



What is the development of WACC for wind power in the 28 EU Member States -and why?

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Strommarkttreffen, 9th March 2018

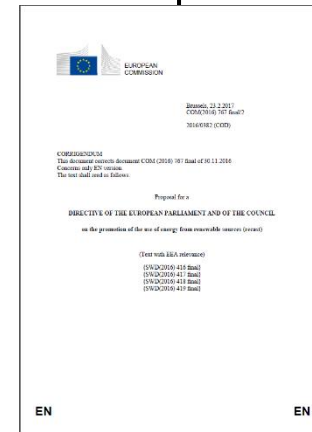
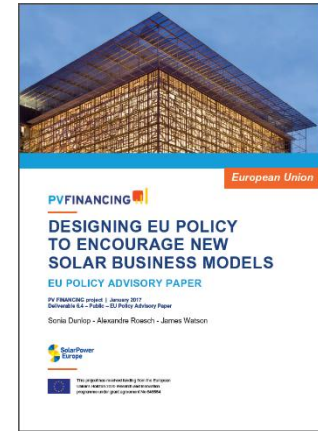
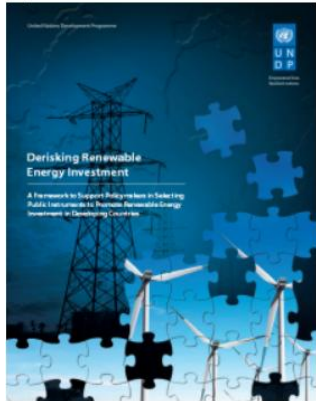
Introduction

Development of WACC discourse

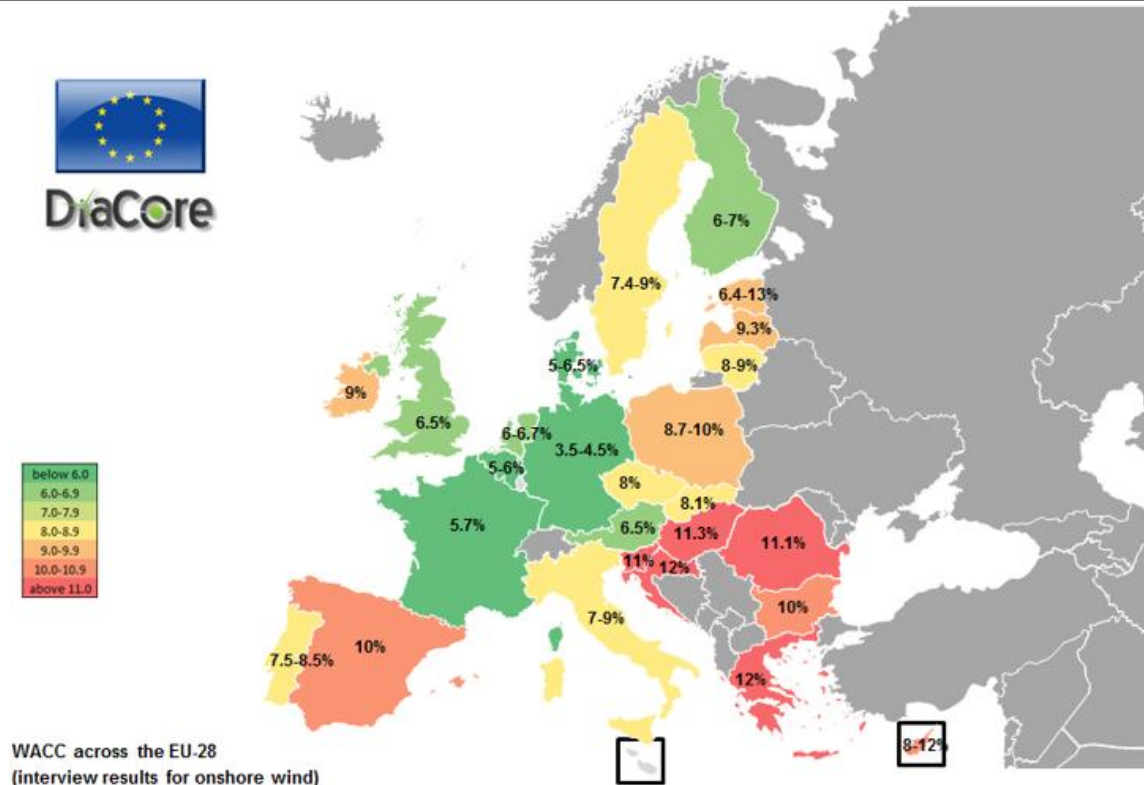
Results from RE Frame project

Conclusion

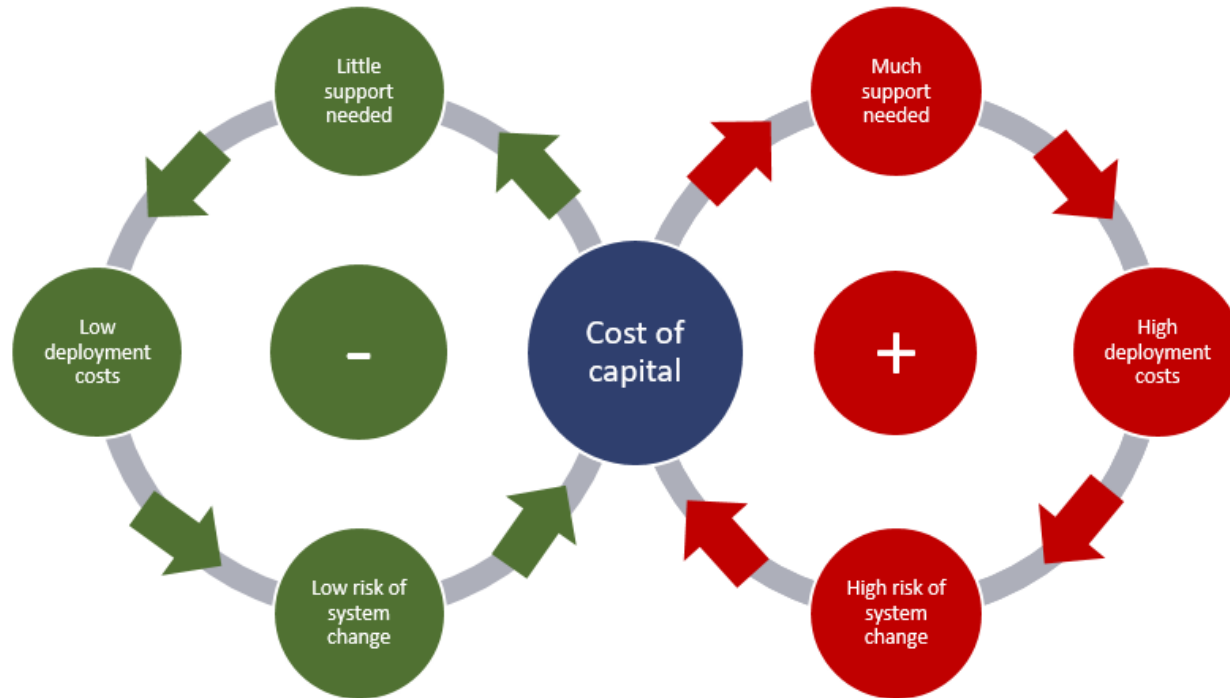
Development of WACC discourse



WACC estimations onshore wind – approximation based on interviews



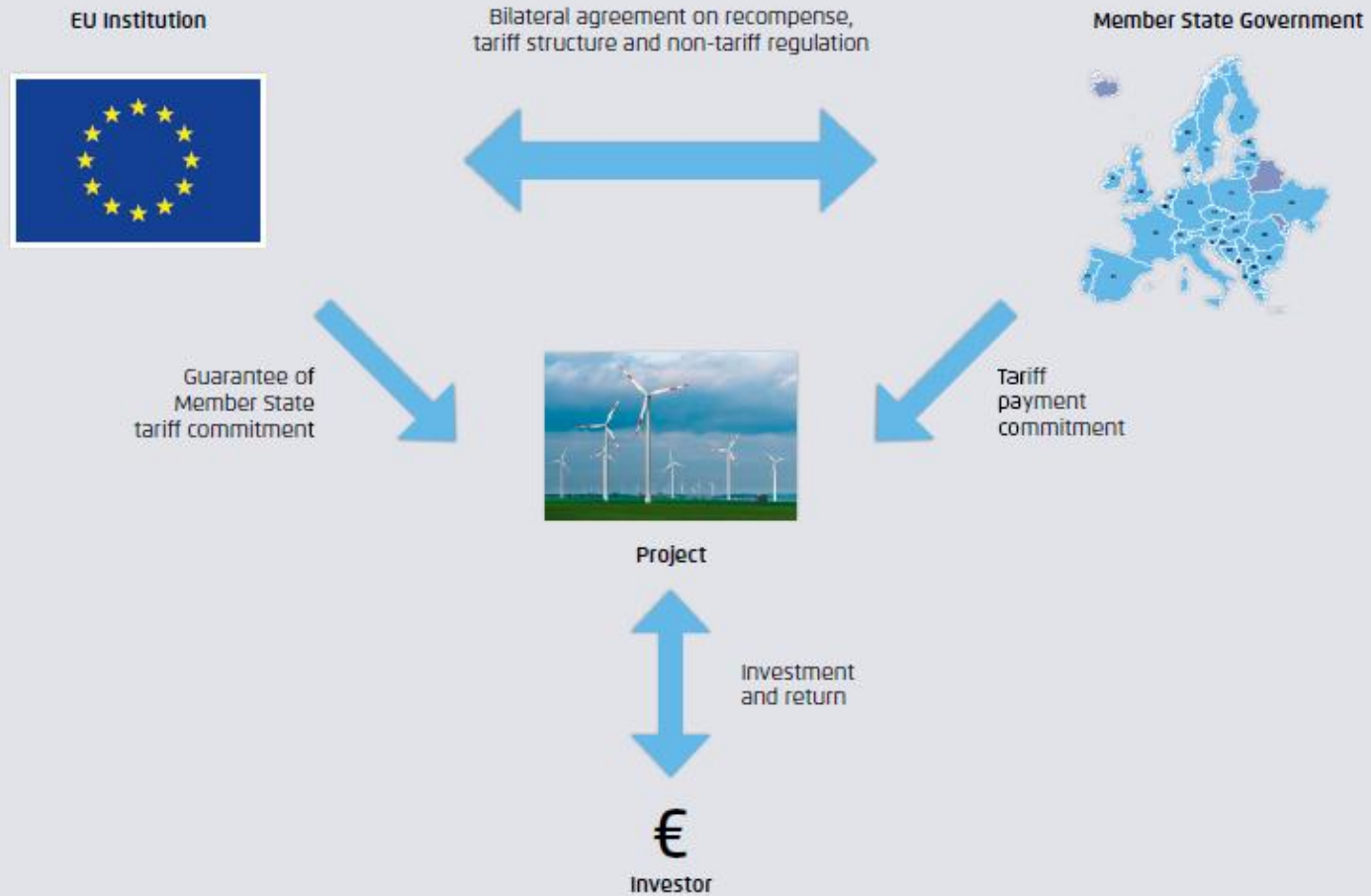
Impact of costs of capital on RES costs in a system dynamic approach



Cost Reduction Facility

The basic relationships governed by the RES CRF

Figure 5

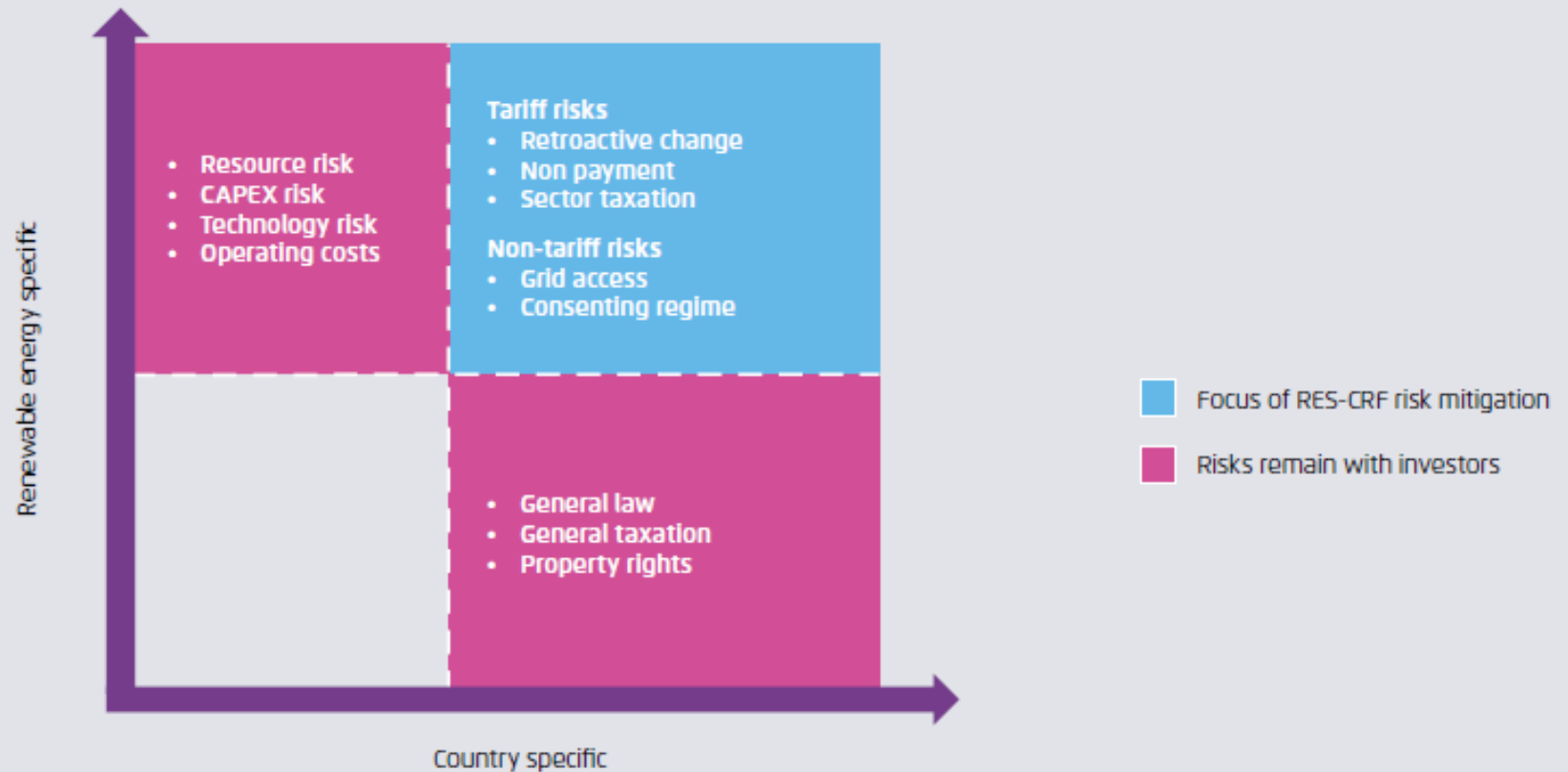


Own illustration

Cost Reduction Facility

Renewable energy risk matrix

Figure 6

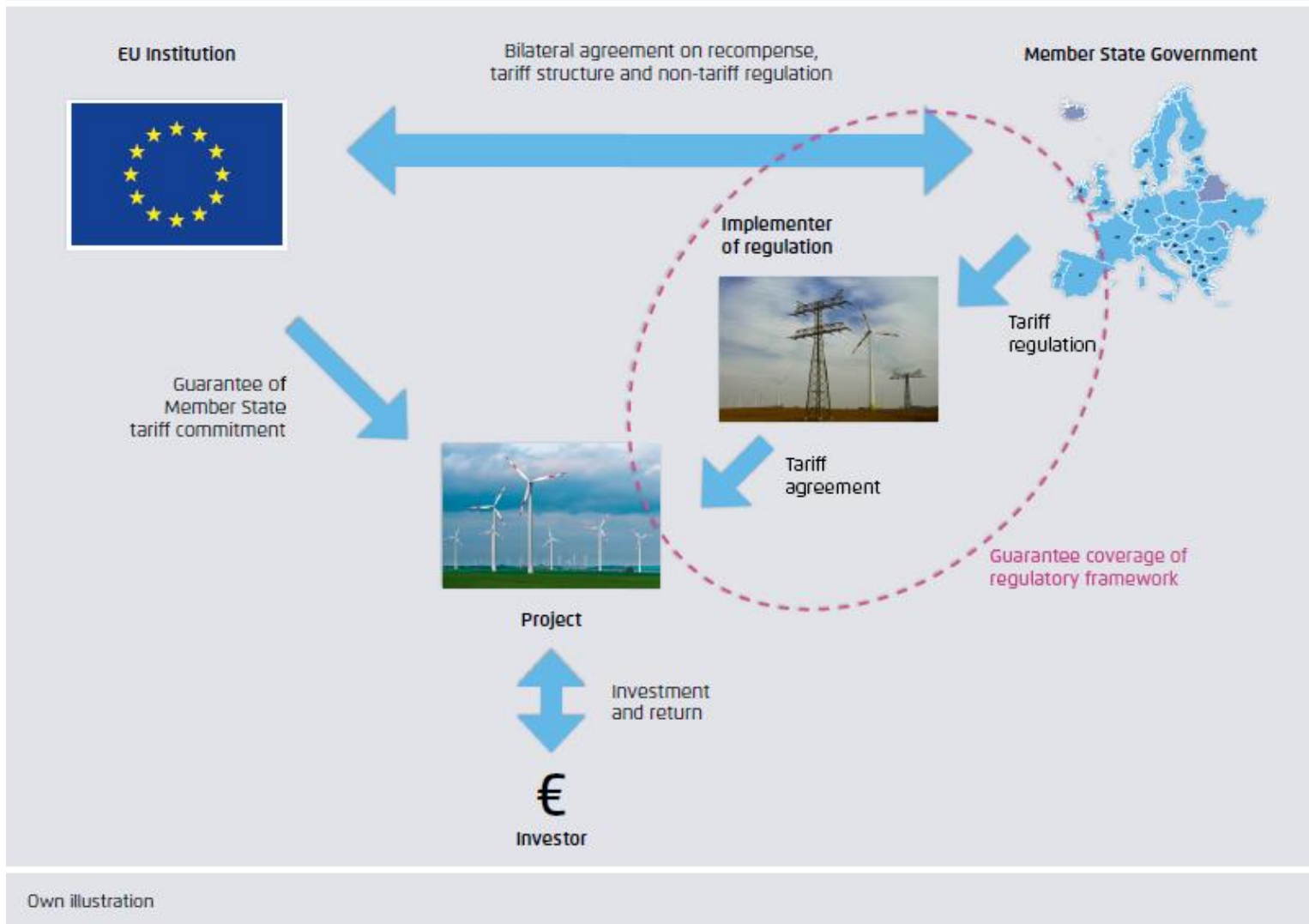


Own illustration

Cost Reduction Facility

Internal arrangements between Member State and Investor under RES CRF

Figure 7





Brussels, 23.2.2017
COM(2016) 767 final/2

2016/0382 (COD)

CORRIGENDUM

This document corrects document COM (2016) 767 final of 30.11.2016

Concerns only EN version.

The text shall read as follows:

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the promotion of the use of energy from renewable sources (recast)

(Text with EEA relevance)

{SWD(2016) 416 final}

{SWD(2016) 417 final}

{SWD(2016) 418 final}

{SWD(2016) 419 final}

EN

EN

4. The Commission shall support the high ambition of Member States through an enabling framework comprising the enhanced use of Union funds, in particular financial instruments, especially in view of reducing the cost of capital for renewable energy projects.

Methodology

Existing data

- Estimations of **costs of capital of wind onshore-investments** from DIA Core Project
- Comprehensive interview series with financial experts
- Evaluation of development of parameters

Analysis

- Comparison with **interest rates for loans from other sectors in EURO zone**
- Description of trends

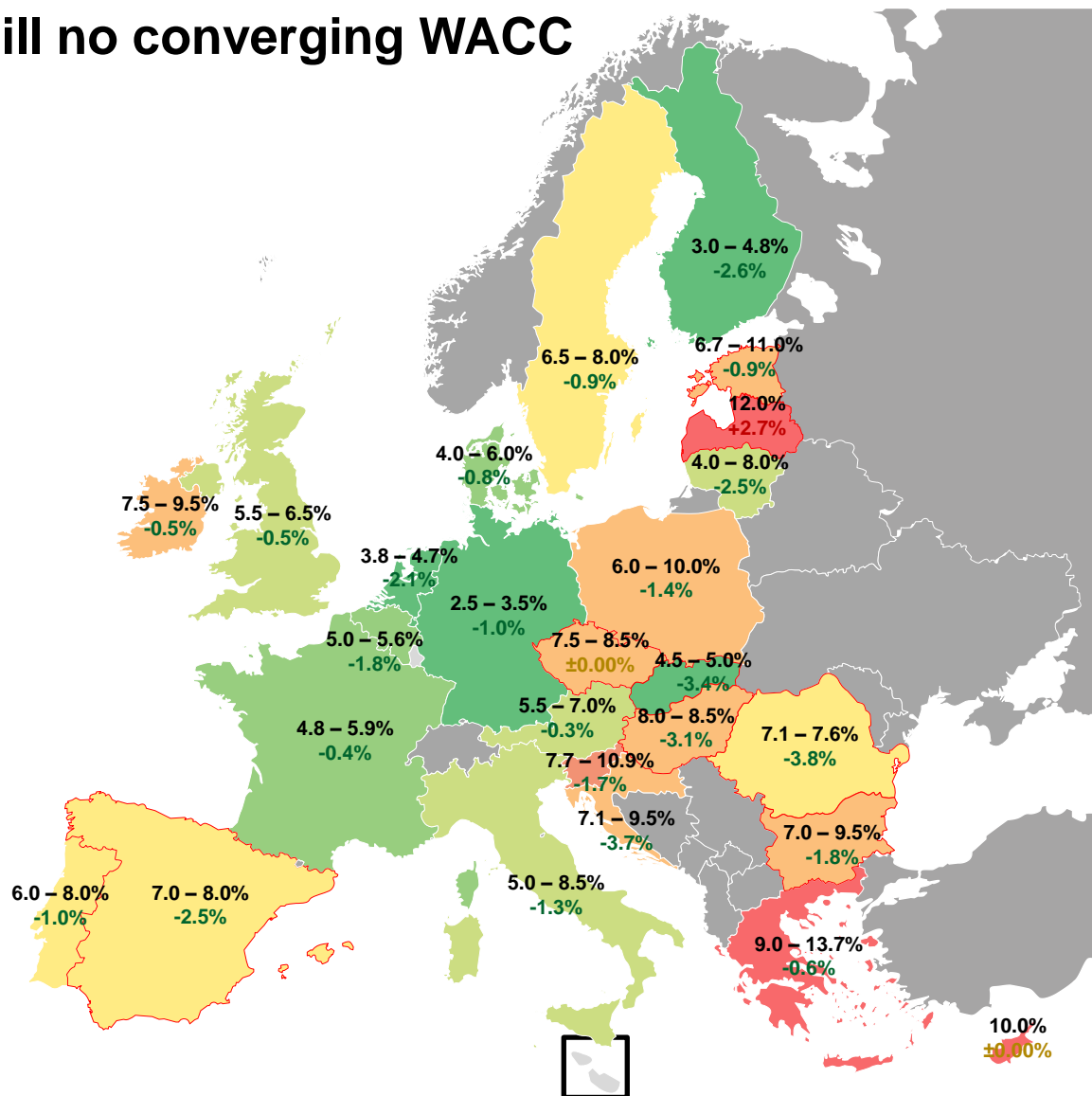
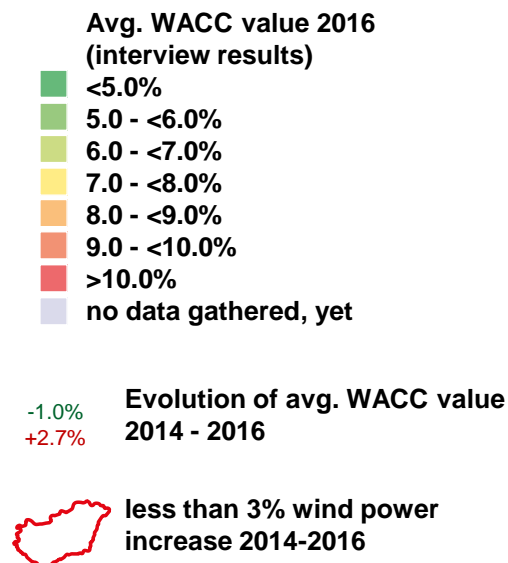
Results

- Aggregation and visualization of meta data
- Presentation of results and **feedback from national experts**
- Preparation of deliverables: project presentation & database

Before we start: some caveats

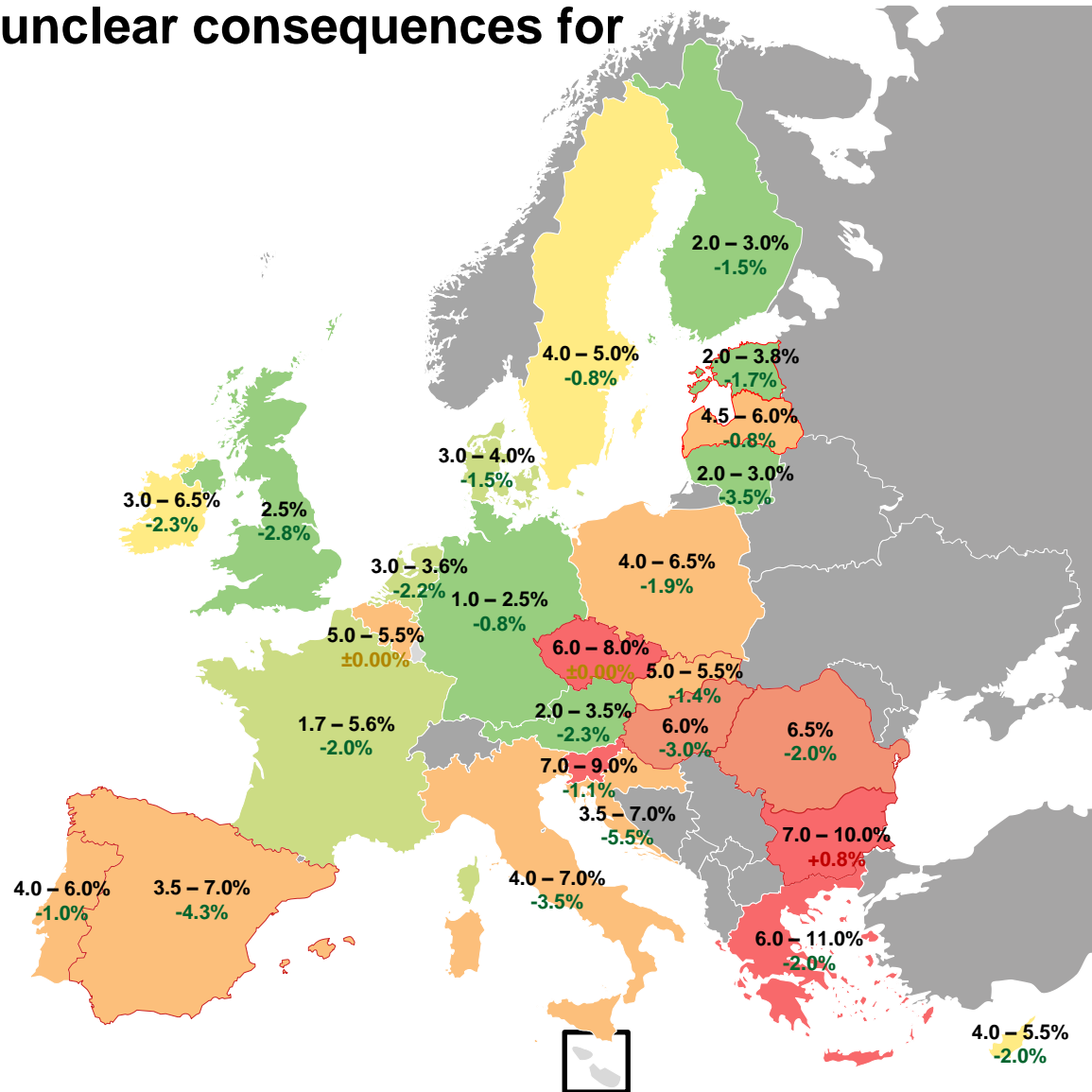
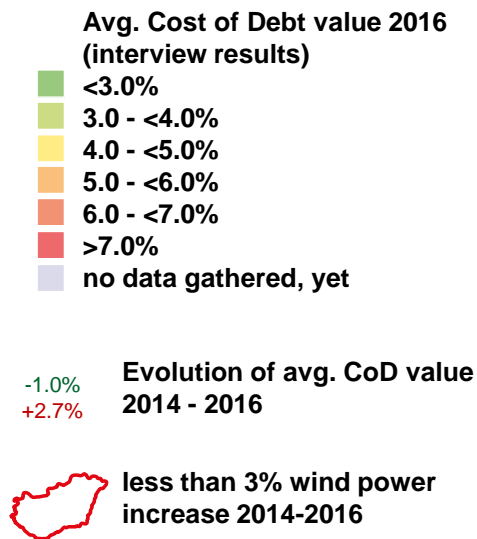
- There are **several methods for wind project financing**: corporate financing or project financing
- Ongoing changing interest rates
- Constant changes of RES market conditions
- **Lack of current, significant projects in some EU markets**, made sometimes model estimations necessary
- Different level of transparency of market actors

Decrease in most MS, but still no converging WACC



Cost of Debt Development

Plunging interest rates – but unclear consequences for market actors



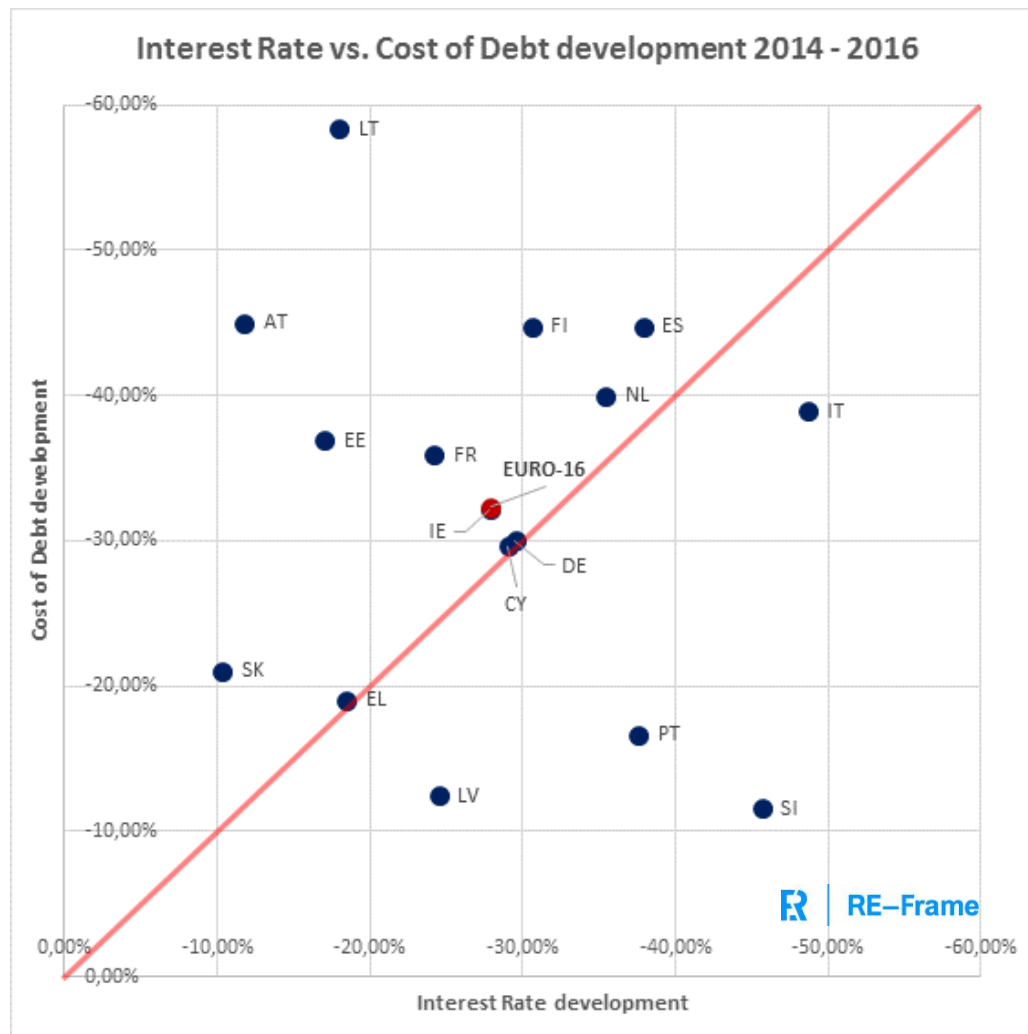
Comparison of Cost of Debt & interest rate development

Trend indicates correlation between cost of debt & interest rates...



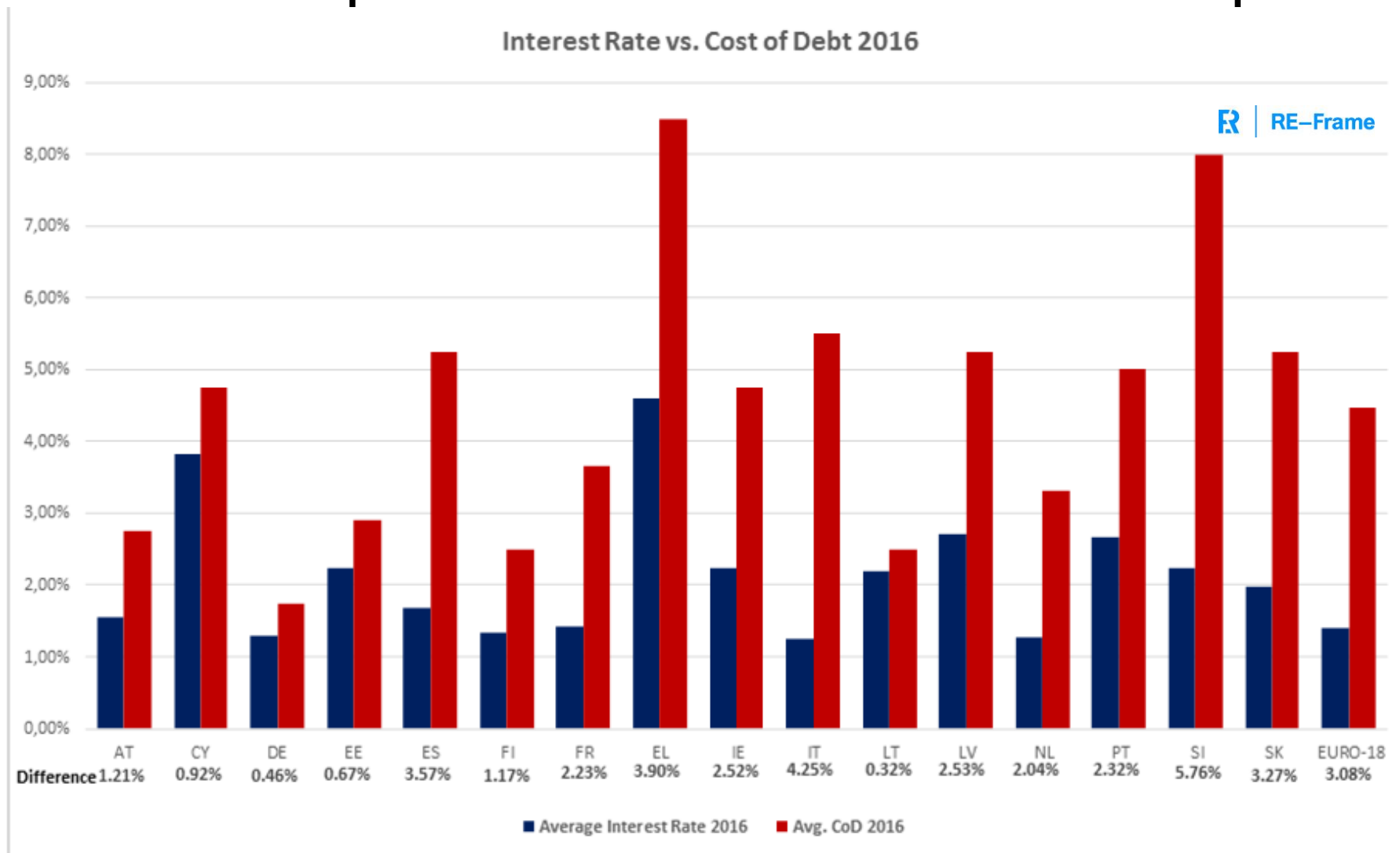
Comparison of Cost of Debt & interest rate development

...but the development at EU Member State level is extremely diverse



Comparison of Cost of Debt & interest rate development

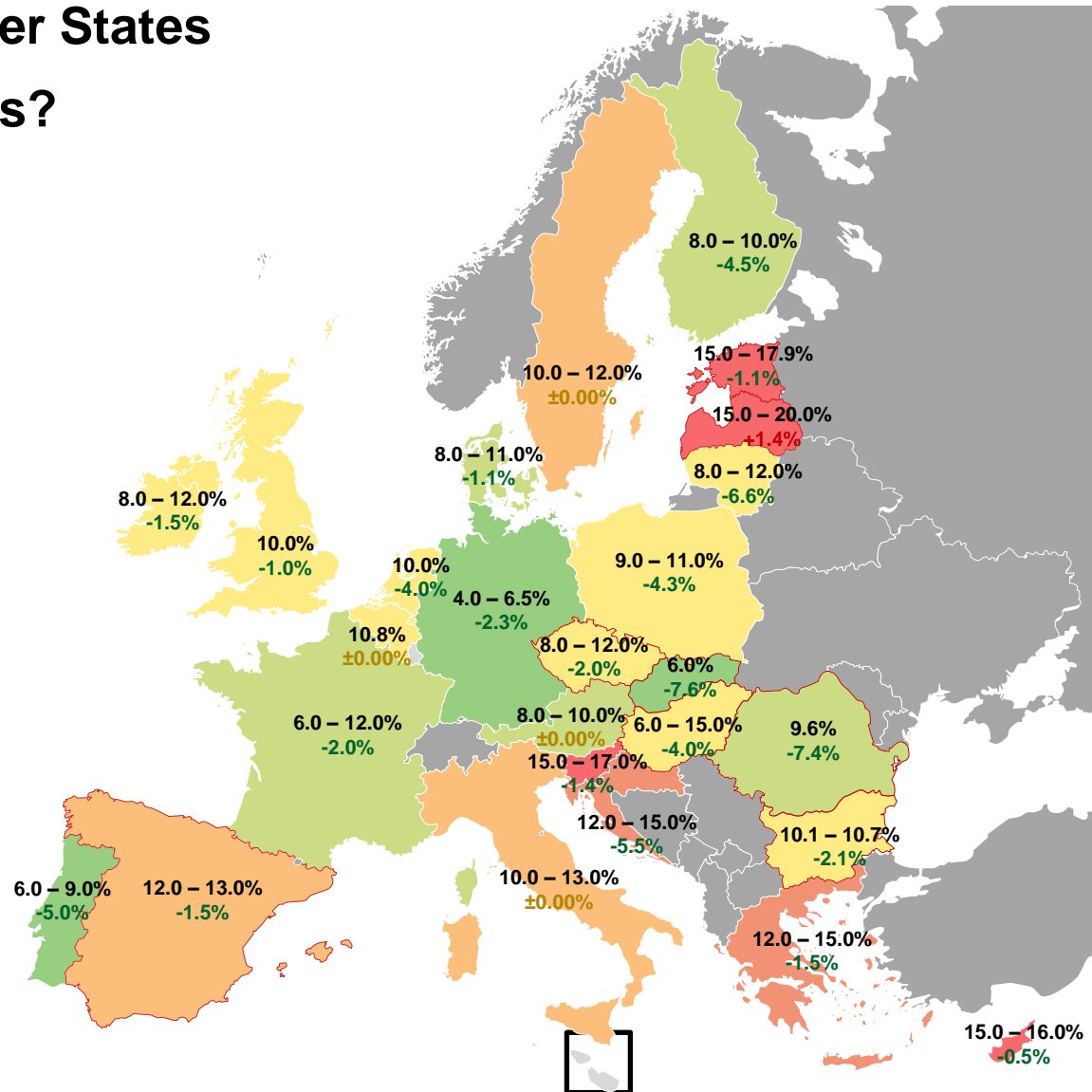
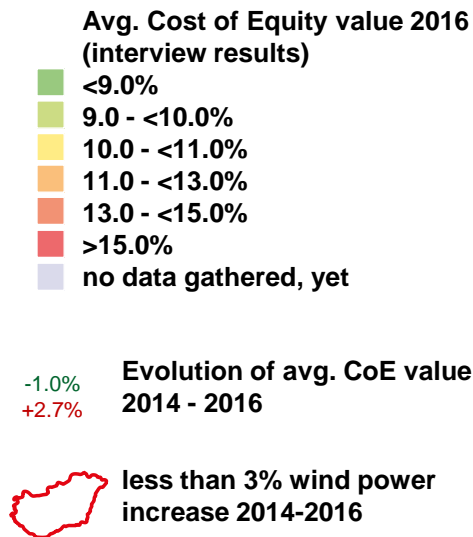
Differences in comparison to absolute interest rates - and their potential



Cost of Equity Development

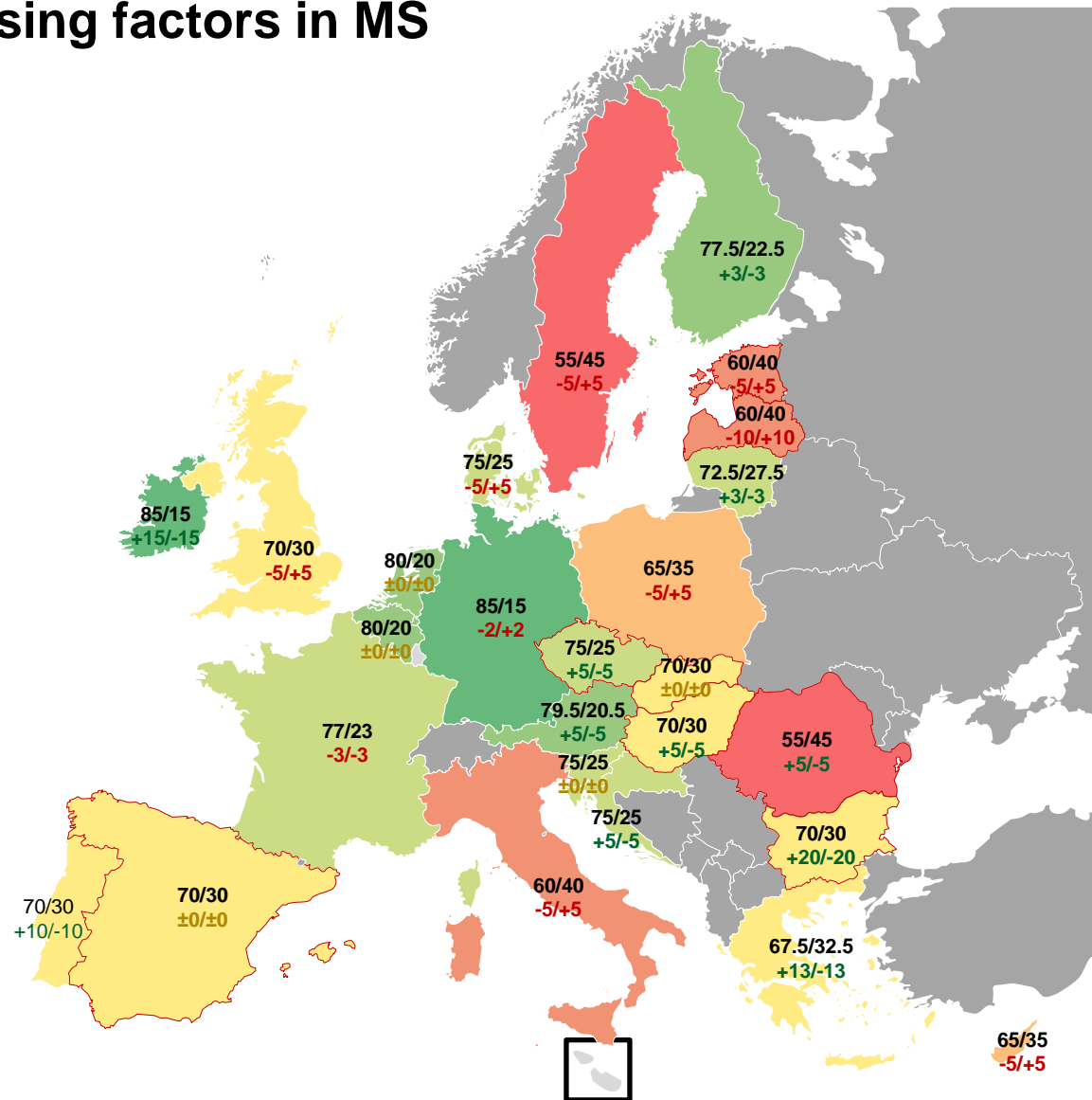
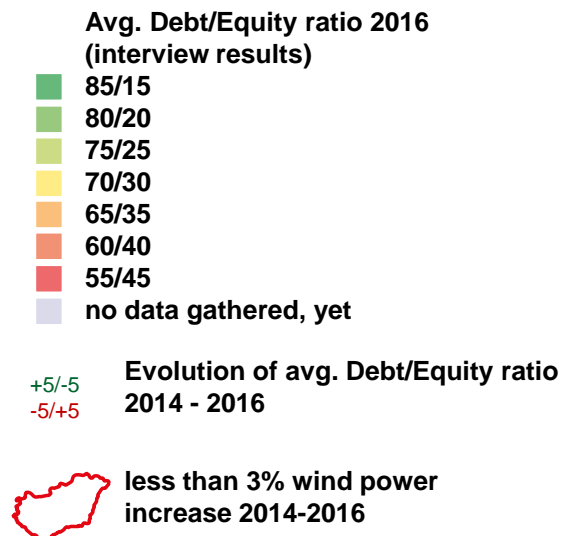
Decrease in almost all Member States

– change of business models?



Development of debt/ equity ratio

Diverging ratios reflect opposing factors in MS



Conclusions

The Good:

- Decreasing trend for WACC for wind onshore in Europe
- Trend more positive than in other sectors

The Bad:

- Still no converging markets
- Discrepancy in all WACC components
- No wind-onshore deployment in some markets despite decreased WACC
- Increasing risks for at least some market actors

The Ugly:

- Relationship between macroeconomic development, policies & WACC development still not entirely clear
- Predictions of future developments are pretty limited

The Pretty:

- Huge numbers of approaches to analyze and mitigate this challenge
- The window of opportunity is open now.



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ideas into energy.

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