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The climate indicator: a tool to support companies in their climate transition

Climate change creates risks for companies and, more generally, for the economy (particularly in terms of inflation and financial stability). In this context, the Banque de France is gradually rolling out tools to support companies, providing them with a free assessment of the risks to which they are exposed. In particular, the transition climate indicator (TCI) will enable companies in the sectors that emit the most greenhouse gases to develop strategies that are in line with the Paris Agreement. They will also be able to use it as a benchmark for financing their transition. The indicator was launched in 2024 for three initial sectors: electricity generation, real estate companies, and transport. More than 1,500 indicators have been assigned. In addition, a climate risk exposure indicator will gradually be made available to all companies located in France.

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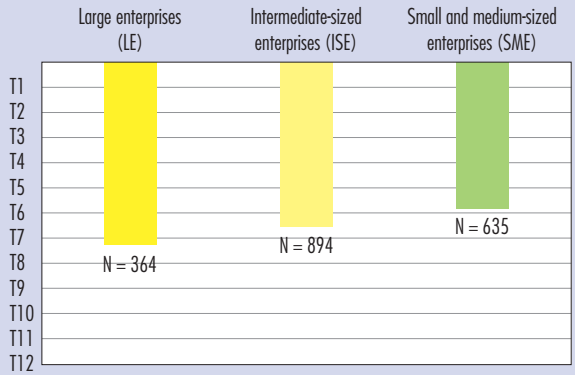
24%
average response rate of companies asked to adopt the climate indicator approach

1,500
number of transition climate indicators assigned in 2024, assessing a company's alignment with the Paris Agreement

intermediate
average rating of the trajectory towards a low-carbon economy for companies that responded in 2024

Average transition climate indicator (TCI) by company size

(N = number of companies assessed; on the y-axis, TCI rating)



Source: Banque de France.
Key: Out of 364 large enterprises assessed, the average TCI is T7, on a scale ranging from T1 (best rating) to T12 (worst rating). Company sizes correspond to the 2008 Economic Modernisation Act.

BANQUE DE FRANCE
EUROSYSTÈME

1 The climate indicator, a public service tool for companies

Given the scale of the risks associated with climate change, the Banque de France is rolling out indicators designed to help companies assess their strategy and emissions trajectory, as well as their exposure to climate risks, on a voluntary basis.

To carry out this mission, the Banque de France is relying on its network of branches located across the country. Thanks to its longstanding business rating mission, the Banque de France has acquired a thorough understanding of the economic fabric and established a relationship of trust with companies, which facilitates dialogue with climate analysts and enables it to obtain the information needed to produce a robust assessment.

Providing free support to companies facing climate change challenges

The climate indicator is part of the Banque de France's fundamental missions, and more specifically its mission to support companies, which are exposed to new risks linked to global warming and the energy transition, but also to new opportunities: reducing their dependence on fossil fuels, investing in more efficient technologies or materials, innovating to stay ahead of competitors, and mobilising their employees. In this context, the climate indicator enables companies to become more aware of the impacts of climate change, to evaluate the actions they have already taken or are planning to take, and to have at their disposal a benchmark indicator that can potentially be used with investors or other stakeholders, free of charge.

The climate indicator covers both dimensions of climate change: transition and adaptation

The transition to a low-carbon economy, with the transition climate indicator (TCI)

This indicator compares the company's future greenhouse gas emissions trajectory with its reference trajectory, as provided by the International Energy Agency (IEA) and in line with the Paris Agreement, i.e., limiting global warming to 1.5°C by 2100 (see Appendix). This indicator therefore enables each company analysed to assess its own alignment with the Paris Agreement trajectory.

The transition dimension of the climate indicator measures greenhouse gas (GHG) emissions within companies' "scope of interest." This scope of interest corresponds to the scope of GHG emissions that is most relevant with regard to the company's activity, i.e., a majority of total emissions, and over which the company has decarbonisation levers.

In addition, the transition maturity climate indicator (ICMT) is based on a set of mainly qualitative questions, broadly aligned with the information required in the Voluntary standard for non listed micro-, small- and medium-sized undertakings (VSME). It measures the extent to which a company's strategy is consistent with its chosen GHG emissions trajectory.

Methodological principles of the transition climate indicator

The transition climate indicator (TCI) is based on several methodological principles that address the limitations of other rating tools based on environmental, social, and governance (ESG) criteria (Kohler, Da Costa, Cluzel and Umbricht, 2025):

- **Robustness**: The TCI was developed in partnership with the French Agency for Ecological Transition (ADEME). More specifically, it is based on its ACT (accelerate climate transition) methodology. This scientific approach ensures a consistent analysis of companies' transition plans with climate objectives, as defined by the Paris Agreement.

- **Forward-looking approach**: The TCI takes a forward-looking approach, focusing on the company's future greenhouse gas (GHG) emissions. It has a short-term horizon, in line with the company's investment planning horizon for its sector, and is therefore suited to measuring current and future efforts.

- **Support**: As part of the assessment conducted by the Banque de France, its analysts through the network support companies by explaining how the rating mechanism works and how to move forward in the mechanism.

- **Physical vision**: The TCI uses the company's physical output to calculate its carbon intensity and estimate its efficiency in this area, in order to ensure that resources and material and energy needs are balanced within GHG emission limits. The scenarios used as normative benchmarks focus more on stocks and physical flows than on their monetary counterparts. The analysis is conducted in terms of carbon intensity (GHG emissions relative to activity volumes) and absolute value, in order to measure the efforts made by the company and the actual reduction in GHG emissions.

- **Tangibility**: The TCI assesses the company's transition plan according to tangibility criteria. Only decarbonisation actions whose implementation is deemed credible are taken into account when measuring the company's alignment. The tangibility criteria require that the action be documented, that its effect on GHG emissions be quantified or quantifiable, and that financial resources be allocated to it, where relevant. The validation of tangible actions is carried out by the climate analyst responsible for collecting information from the company.

- **Sectorisation**: The TCI methodology is broken down sector by sector to take into account sector-specific characteristics. Certain elements, such as emission sources, volumes of activity and the units used to measure them, as well as the time horizon of the assessment, are defined at sector level. The assessment of the transition plan also depends on the sector, as the levers for decarbonisation differ.

Adaptation to climate change, the other dimension of the climate indicator

The adaptation dimension of the climate indicator enables companies to measure their exposure to future changes in various climate risks (heat, rain, wind, fire, cold, drought) established in relation to the reference warming trajectory for climate change adaptation,[1] in the geographical areas where the company is exposed. To this end, the geographical locations of the company's economic centres of interest in mainland France are compared with the high-resolution spatial climate projections (8 km by 8 km grid) from Météo-France's "Providing access to regionalised French climate scenarios

1 French Ministries for Ecological Transition, Spatial Planning, Transportation, Cities, and Housing (2023), « La trajectoire de réchauffement de référence pour l'adaptation au changement climatique (TRACC) ».

for the impact and adaptation of our societies and environments" (DRIAS) project. Via the Banque de France's Espace dirigeant,[2] from early 2026 companies will be able to consult their own exposures and those of their value chains at three levels of warming: +2°C, +2.7°C, and +4°C, corresponding to the time horizons of 2030, 2050, and 2100. This service is also free of charge and will be enhanced in subsequent years.

In 2027, an indicator combining exposure to various climate risks will be made available to companies. It will be supplemented by an assessment of their vulnerability to these climate risks and will enable companies to evaluate their adaptation challenges.

Alongside this quantitative aspect, the adaptation maturity climate indicator (ICMA) is based on a set of mainly qualitative questions, which are broadly aligned with the information requested in the VSME standard. It is used to assess the maturity of the company's adaptation strategy. For the year 2026, this analysis will be supplemented by an assessment of the company's degree of vulnerability.

Data collection is limited, carried out directly with companies, based on their current activity, and closely aligned with non-financial reporting and client requirements

The transition climate indicator methodology, which is tested with companies before the indicator is introduced for each sector, aims to limit the burden on companies by focusing on data essential to the analysis (40 to 70 data points) and to maximise the use of non-financial information already disclosed, particularly under the Corporate Sustainability Reporting Directive (CSRD) and the VSME standard. In 2025, up to 80% of the data points required for the climate indicator can be taken directly from the CSRD standard, and 100% from the VSME standard. The climate indicator approach has also been designed to be consistent with the various existing standards used by stakeholders: SBTi, CDP, GHG Protocol, etc.

Finally, the sector-specific questionnaires are modular in order to correspond to all the companies targeted. Smaller or less mature companies can thus use the qualitative section of the questionnaire (maturity climate indices) to initiate a transition and adaptation approach. They will have the possibility of being assessed without having to fill in all the requested data. By completing the questionnaire in full, more mature companies will receive a free expert assessment of their transition and adaptation plans.

A company's climate indicator is intended to be updated every two years.

Distinct indicators for climate transition and climate adaptation

In line with the above, the assessment of a company's strategy and emissions trajectory relies on two indicators:

- **The transition maturity climate indicator (ICMT)** is based on an expert analysis that assesses the adequacy of the company's structure in relation to transition issues. This assessment is based on three pillars of analysis: (i) becoming aware of the issues; (ii) preparing for action; and (iii) implementing the transition. It is given on a four-point scale: initial, elementary, advanced, and very advanced. The questions related to the "becoming aware of the issues" and "preparing for action" pillars are the same for all sectors. Some questions in the third pillar ("implementing the transition") are sector-specific in order to best reflect the specific characteristics of each sector: priority decarbonisation levers, additional emissions such as those in scope 3[3] for the generation of electricity;

2 *https://dirigeant.banque-france.fr*

3 Value chain emissions, in this case those emitted during the manufacture and transport of wind turbines or photovoltaic panels.

- **The transition climate indicator (TCI)** is based on a quantitative analysis that measures the alignment of the company's trajectory with the Paris Agreement. This rating varies between T1 (best rating) and T12 (worst rating), depending on the company's volume of greenhouse gas (GHG) emissions and its emission reduction trend compared to the reference trajectory (see rating scale below).

Rating scales and meaning of the transition climate indicator (TCI)

In light of what is expected for the transition to a low-carbon economy, the degree of consistency of a given company's GHG emissions trajectory in the short and medium term is considered to be:

Excellent	T1
	T2
	T3
Good	T4
	T5
Intermediate	T6
	T7
Partial	T8
	T9
Limited	T10
Very limited	T11
Transition not initiated	T12

A company can obtain a good maturity rating even if its quantitative indicator is much less favourable.

Finally, the **adaptation climate indicator** is currently based solely on an expert analysis assessing the adequacy of the company's structure in terms of its adaptation to its vulnerability to climate risks. This assessment follows the same pillars as the ICMT (awareness, preparation, implementation) and is given on the same four-point scale (initial, elementary, advanced, very advanced).

The diagram below summarises the various indicators available.

The climate indicator: a modular tool supporting transition and adaptation

Transition to a low-carbon economy	Adaptation to climate change
Assessment of the maturity of the company's strategy (maturity indicator)	Assessment of the maturity of the company's strategy (maturity indicator)
+	+
Assessment of the greenhouse gas emissions trajectory	Assessment of exposure to climate risks
=	=
Transition climate indicator (TCI)	Adaptation climate indicator(s)

2 An encouraging first campaign: 1,500 climate indicators assigned

After an initial test phase, the climate indicator is gradually being rolled out, with priority given to sectors facing significant decarbonisation challenges

In 2022 and 2023, the Banque de France conducted data collection tests, carried out by network analysts during dedicated interviews. These tests confirmed the robustness and effectiveness of the methodology developed by the Banque de France and made it possible to refine the roll-out strategy by targeting companies belonging to sectors covered by the statistical classification of economic activities in the European Community (NACE code). The climate indicator thus targets around ten sectors by 2027, representing approximately 20,000 companies and 60% of territorial greenhouse gases.

In 2024, the first year the climate indicator was actually deployed across the entire pool of companies in the "electricity", "real estate companies," and "transport"

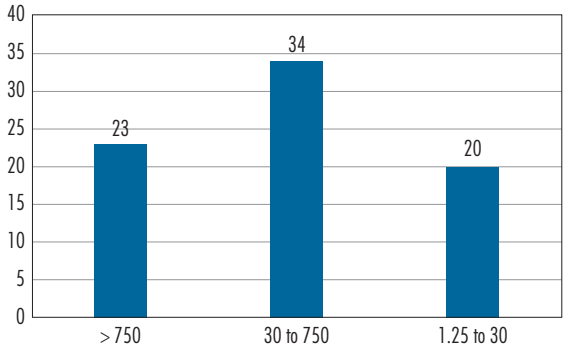
sectors, approximately 1,800 questionnaires were sent to companies by Banque de France analysts,[4] who subsequently got in contact and offered assistance in completing the questionnaire. Since July 2025, data collection in these same sectors has also been possible via the Espace dirigeant, providing a more user-friendly approach for companies.

A response rate that illustrates the French industry's interest in climate issues

In 2024, 513 questionnaires were collected from independent companies or groups, and a total of 1,564 climate indicators were thus assigned, including 1,051 to subsidiaries. The questionnaires came mainly from small and medium-sized enterprises (SMEs). However, the response rate was higher for intermediate-sized enterprises (ISEs – see Chart 1). In line with the number of companies targeted, transport accounts for the majority of climate indicators assigned (893, compared with 212 for real estate companies and 459 for electricity generation companies). This first year of climate indicator assignment was therefore very encouraging, with approximately 12.5% of the initial target scope assessed.

C1 Questionnaire response rate, by company size in EUR millions of turnover

(%)



Source: Banque de France.
Key: The response rate for companies with a turnover exceeding EUR 750 million was 23%.

The companies assessed represent a significant share of the value added of the sectors concerned, which is consistent with this overall response rate (see table).

Value added of companies assessed by the climate indicator

(EUR thousands)

	Gross added value	Share of all companies in the sector
Electricity	681,664	10%
Real estate companies	7,731,415	22%
Transport	4,458,148	10%
Total	**12,871,227**	**15%**

Source: Banque de France.
Scope: The ratio for electricity generating companies does not include one large French company, which alone accounts for 79% of the sector's total value added.
Key: All companies in the real estate sector assessed by the climate indicator account for 22% of the total value added of companies in the sector, i.e. EUR 7.7 billion.

These different response rates are consistent with the average response rates for other public questionnaires aimed at companies, which are subject to numerous constraints (time, resources, etc.).

The companies assessed are, on average, more mature in terms of transition than in terms of adaptation

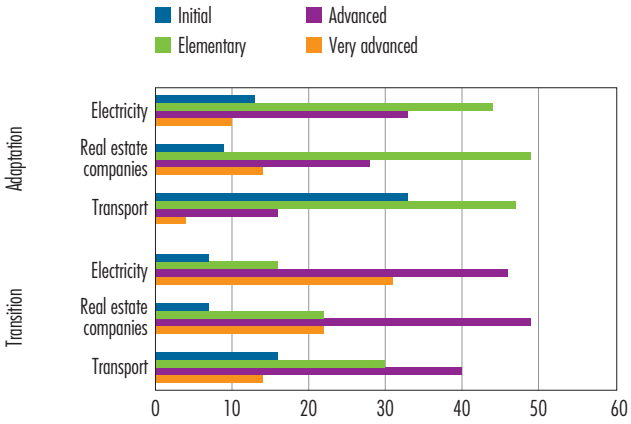
In 2024, the majority of transition maturity climate indicators (ICMT) were at the "advanced" stage (43%), while the majority of adaptation maturity climate indicators (ICMA) were at the "elementary" stage (46%). This finding is consistent with the latest study conducted by the Directorate General for Enterprises (DGE), which shows that despite EUR 10 billion worth of climate-related losses in 2022, 68% of business leaders do not consider adaptation to climate risks to be a strategic priority (Directorate General for Enterprises, 2025).

While all three sectors assessed are concerned by climate risk adaptation, real estate companies seem to be more so. As regards transition, electricity generation posts the highest proportion of "very advanced" maturity (31%). This could be explained by the significant share of renewable energy production companies in the total

4 A total of 1,564 climate indicators were assigned, but only 1,495 incorporate a quantitative analysis of the company's trajectory (transition climate indicator). In 2025, the second year climate indicators were assigned, two additional sectors were added: building construction and cement. In 2026, four new sectors will be covered: aluminum, chemicals, vehicle manufacturing, oil and gas, and, potentially, agriculture (field crops).

C2 Degrees of adaptation maturity (ICMA) and transition maturity (ICMT) by sector

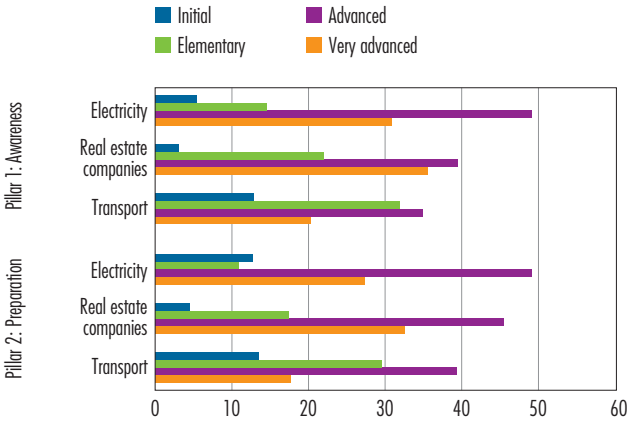
(as a % of companies assessed)



Source: Banque de France.
Key: 13% of electricity generating companies assessed are rated "Initial" on qualitative questions related to adaptation (ICMA), compared with 7% on qualitative questions related to transition (ICMT).

C3 Assessment of the first two pillars of transition maturity (ICMT) by sector

(as a % of companies assessed)



Source: Banque de France.
Key: 5% of electricity generating companies assessed are rated "Initial" on pillar 1 "Awareness" of the ICMT.

number of responses. These players are naturally highly aware of climate transition challenges, as this is at the heart of their business. In addition, the "implementation" pillar of maturity is structurally favourable to a company that produces only renewable energy.

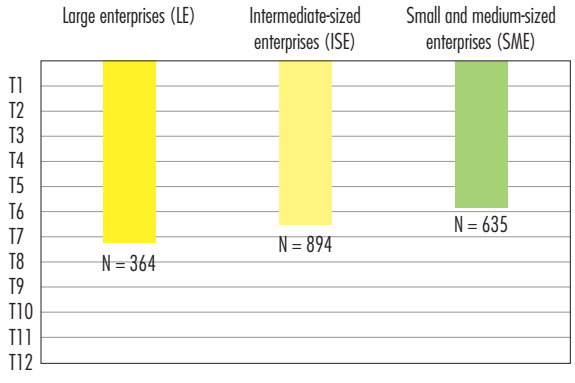
If we focus solely on the "awareness" and "preparation" pillars, a larger proportion of real estate and transport companies are considered "very advanced" (see Chart 3). However, despite its strong involvement in the climate indicator approach, the transport sector appears to be less mature in terms of transition than the other two sectors analysed: the share of companies whose strategy is assessed as being at an initial or elementary stage is close to 40% for this sector, compared with closer to 25% in the real estate and electricity generation sectors.

Within the sample under review, small companies – with a lower response rate – are on average more advanced in the transition than larger companies

In terms of the expected decarbonisation trajectory, the degree of consistency among the companies surveyed on a voluntary basis appears to be at an intermediate level, with a transition climate indicator (TCI) between T6 and T7 (see Chart 4). On average, the indicator is less favourable for large enterprises than for intermediate-sized enterprises and small and medium-sized enterprises. However, the fact that relatively fewer small companies responded requires putting this finding into perspective.

C4 Average transition climate indicator (TCI) by company size

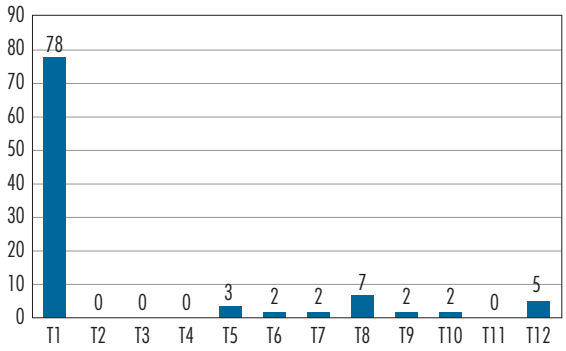
(N = number of companies assessed; on the y-axis, TCI rating)



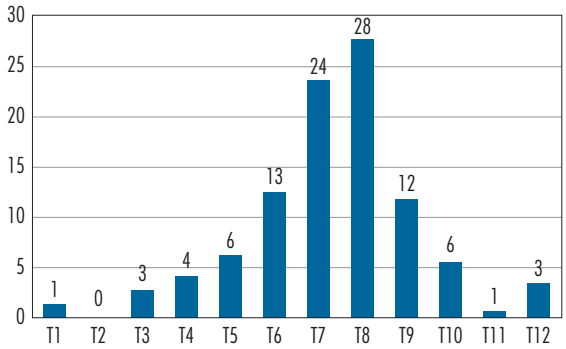
Source: Banque de France.
Key: Out of 364 large enterprises assessed, the average TCI is T7, on a scale ranging from T1 (best rating) to T12 (worst rating). Company sizes correspond to the 2008 Economic Modernisation Act (LME).

C5 Distribution of transition climate indicator (TCI) ratings by sector
(as a % of companies assessed)

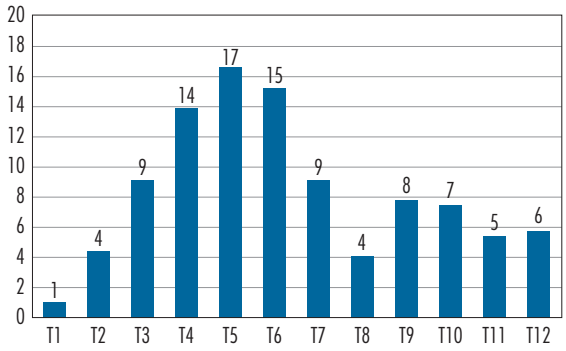
a) Electricity



b) Real estate companies



c) Transport



Source: Banque de France.
Key: 78% of electricity generating companies assessed obtain a T1 rating for the transition climate indicator (TCI).

The distribution of the TCI varies considerably across sectors. While the transport sector has a relatively balanced distribution, 73% of cases in the real estate sector show a rating of T7 or higher. Conversely, 78% of electricity generating companies are rated T1.

The specificity of the electricity generation sector[5] can be explained by the sectoral benchmark used, which is based on the International Energy Agency's "net zero emissions" scenario (*World Energy Outlook, 2023*), only available at the "world" level. This benchmark curve favours French companies, which already have a very low-carbon electricity mix. Nevertheless, the positive impact of this normative benchmark on company alignment should not be overestimated, as the dividing line is more between 100% decarbonised companies and those with fossil fuel assets.[6]

3 Use cases for the climate indicator

A tool to help companies manage their transition and adaptation

The climate indicator helps companies by providing them with a free assessment of their transition plan (degree of maturity of their strategy, decarbonisation trajectory) and their strategy in relation to their exposure to climate risks. It is aimed both at companies with little experience in these areas, enabling them to address these complex issues through modular questionnaires and support from Banque de France analysts, and at companies that have already implemented a transition plan or developed a fully-fledged adaptation strategy.

The climate indicator can be used in-house by the company (employees, board of directors). Subject to agreement for its disclosure in the Fichier bancaire des entreprises pour le climat (FIBEC), the company may also use it with certain external stakeholders (see below).

5 The largest companies in the sector were surveyed in 2023 and were therefore not approached in 2024: they are therefore excluded from the sample. Thus, company size in 2024 does not affect the distribution.

6 Only 31% of electricity generating companies are considered "very advanced" on the transition maturity climate indicator (ICMT). This illustrates the complementarity of the two indicators, as emissions outside of scope 1 are excluded from the TCI for this sector.

A potential benchmark indicator for investors

The climate indicator aims to facilitate dialogue between companies and their counterparties and to become a benchmark indicator for financing the ecological transition. By providing a reliable overview of companies' transition and adaptation efforts, this benchmark indicator could facilitate their access to financing. With companies' consent,[7] the Banque de France may make the results of the assessment and all or part of the data collected available to financing stakeholders on the FIBEC platform, which is managed by the Banque de France on the same principle as the Fichier bancaire des entreprises (FIBEN), which is dedicated to financial ratings.[8] A first set of data will be available from 2026. Companies may also use the climate indicator when dealing with certain external counterparties (in particular principals).

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NGFS Short-term Climate Scenarios for central banks and supervisors, May.
Download the document

NGFS (2024)
NGFS long-term scenarios for central banks and supervisors, November.
Download the document

7 The climate indicator is based on a threefold voluntary approach: companies are (i) free to respond or not to requests from the Banque de France and questionnaires, (ii) free to disclose or not disclose gross data, and (iii) free to disclose or not disclose their climate indicator. However, companies subject to the CSRD are not covered by this voluntary approach and the information is disclosed automatically.

8 For FIBEN, see *https://www.banque france.fr/fr/a-votre-service/banques-assurances-prestataires-fiduciaires/fichier-bancaire-entreprises-fiben*

Appendix
Presentation of sectoral benchmarks

The transition dimension included in the Banque de France climate indicator is based on a comparison between the company's tangible decarbonisation trajectory and a sectoral decarbonisation benchmark.

This standard is defined to correspond to a warming trajectory in line with the Paris Agreement, i.e., global warming limited to 1.5°C above pre-industrial averages. Sectoral decarbonisation trajectories must be consistent both within sectors (economic and technological feasibility) and across sectors (the transition of one sector must not impede the transition of another). In addition, the methodology developed by the Banque de France requires that the results of modelling an economy aligned with 1.5°C be available in the form of physical activity metrics. Indeed, carbon emissions expressed in terms of monetary activity metrics have the disadvantage of being sensitive to each company's pricing strategies and market fluctuations.

The International Energy Agency (IEA) GEC model

The sectoral references for the transition climate indicator are based on global decarbonisation scenarios, allocating the global carbon budget by sector and by year. Several organisations provide such scenarios, of which the International Energy Agency (IEA). The IEA's Global Energy and Climate Model (GEC Model) has all these characteristics and has therefore been selected as the benchmark decarbonisation standard for all sectors covered during the "climate 2024" campaign. The Banque de France's Climate Business Division also carries out this type of operation based on the IEA's decarbonisation scenarios.

In 2024, the Banque de France and the French Agency for Ecological Transition (ADEME) renewed their partnership, under which ADEME provided sectoral benchmarks used to apply the ACT Assessment methodology. The Carbon Performance Tool and ACT NZE Refresh are the names of the tools that provide compilations of sectoral benchmarks for many sectors.

The information is drawn from the IEA's *Energy Technology Perspectives* (ETP) and *Net Zero* reports.

How are these scenarios used in the different sectors covered?

The scenarios are constructed with different levels of granularity in terms of geography, asset category, and technology.

The aim is to better take into account certain specific characteristics of the geographical area, such as the reality of the levers available to companies, the average intensity of the players in the area, the electricity mix in the area, etc.

The sectoral benchmark analysis framework provided by the Climate Business Division aims to ensure that the sectoral benchmarks meet the quality standards of the transition climate indicator (TCI) each year. This concerns the scientific credibility of the issuing body, the scenario used and its alignment with the Paris Agreement, equity between different sectors of activity, and the level of technological, geographical, and temporal granularity.

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