Guidance 21b: High-level approach for stress testing transition risks

British International Investment

START

Agree key objectives

a. Define the precise goals of the exercise – e.g. evaluate short-term credit risk impacts on electricity generation under an accelerated transition to high carbon prices.

b. Specific segment (e.g. power generation loans and electricity-related infrastructure), time horizon (e.g. 1-5 years) and the nature of credit/market risks to assess.

Design scenarios

Develop scenario narratives that capture the nature, scale and drivers of the transition shock, such as:

a. Abrupt policy action – e.g. introduction of a significant carbon price hike (using NGFS or local regulatory guidance).

b. Accompanying market/technological shifts – e.g. electricity demand and renewable energy penetration.

c. Consider pass-through limitations, regulatory price caps, market dynamics and technology mix.

Avoid setting numerical multipliers or pass-through rates until the scenario is well-defined.

Select analytical approach

Choose between top-down, bottom-up or hybrid frameworks.

a. **Top-down:** use macro-sectoral averages – e.g. average carbon intensity/pass-through in sector.

b. **Bottom-up**: use asset/firm-level data on technology, emissions, cost structure and market exposure.

c. **Hybrid:** apply sector averages but refine for largest exposures or key sub-groups.

Selection informs data requirements and modelling choices.

Data collection and preparation

Gather relevant data tailored to scenario and approach.

a. Asset/loan-level info – e.g. technology type, fuel mix, emissions factors, generation capacity, baseline financials etc.

b. Segment exposures by carbon intensity, technology, geography and regulatory regime.

c. Client ability to pass on costs, market share, contractual protections, hedging strategies, etc.

d. Identify high-emitting, low-adaptation exposures for focus.

Apply scenario shocks and model impacts

Translate policy, market and technology changes into financial impacts. For example:

a. Calculate increased carbon cost for each asset/client based on emissions factor and scenario carbon price.

b. Estimate revised operating margins and profitability, accounting for pass-through constraints and regulatory price caps.

c. Use empirical relationships (e.g. historical or modelled elasticities) to estimate changes in PD and LGD – then apply relevant multipliers.

d. Recalculate key metrics for each exposure, such as ECL, NPL ratio and margin compression.

Aggregate, analyse and report results

a. Sum ECL and NPLs at segment/portfolio level.

b. Compare with a no-transition business-as-usual baseline.

c. Identify risk concentrations by geography, technology types, client group, regulatory regime, etc.

d. Test sensitivity-testing of key variables and assumptions such as carbon price, pass-through rate and demand response.

REVIEW AND ITERATE