**Analysis of the historical pass-through of carbon cost to electricity prices in European power markets**

Fabien Roques\*\*, Petr Spodniak\*, Yuanjing Li

\* Economist, Compass Lexecon; E-mail: pspodniak@compasslexecon.com

\*\* Corresponding author. Associate Professor of Economics, Dr., Scientific Advisor, Chaire European Electricity Markets (CEEM), University of Paris Dauphine, 75775 Paris Cedex 16, France (ceem-dauphine.org). E-mail: froques@compasslexecon.com

**ABSTRACT**

In this paper, we estimate the carbon pass-through rate in the French and Central Western European power market with a linear econometric model using data of French electricity EU ETS forwards over the period of 2011-2018. We find that the period 2011-18 can be split into seven sub-periods with identified structural breaks and that the estimated carbon pass-through rate varies between 0.53 and 1.23 depending on the period considered. The paper contributes to the understanding of the drivers of the carbon cost pass-through by identifying the key events that are associated with these structural breaks and providing the first and the most up-to-date empirical evidence of this pass through over the period of 2011-2018.

**Key words**: carbon pass-through, EU ETS, forward price