



# Climate Action in Financial Institutions

PRINCIPLES FOR MAINSTREAMING CLIMATE ACTION

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## Crédit Agricole's PgXCA methodology to assess the materiality of climate risks

Institution	Principle	Related Work Stream(s)
	PRINCIPLE 2: MANAGE Climate Risks	

Publication date: 2017

Date Policy/Tool Established	Additional Capacity Required (e.g., staff, resources, other)	How Established?
Development: 2016 - 2017	No additional capacity required	Developed as part of the overarching CSR Program (FRD) under the supervision of CERES committee
Monitoring, reporting tools		How Implemented?
Integrated into existing risk monitoring and reporting tools		Developed internally with the help of previous work by academics (Chaire Finance et Développement Durable)
Key Lessons		
<ul style="list-style-type: none"> <li>A sector and issue-based approach (PgXCA methodology) enables assessing materiality of the transition risk under a set of scenarios</li> <li>This approach constitutes a first step for developing stress tests</li> </ul>		

## Introduction

Use of PgXCA methodology is part of the CACIB primary approach decided in 2009 for assessing and managing the climate-change impacts of the Bank and the related risks.

As a first step, a methodology was developed with academics and used since 2011 to map the carbon footprint of the finance provided by the Bank by sector and country using an innovative issue-based approach named PgXCA (cf. "Use of a sectoral and issue-based cartography of global financed emissions for developing CSR sector policies" in 1st version of Emerging Practices Paper).

It was decided in 2015 to initiate an Action Plan (as part of the Group master CSR program FReD) to assess the importance of the climate risks (physical, transition, legal) at different point in time (short term, medium term, long term) and work on a methodology for assessing at the client level the risk identified as most important.

Combined with the use of scenario, the PgXCA methodology has enabled assessing the materiality of transition risks.

## Development and Design

An innovative aspect of the PgXCA methodology is to allocate emissions from an issue-based perspective, and not use the traditional scope-based perspective. This issue-based perspective is based on the allocation of GHG emissions to sectors according to their capacity for reduction, with no multiple accounting. It results in emission factors (tCO<sub>2</sub>/EUR of financing) that can then be multiplied by the outstanding amount of finance provided and investments by sector and countries to estimate the carbon footprint of financial institutions providing finance and produce a breakdown by sectors and countries.

To estimate the emission factors, the methodology uses a breakdown of national GDP by sector equal to the sum of the added values of companies in this sector and country. It is then possible to compare the value of the emissions allocated to each "couple" (sector, country) for a given level of carbon price to the added value of the sector.

## Implementation

The level of carbon price that companies could be subject to has been assessed for three time periods (before 2020, between 2020 and 2030 and after 2030) under a set of four scenarios.

These scenarios differ by the significance of measures taken to fight climate change and how gradually (or abruptly) these actions are implemented. A level of carbon price is estimated in relation to the ambition of mitigation measures taken in a given country. And the pace of the transition determines in what proportion the carbon price affects the added value of companies (from 0% in a smooth transition to 100% in a Break up scenario).

The same approach has been used for assessing the materiality of physical risk under the same set of scenarios.

## Experience and impact

While virtually no impact has been found at short term for both transition and physical risks under the four scenarios developed, significant differences appear at medium term for transition risks. In particular, the average impact on the value added of clients has been found unimportant under two scenarios (Business As Usual and Gradual Transition), moderate under one (Accelerated Transition) and potentially significant under one (Break up Scenario).

Therefore, it has been decided to develop a methodology for assessing the transition risks at medium term at client level (please see Crédit Agricole's case study on the Development of a Medium-term Transition Risk Index).