

EU ETS lessons learned and future plans

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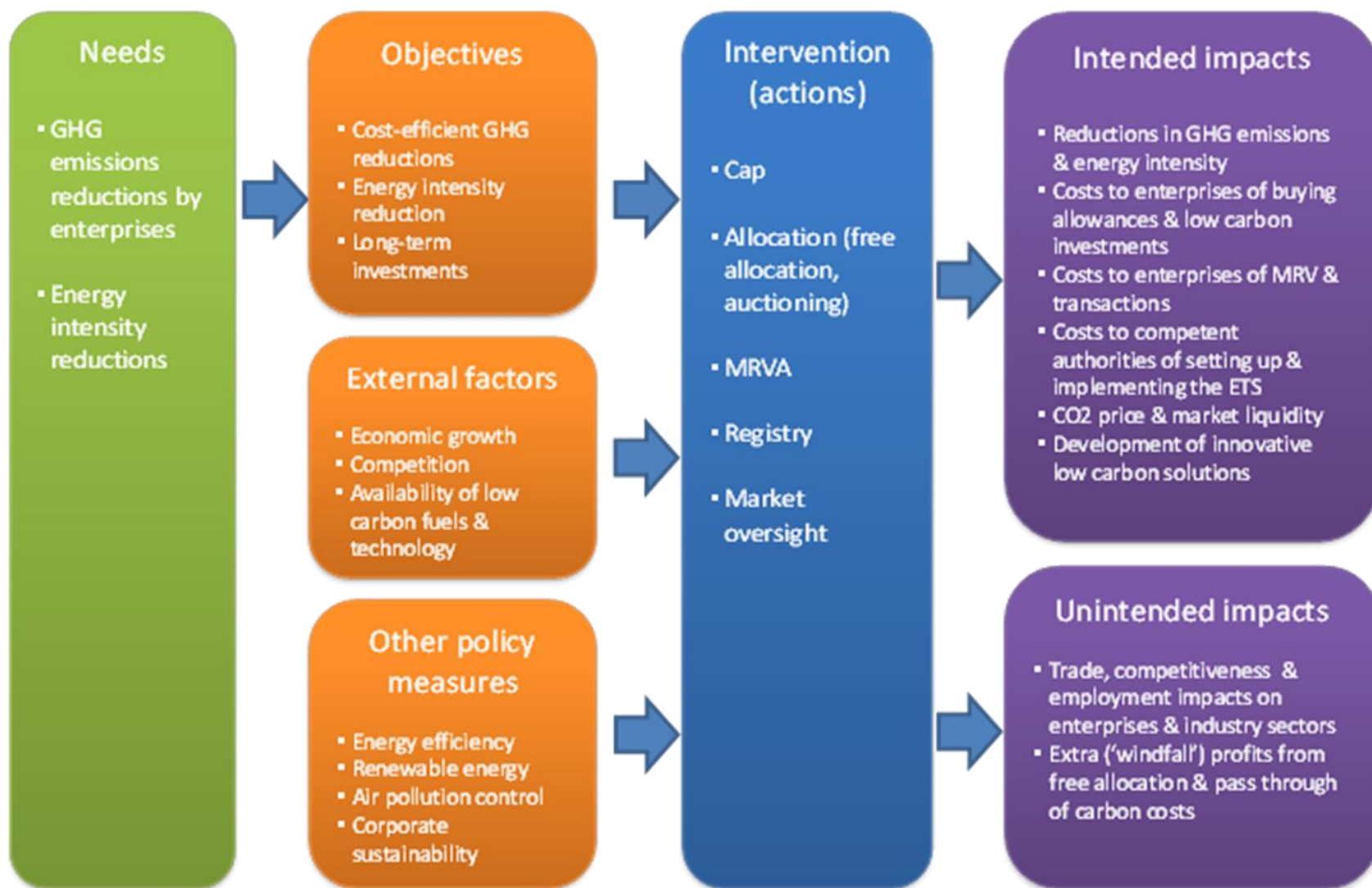
EU-KOREA
ETS PROJECT



- EU ETS evaluation
 - Process
 - Findings
- Carbon prices
 - Market Stability Reserve
 - Cap
- Free allocation and carbon leakage
- Low carbon action
 - Impacts
 - Funding mechanisms
- Key lessons learned

EU ETS Evaluation

‘Intervention logic’



EU ETS Evaluation

Evaluation questions



- Relevance
 - To what extent do the (original) objectives (still) correspond to the identified needs?
- Effectiveness
 - To what extent did the intervention cause the observed impacts?
 - To what extent do the observed impacts meet the objectives?
- Efficiency
 - To what extent was the intervention cost effective?
- Coherence
 - To what extent is this intervention coherent with other interventions which have similar objectives? E.g. energy efficiency, renewable energy, taxation and other policies.



■ Strengths

- Environmental integrity - cap ensures GHG reduction target is met
- A functioning carbon market established → carbon price has evolved
- Carbon costs internalised into product prices at various levels
- Robust infrastructure - MRV

■ Weaknesses

- Low carbon price → insufficient investment in innovative technology to decarbonise economy
- Political and regulatory uncertainty → delayed decision making for long long term investments

■ Further improvements

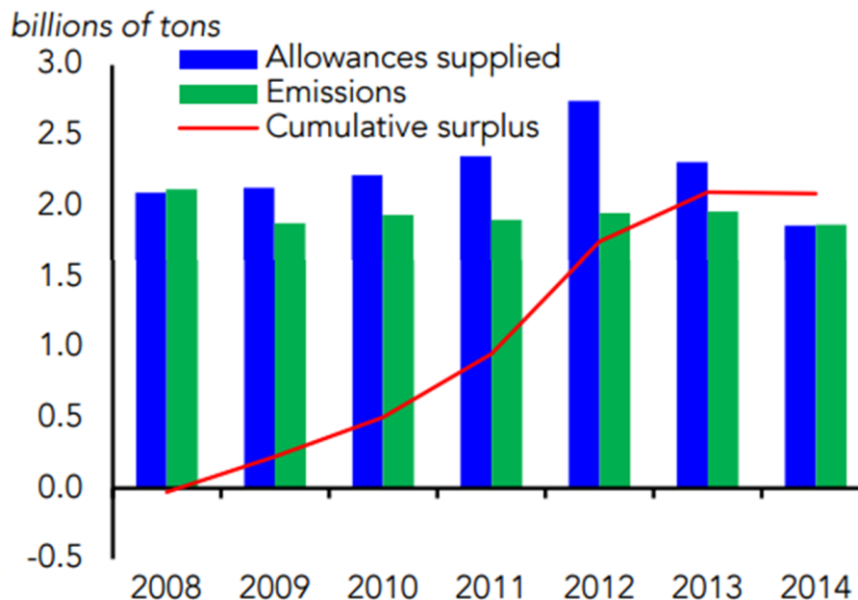
- Market stability reserve
- Cap setting
- Free allocation and carbon leakage
- Funding mechanisms for low carbon technology

Carbon prices

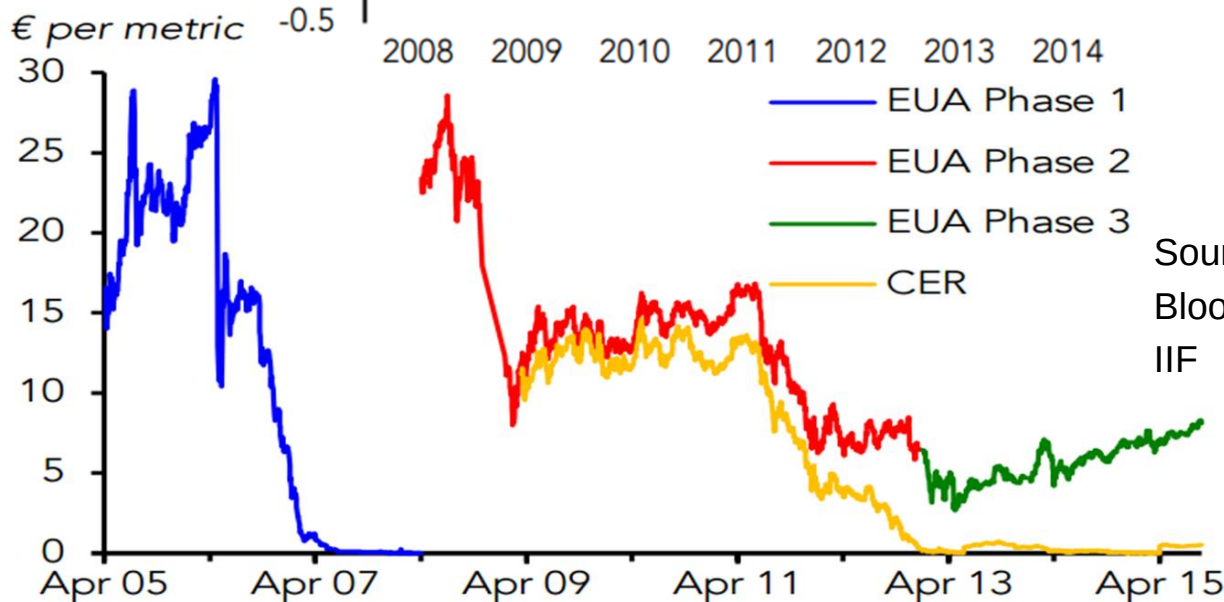
Surplus of allowances & carbon prices



- Mismatch between (fixed) supply and (variable) demand
- Large surplus
→ low carbon prices
→ risk of carbon lock-in



Source:
Sandbag UK



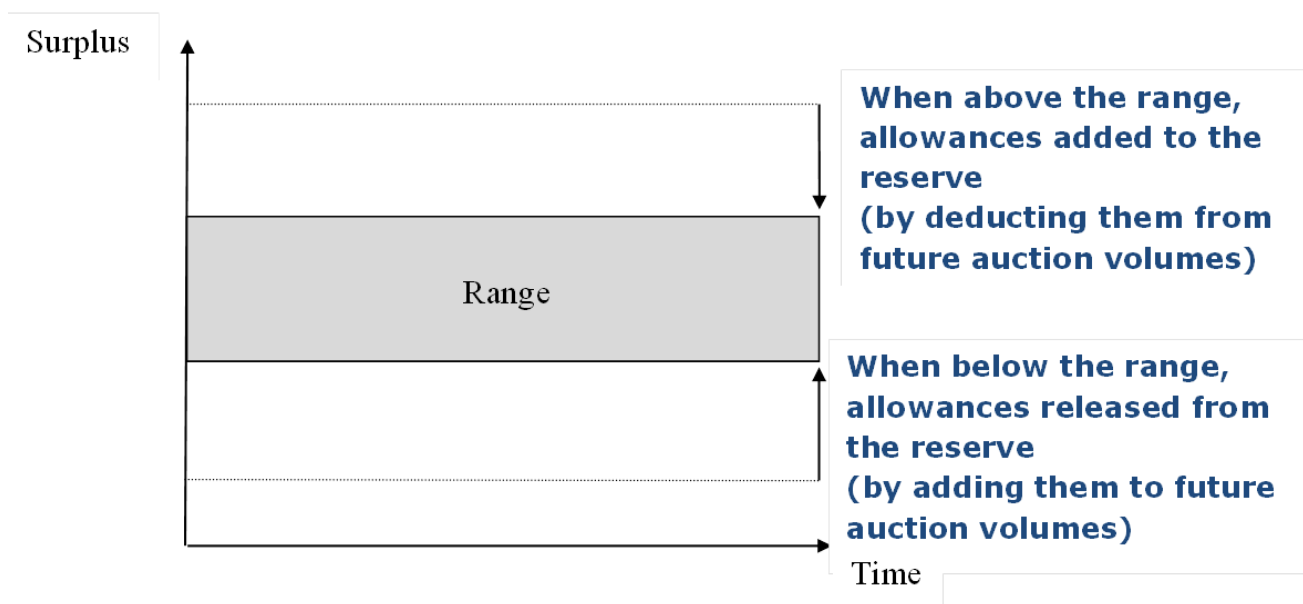
Source:
Bloomberg
IIF

Carbon prices

Market stability reserve



- Objectives
 - Tackle structural surplus
 - Increase resilience to large demand shocks
- How it works
 - Automatic adjustment of auction volumes under predefined conditions
 - Allowances not cancelled, but returned to market in line with rules

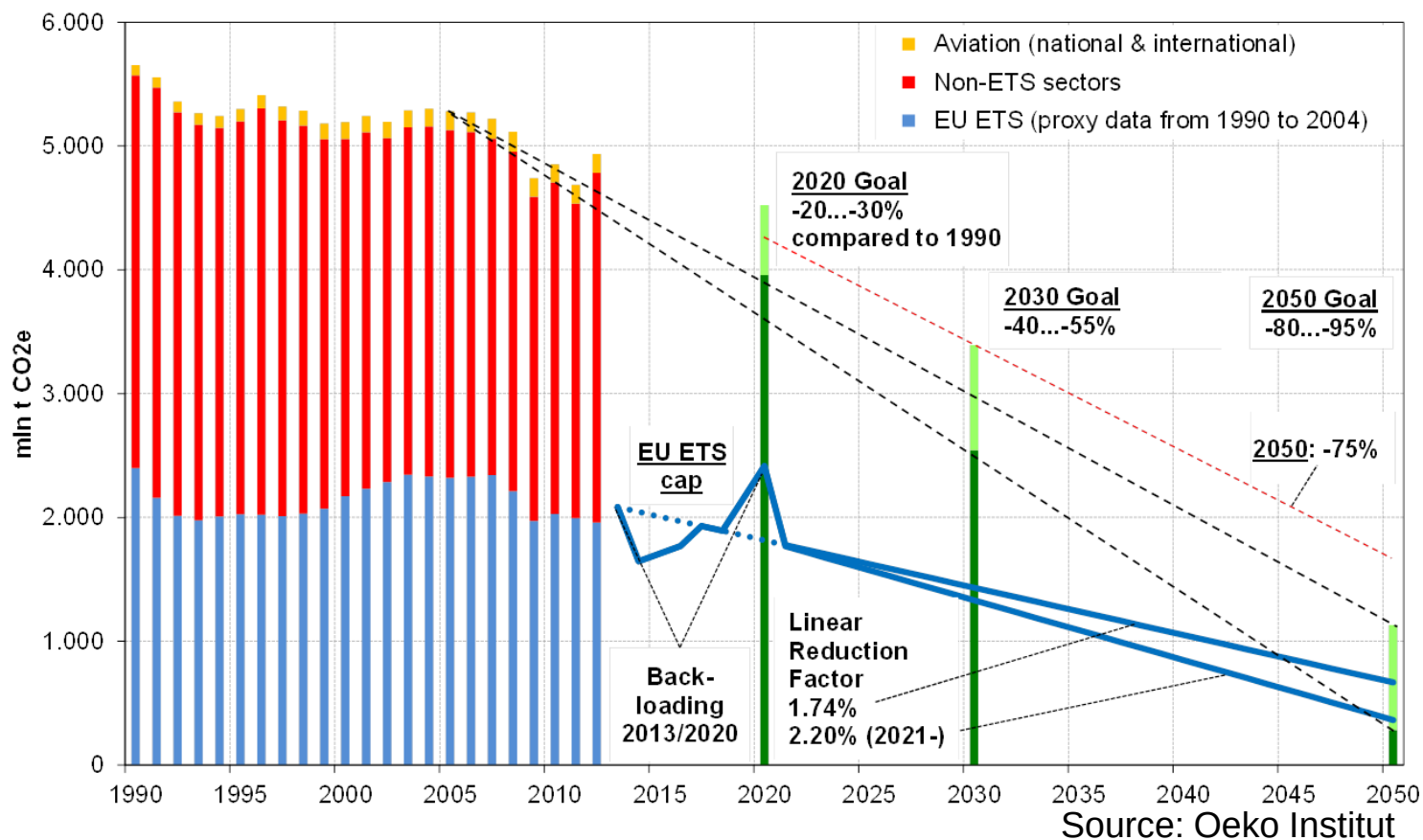


Carbon prices

Cap



- Overall EU target of 40% GHG reduction by 2030 from 2005 levels
- 43% reduction for EU ETS sectors
- Increased pace of decline of cap in Phase 4 (1.74% to 2.2%)



Free allocation and carbon leakage

BM-based allocation



- Benchmark values will be updated to reflect technological progress
 - EC proposal: flat rate 1% improvement per year (in exceptional cases 0.5 or 1.5%)
 - Some stakeholders demand new data collections, exceptions,...
- For updating allocations, not only capacity changes should be eligible, but changes in activity level (i.e. production).
 - Intensive discussion on thresholds for such changes can be expected.
 - The lower the threshold, the higher the number of changes and administrative burden.
 - Characteristics of ex-ante system (less distorted price signal) may change to more ex-post system (claimed to be more effective against carbon leakage, but needs more burdensome MRV)

Free allocation and carbon leakage

Cross-sectoral correction factor



- The Directive defines a maximum level of free allocation per year (because electricity generators don't get free allocation) – linear decrease like the cap
- All preliminary calculated allocations are added up
- If the result is bigger than the allowed maximum, a CSCF (“cross-sectoral correction factor”) is calculated such that the maximum is just met.
- In practice the CSCF was 88.4% (average)
 - Reasons: Choice of HAL period; heat allocation for zero-rated biomass, outsourced CHP installations not part of the “free allocation cap”, extensive CL list
- → huge complaints by operators (“unexpected”, “unfair”)

Free allocation and carbon leakage

Carbon leakage



Is CL a reality?

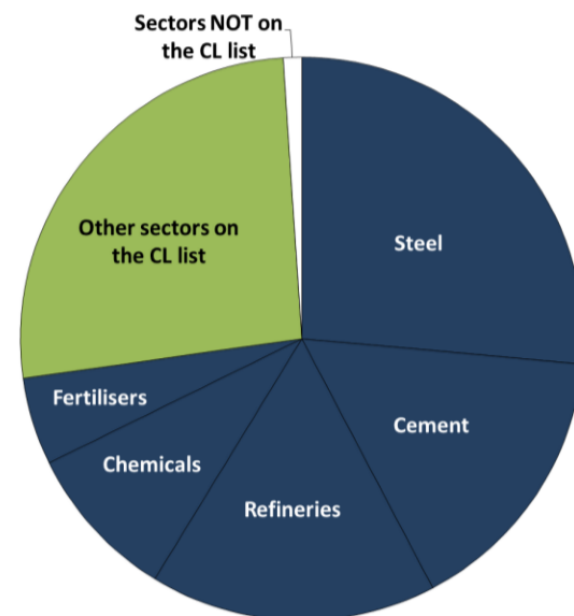
- No evidence in literature yet that CL takes place
- Current low CO₂ prices may be a reason
- Levels of free allocation seem sufficient or may be even too high (leading to windfall profits)
- Cost pass-through ability of sectors may be better than claimed by industry
- The theoretical concept is generally accepted, studies using modelling with higher CO₂ prices find some (limited) CL likeliness
- With Paris agreement and evolving CO₂ markets, CL should become increasingly less of a concern

Free allocation and carbon leakage CL groups



Share of sectors (by emissions) on CL list in Phase 3 shown below

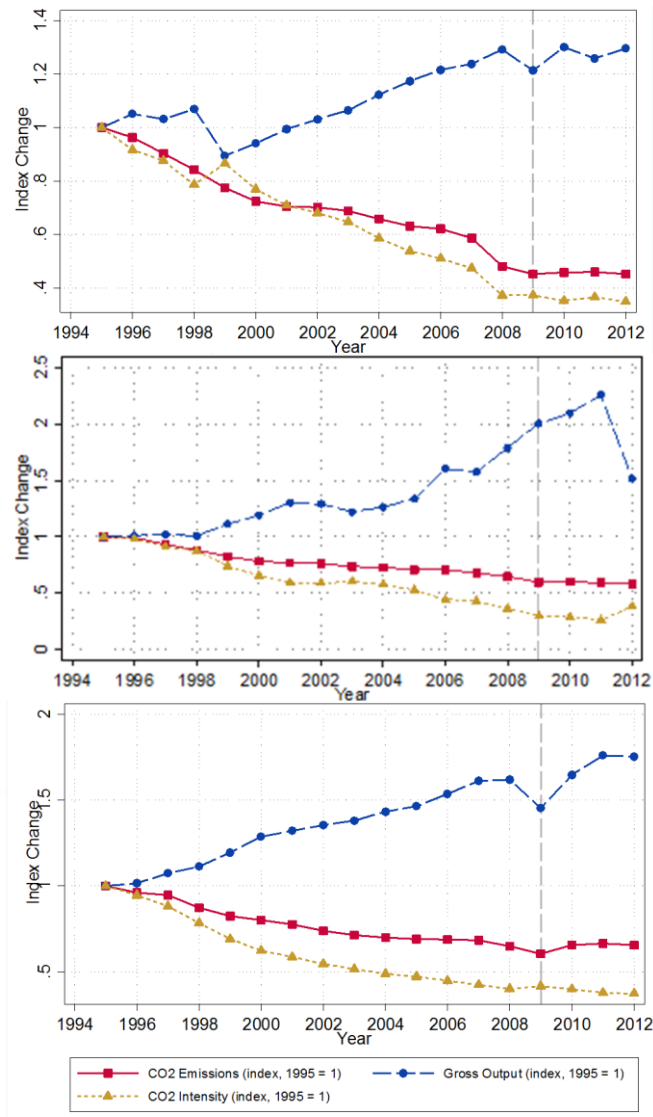
- High carbon costs (>30% of sector's GVA) or
- High trade intensity (>30%) or
- High carbon costs (>5% of sector's GVA) (>10%)
- Alternatively: Qualitative criteria



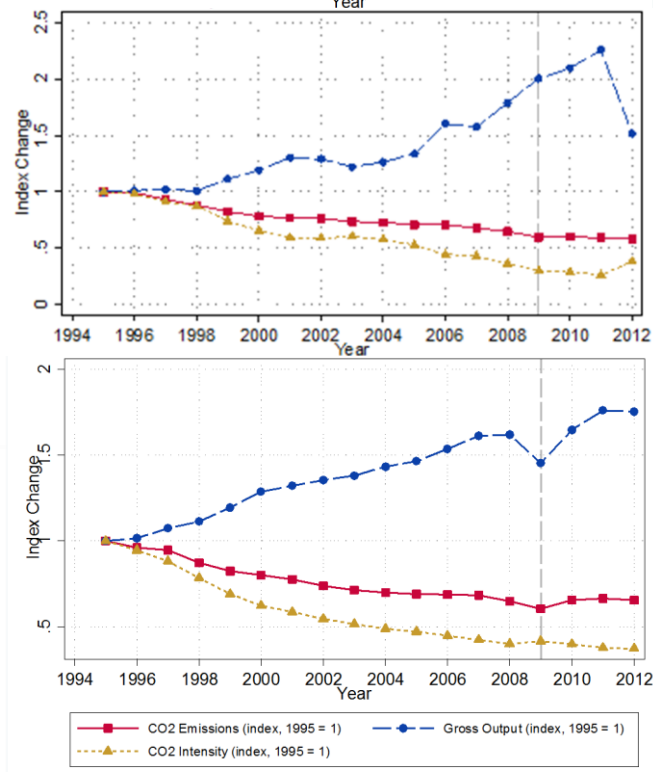
EC proposal for more targeted list in Phase 4

- High carbon intensity AND high trade intensity (product is >0.2)

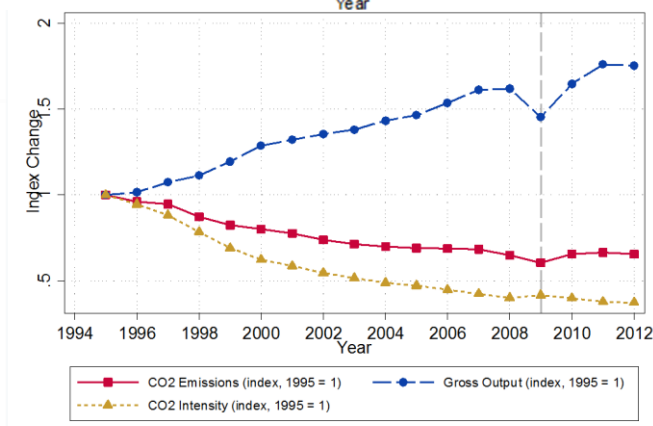
Electricity,
gas & water
supply



Coke &
petroleum

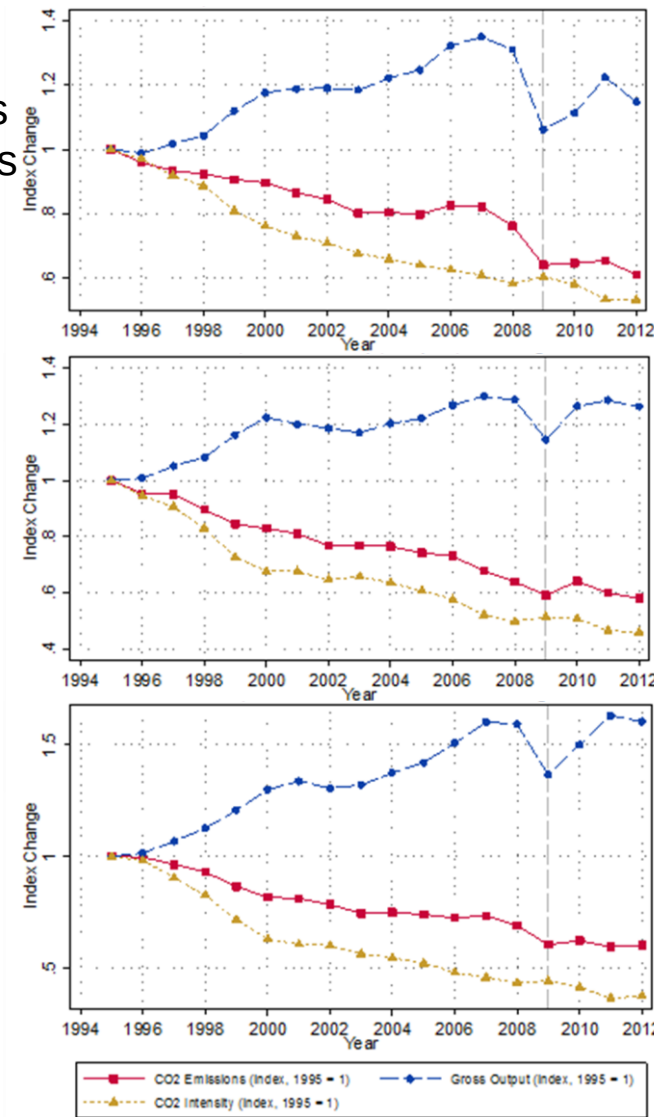


Chemicals

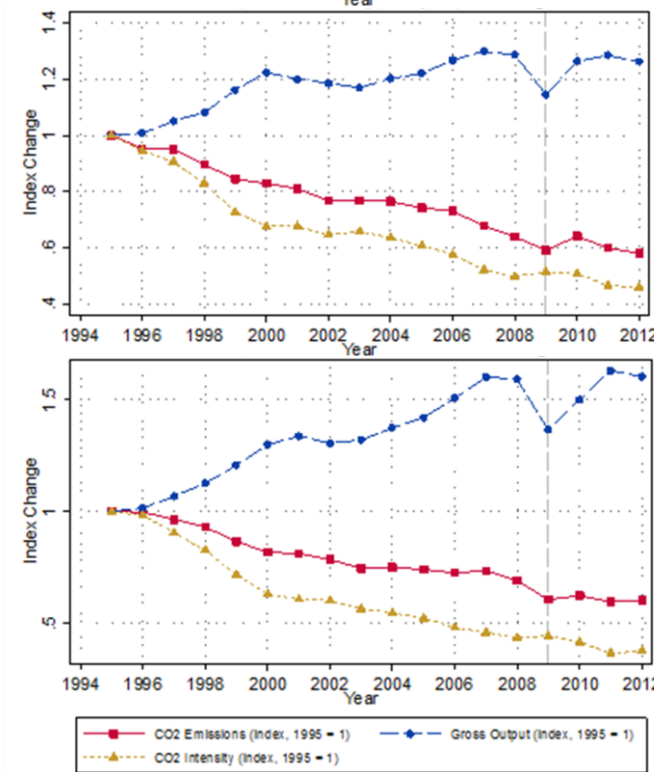


Source: ZEW

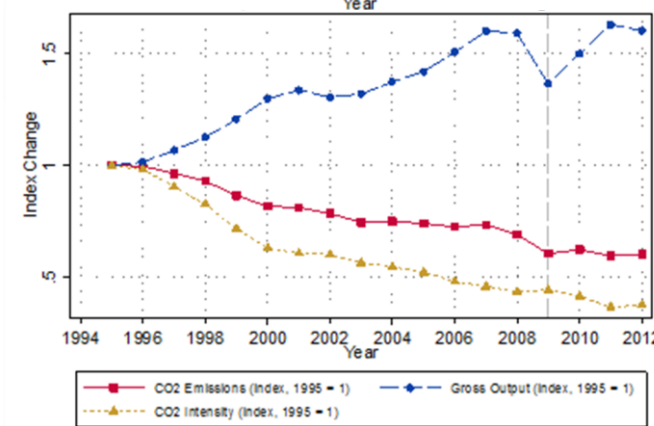
Cement,
lime, glass
& ceramics



Pulp &
paper



Other manu-
facturing

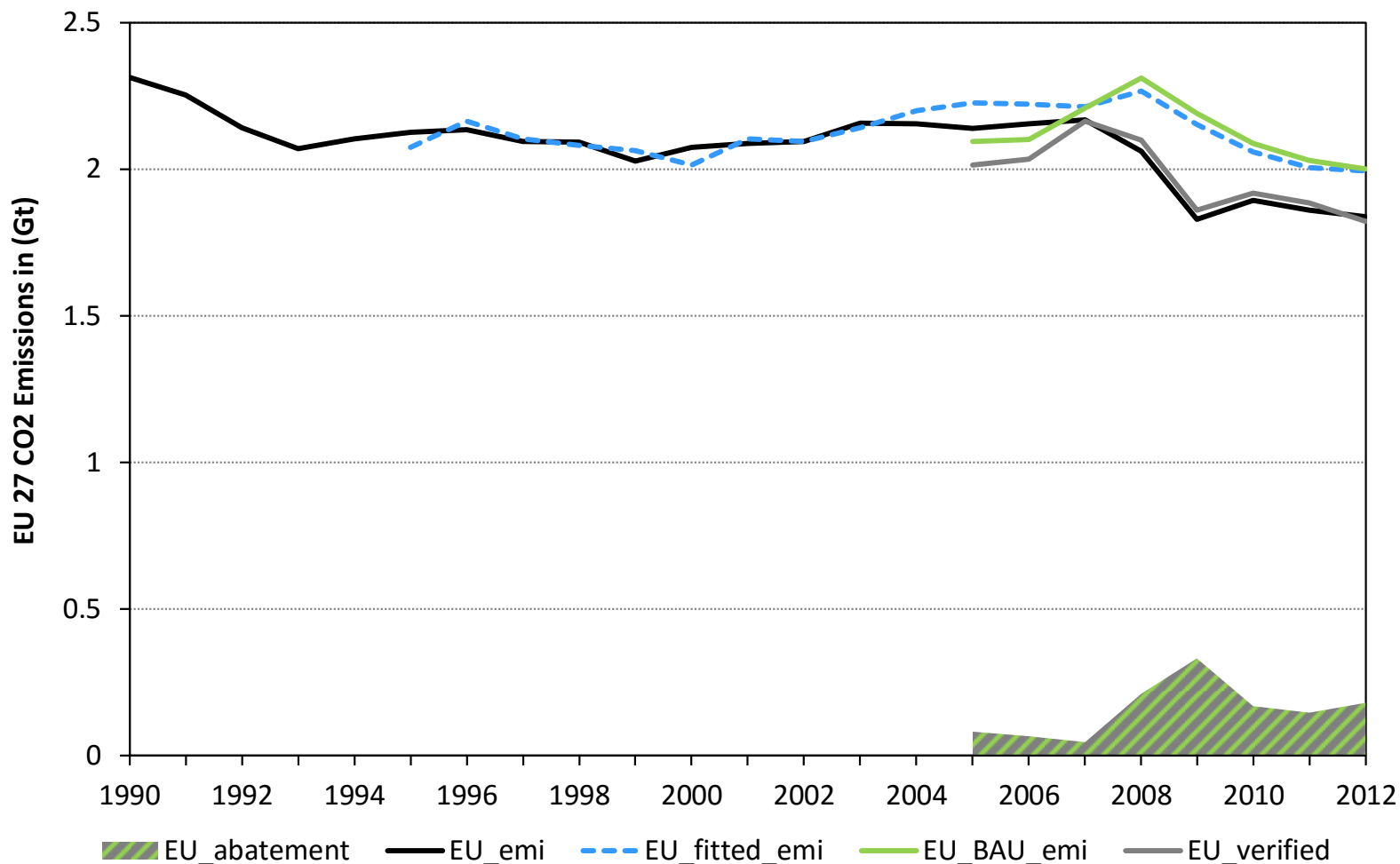


Impact on low carbon action

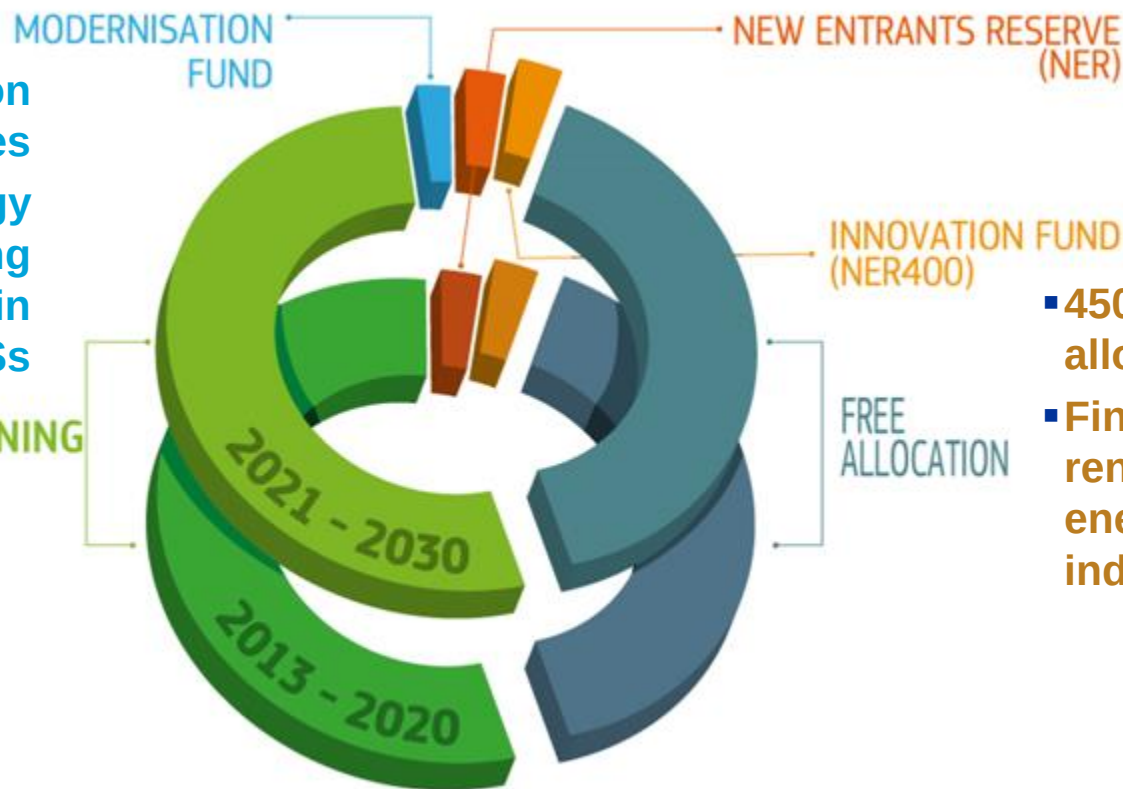
Econometric analysis



EU ETS emissions (actual, counter-factual & abatement)



Source: ZEW



- 310 million allowances

- Modernising energy systems & boosting energy efficiency in 10 MSs

AUCTIONING

- 810 million allowances in 2013 (€3.6bn)

- Financing domestic & international climate action

- 450 million allowances

- Financing CCS, renewables, energy intensive industry



- Successfully implemented, but can still be optimised
 - Market Stability Reserve
 - Free allocation and carbon leakage
 - Funding for low carbon technology
- Simplicity
- Predictability → supports investment decision making
- Harmonisation → equal treatment, avoid competitive distortions
- Stakeholder engagement → transparency, expertise, diffuse conflict
- Learning by doing
- It works!
 - 2015 emissions 5% below 2013
 - 2020 emissions will be 21% below 2005
 - 2030 emissions will be 43% below 2005



THANK YOU

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