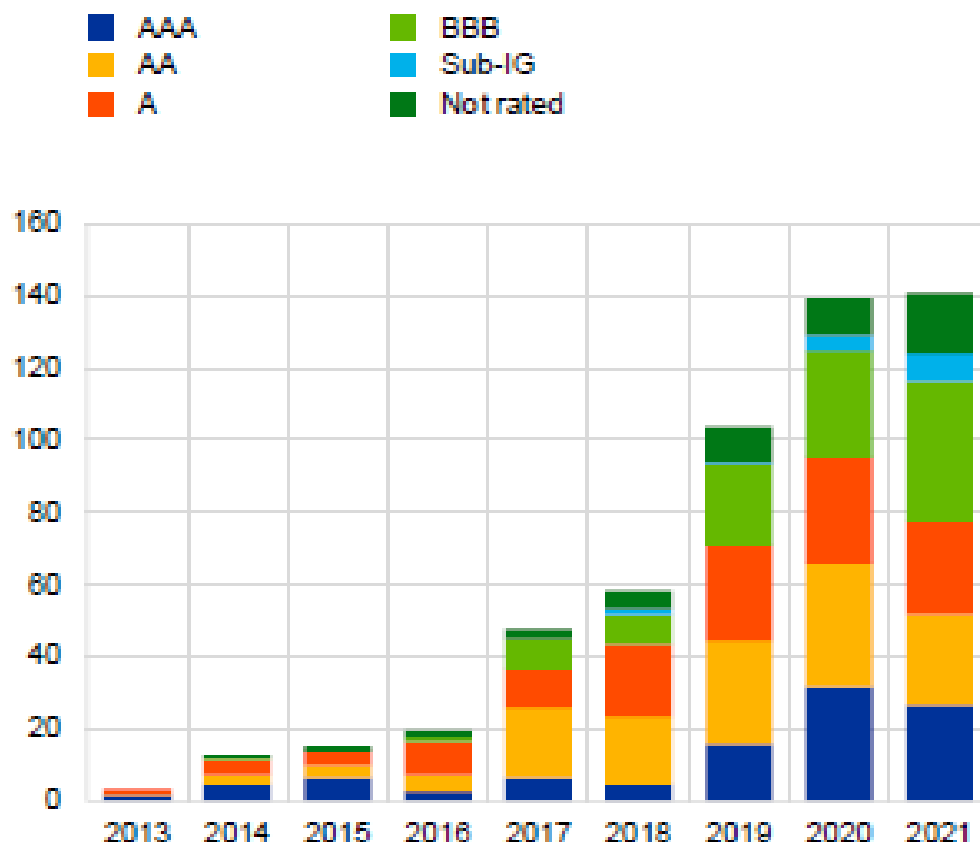
# The EU action plan on sustainable finance

- *How can investors recognise sustainable investments?*
  - The **taxonomy** is a classification of economic activities which contribute at least to one of the EU's climate and environmental objectives (it is **green**, but not **brown**)
- *How can financial intermediaries identify who is producing according to the taxonomy?*
  - Mandatory **disclosure** of economic activities and sustainability indicators (e.g. Corporate Sustainability Reporting Directive, Sustainable Finance Disclosure Regulation)
- *How can firms finance their taxonomy-aligned investments?*
  - Through transparent, accountable, comparable, and credible **green bonds** (EUGBS)
- *How can investors compare different green investment opportunities?*
  - Via the new EU Climate Transition **Benchmark** and the EU Paris-aligned **Benchmark**

# Green bond market is growing strongly

## Volume of traded Green Bonds in EU markets

in bn EUR



- **Green bonds** are used to finance projects that are aligned with sustainability targets (e.g. green energy production, raising energy efficiency)
- Large financial intermediaries like the German KfW have already been running **green bond programmes** for years
- **Growing demand** yields dynamic growth of the market
- **Europe** is the largest market for green bonds globally

## Potential effects of including nuclear energy

- If **nuclear energy** production is included in the **taxonomy**, nuclear power plants could be financed via **green bonds**
- Investment fund managers who want to launch a **green fund** could also include bonds by nuclear power plants in their portfolios, making it difficult for sustainability-oriented **retail investors** to avoid investing in nuclear energy
- Given the **growing demand** for green bonds and green funds, the **financing costs** for firms whose activities are included in the taxonomy are likely to decrease

*Example: Higher demand for a bond results in a higher bond price, thereby lowering the bond yield (e.g. bond price 100 €, coupon 5 € → yield of 5%; if the price goes up to 111 €, the coupon is still 5 € → yield is reduced to 4.5%)*

- Vice versa, if nuclear energy is **not included** in the taxonomy, the financing costs of nuclear power firms will be relatively worse compared to sustainable energy.

## Financial risks of including nuclear power in taxonomy

- **Fragmentation risk:** the green bond standard should create a deep and liquid market for financing sustainable investment. If many investors want to avoid funding nuclear energy, the green bond market might become fragmented (“green bond plus“?)
- **Default risk:** green bonds should provide a reliable form of investment. Nuclear accidents are low probability, but high impact events that can wipe out the entire capital of the operating firm.
- **Regulatory risk:** if popular opinion changes (e.g. after another accident), legislative action against nuclear power could be enacted, causing losses
- **Litigation risk:** the costs of accidents are probably not insurable. The polluter principle could burden operators with costs long after a power plant is switched off since radioactive waste might cause damages in the future.



**Danke für Ihre Aufmerksamkeit**

**Thank you for your attention**

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