

## Climate in credit risk: Building sector specific models for wholesale portfolios

Many firms have built first generation climate risk models to perform stress testing and scenario analysis. For wholesale portfolios, larger banks have adopted a modelling approach that is based on the principles of micro-economics (developed originally by the UNEP FI). At a high level, the approach aims to capture the impact of carbon taxes on supply and demand curves and subsequently firm level financials and default risk.

The UNEP FI's approach in principle can be implemented for almost any sector with limited sector customisation. However, the impact of climate risk is nuanced and specific to each sector. Therefore, in favour of achieving more accurate and sensible model results, there is a need to quantify impacts with greater customisation at sector level.

Over the last 2 years Deloitte has developed and implemented its own version of the UNEP FI's approach, customised for carbon intensive sectors. We refer to our approach as the Carbon Elasticity Model (CEM). Our experience has been focused on building sector specific models for wholesale portfolios with exposure to carbon intensive sectors such as Oil, Gas, Power, Steel and Coal Mining. This presentation will explore our approach to building transition risk models at a sector level. With the practical experience of building these models, we will present (amongst others) our approach, assumptions, limitations, and challenges, including modelled results.