



The cross sectoral correction factor

An analyst's perspective

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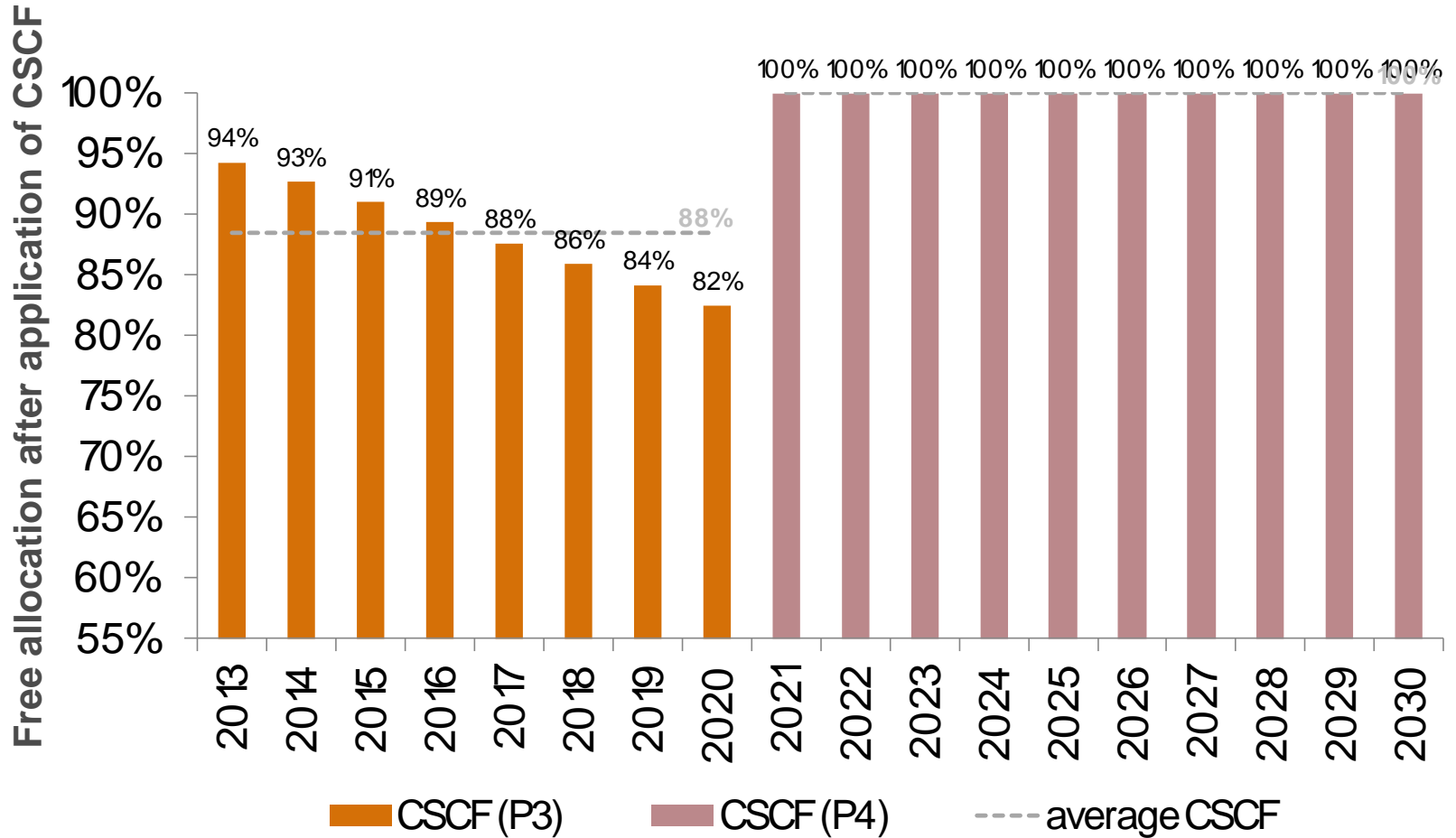
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The CSCF under various benchmark reduction pathways - explanation

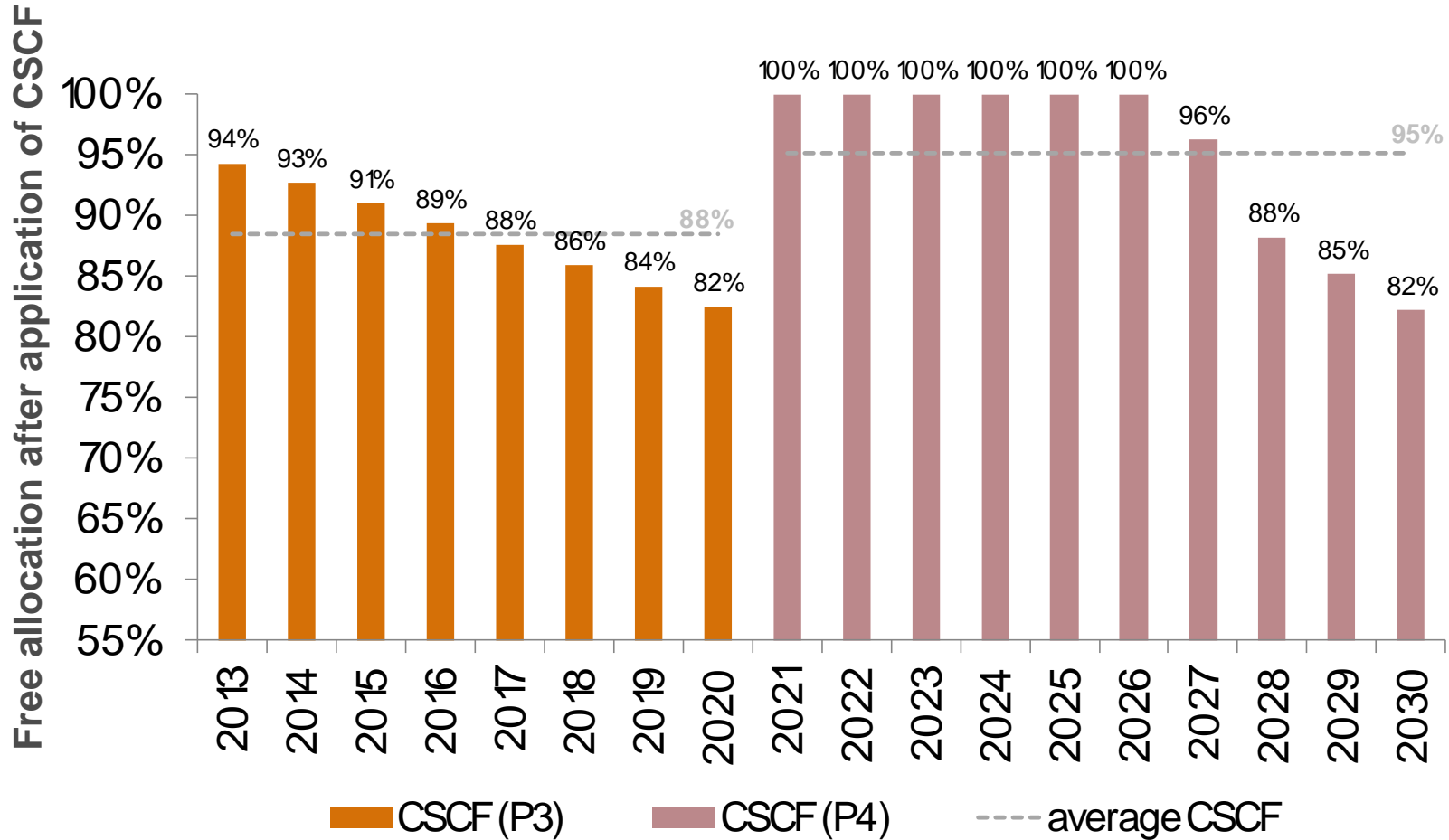
- The bars on the following charts depict the level of free allocation after the application of the CSCF.
- Displayed are three benchmark reduction scenarios: 1.0%, 0.75%, 0.5% annual reduction over both benchmark periods.
- We assume an average industry production growth in the EU ETS sectors of 0.5 % per year during the years 2016 to 2022. This number takes into account variation between sectors with different CO₂ intensities.
- All calculations take into account that non-exhausted free allowances are kept for later years to lower the CSCF.
- In the 1.0% benchmark reduction scenario we barely do not see the CSCF applied during phase 4.
- With benchmark reductions >1.0% we do not see the CSCF applied under the given industry production assumption.



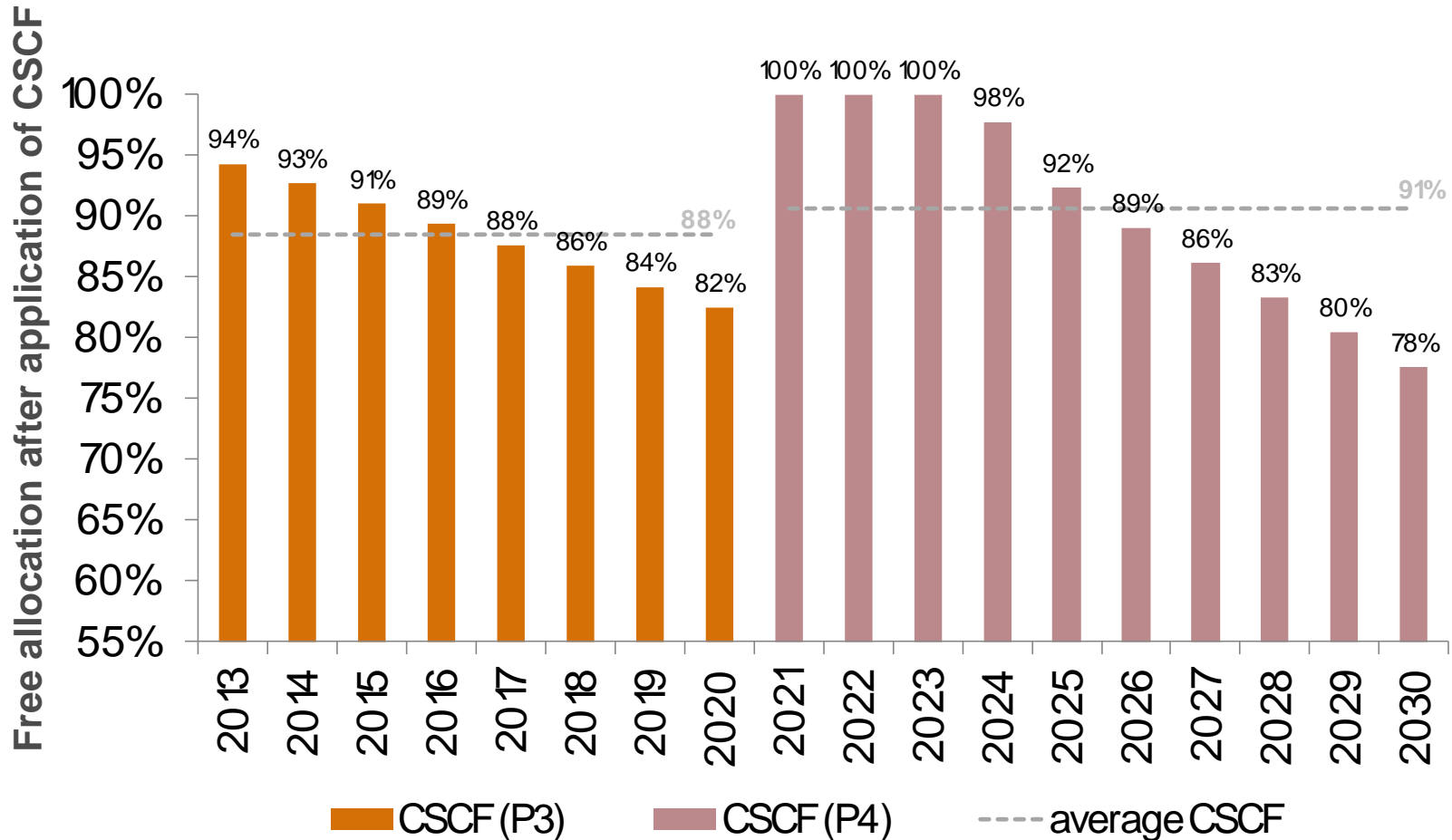
The CSCF under EC proposal (1% benchmark reduction p.a.)



The CSCF under EC proposal (0.75% benchmark reduction p.a.)



The CSCF under EC proposal (0.5% benchmark reduction p.a.)

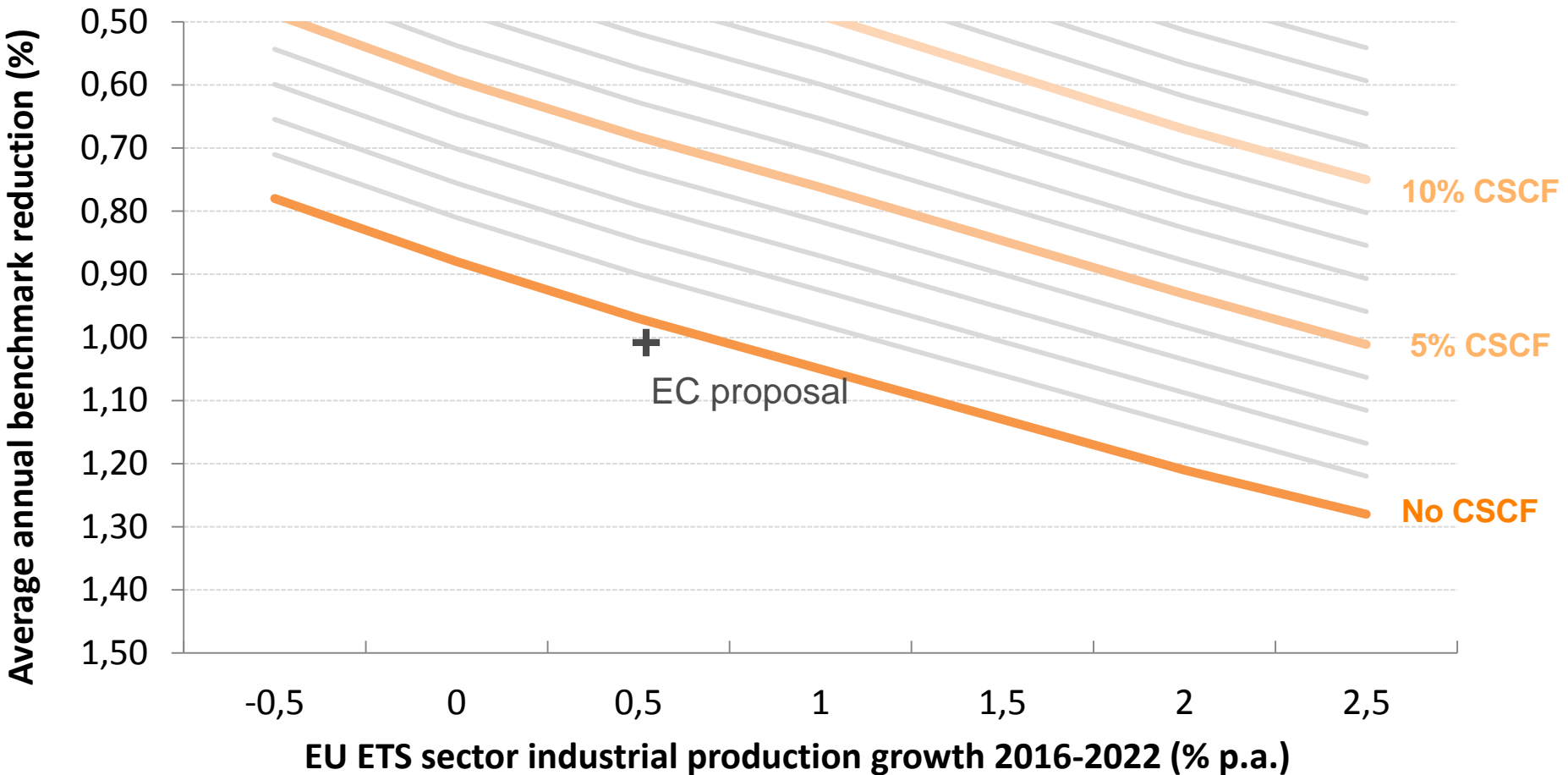


The sensitivity of calculating the CSCF - explanation

- The CSCF is very sensitive to the macro-development the and benchmark setting.
- The following chart displays the P4 CSCF as a function of future annual industry production growth (2016-2022) and the yearly benchmark reduction under the EC proposal (average for both periods).
- The curved lines depict the average application of the CSCF during phase 4, accounting for both factors.
- If industrial production grows more than our base case assumption of 0.5% per year or if a lower average benchmark factor than 1% is applied across all sectors, the CSCF will likely be triggered.
- The chart highlights as well that a different production growth has a far smaller effect than a changed benchmark application.



The sensitivity of the CSCF calculation (EC proposal)



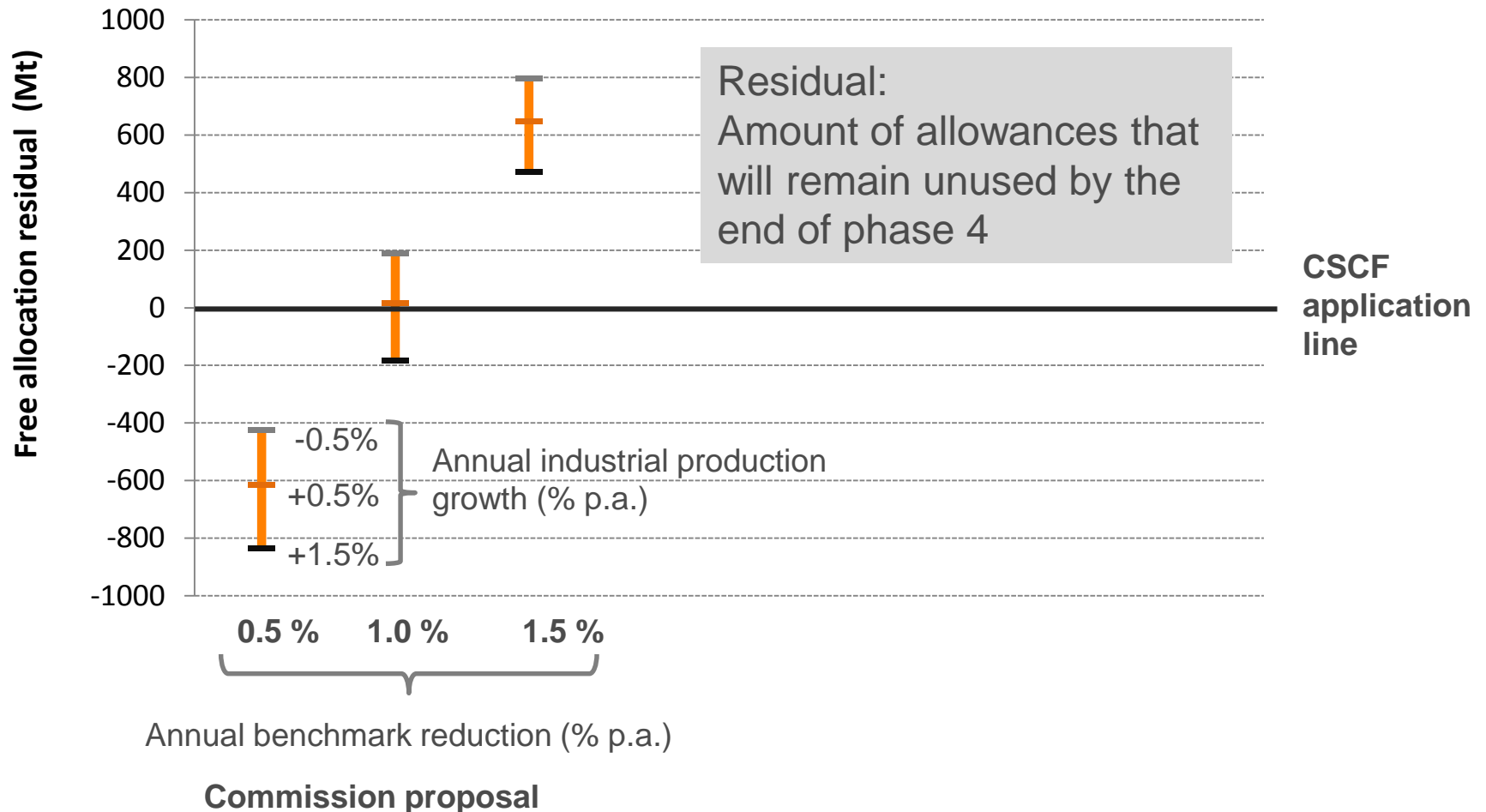
— CSCF not triggered
 — 5% of P4 free allocation
 — 10% of P4 free allocation

CSCF residual calculation - explanation

- The following chart displays the amount of allowances that will remain unused by the end of phase 4 (vertical axis). This is what we call the residual amount of allowances.
- This value will be negative when the CSCF is applied and positive when the CSCF is not applied.
- The horizontal axis shows three different options for an annual benchmark reduction (0.5%, 1.0%, 1.5% p.a.). For modeling purposes we applied the same benchmark reduction across all sectors.
- The length of each line represents uncertainty about future industrial production for the period 2016 to 2022. The upper end of the lines represents annual industrial growth of -0.5% and the lower end a growth of 1.5% while the middle represents 0.5% growth.



CSCF residual calculation



Carbon cost pass-through

	Minimum
Iron and steel	60%
Cement	35%
Glass	20%
Refineries	40%
Petrochemicals	25%
Fertilizers	0%

Source: EC impact assessment

- Most of the carbon-intensive sectors have been able to pass through at least part of their carbon costs.
- If lawmakers aim to minimize windfall profits, they would need to take cost pass-through into account when determining the amount of free allocation in phase 4.

Conclusions

- With a 1% annual benchmark reduction we do not expect the CSCF to be triggered during phase 4 with the EC proposal.
- But, the CSCF is very sensitive to macro-development and benchmark setting.
- The CSCF application is more sensitive to changes in the benchmark than to changes in industry production.
- Taking into account cost pass-through rates would in our view better reflect carbon leakage risk.

Q&A

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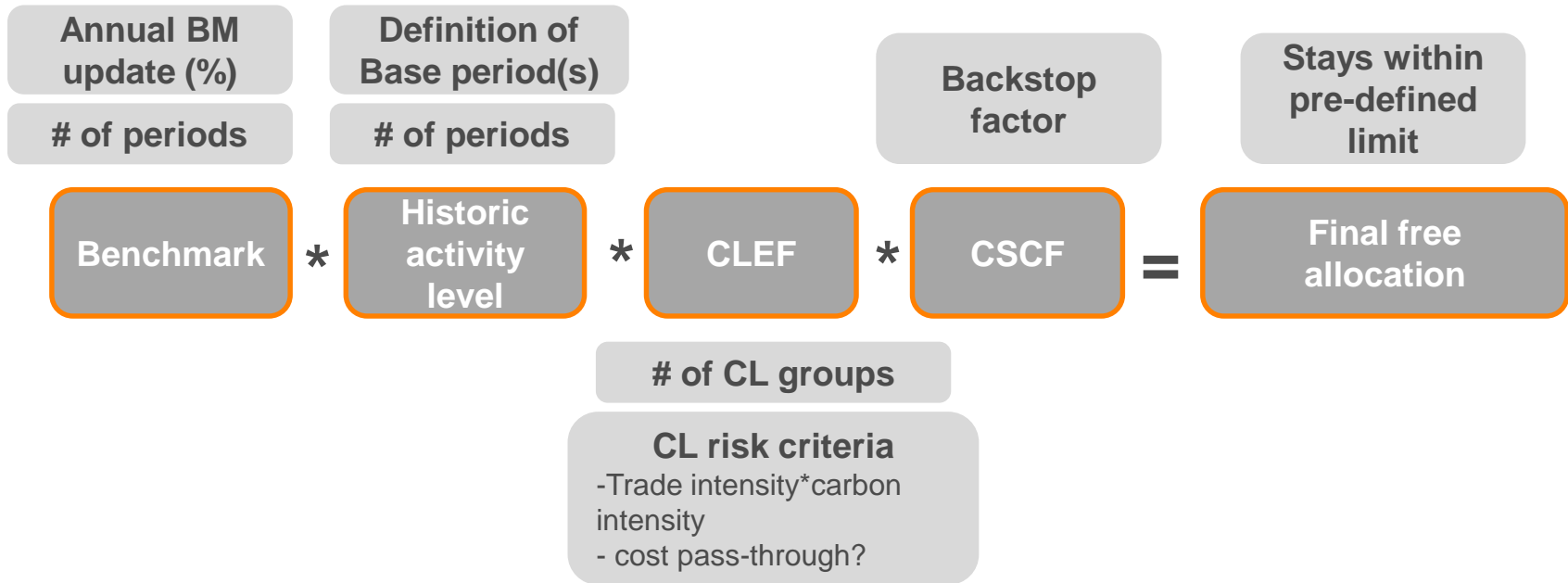
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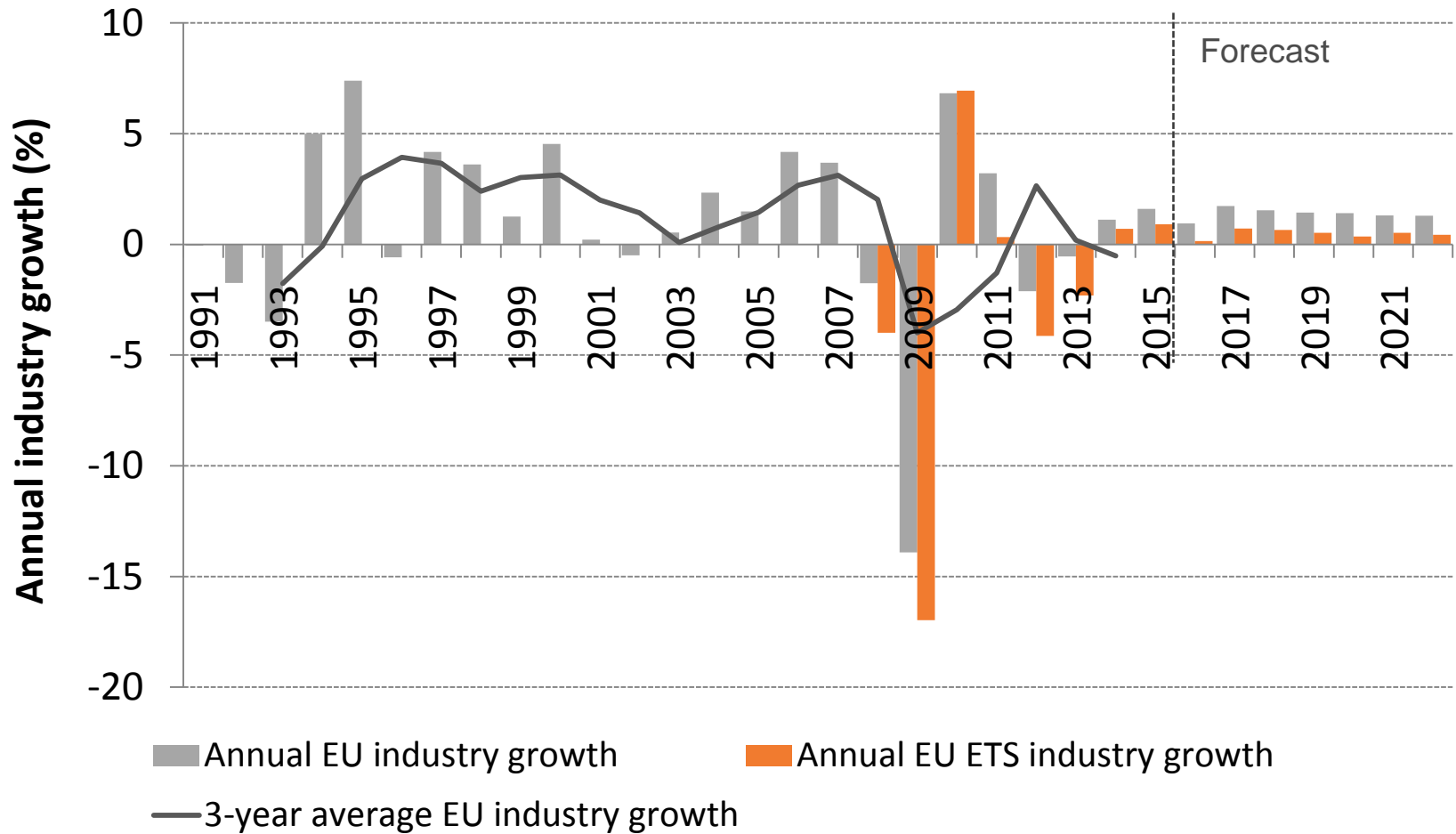
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Free allocation elements



Annual industry growth



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