Responsible Investment Report 2020

BANQUE DE FRANCE
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Responsible
Investment
Report
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The Governor's foreword

François Villeroy de Galhau

The Paris Climate Agreement celebrated its fifth anniversary on 12 December 2020. The 195 signatory countries to that agreement committed to cutting greenhouse gas emissions in a bid to keep global warming to well below 2°C by the end of the century. Article 2 of the agreement also aims to ensure that finance flows are consistent with low carbon-impact, climate-resilient development. Five years on, it is clear that much remains to be done.

The Banque de France is deeply committed to helping to achieve these goals and to promoting the growth of sustainable finance more generally. In fact, playing a role in assessing, mitigating and managing the impact of climate-related risks on the real economy and the financial system is now an integral part of the mission entrusted to central banks under both their monetary strategy and financial stability responsibilities. In 2020, the European Central Bank (ECB) launched a strategic review of its monetary policy, which included the topic of greening its policy. Back in 2017, the Banque de France spearheaded the creation of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), for which it acts as the permanent secretariat. The NGFS, which now boasts over 80 members, published ten reports in 2020, underlining the importance of climate and sustainability issues for central banks and financial supervisors. In addition to its engagement at European and international levels, the Banque de France is making changes throughout its own operations, with steps to cut its greenhouse gas emissions, incorporate environmental, social and governance (ESG) analyses in company scoring, and integrate climate change-related risks into the supervision of French financial institutions. In late 2020, the *Autorité de contrôle prudentiel et de résolution* (ACPR – Prudential Supervision and Resolution Authority) published its first joint report with the *Autorité des marchés financiers* (AMF – Financial Markets Authority) on the climate-related commitments of French financial institutions. This was preceded by a report on coal policies.

The Banque de France has pursued an ambitious responsible investment approach since 2018. It incorporates climate issues as well as ESG questions more broadly in the management of asset portfolios for which it has full and complete responsibility, namely its own funds and pension liabilities investment portfolios (approximately EUR 23 billion). The Banque de France aims to limit the exposure of its assets to climate risks while also taking account of the impact of its investments on the environment, in keeping with the double materiality principle promoted by the European Union. In particular, it intends to align its portfolios with a sub-2°C global warming trajectory while helping to finance the energy and ecological transition.

In 2020, the commitments made under this responsible investment strategy were met and expanded. Accordingly, the Banque de France will exit coal completely by 2024, significantly limit its investments in oil, gas and unconventional hydrocarbons, and oppose any new development project involving the use of fossil fuels by companies in which it holds shares. In addition, the Banque de France has now begun integrating biodiversity – a relatively new subject for the financial sector – in the analysis of its portfolios' ESG performances. The Banque de France also took steps to strengthen the social side of its responsible investment strategy, responding to the need to bolster the "S" of ESG amid an unprecedented health, social and economic crisis.

This document reports, for the third consecutive year, on the execution of the Banque de France's responsible investment strategy. The Banque de France remains one of the few central banks to publish a report devoted to responsible investment. In February 2021, Eurosystem central banks adopted a joint position in which they committed to implementing climate change-related responsible investment strategies for non-monetary policy portfolios. They will report on this from 2022 or beginning of 2023 onwards. Transparency is essential, a fact reflected in the efforts by French and European lawmakers and supervisors to define the ESG disclosure framework for financial institutions and companies. This transparency push is further supported by the 2017 recommendations issued by the Task Force on Climate-related Financial Disclosures (TCFD), which are now widely followed. For institutional investors, transparency on extra-financial issues should make it possible to gather detailed and robust ESG data on the impacts of issuers' activities. These data should be comparable, reliable and universally accessible without disproportionate costs. To this end, European rules to ensure standardised public extra-financial disclosures and a single electronic dissemination format are crucial.

The Banque de France is conveying these messages at the domestic, European and international levels and wants to set an example among central banks by publishing a report detailing its results and methodologies. Its report is also being shared on the Climate Transparency Hub launched in 2021 by the French Environment and Energy Management Agency (ADEME) and the General Commissariat for Sustainable Development (CGDD).

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OVERVIEW

Since 2018, the Banque de France has pursued a responsible investment (RI) approach. As part of this, it adopted an RI Charter, followed by a three-pronged strategy covering climate, environmental, social and governance (ESG) issues more generally, and engagement with companies in which it is a shareholder. This approach covers the own funds and pension liabilities investment portfolios, i.e. assets for which the Banque de France is solely and fully responsible. These portfolios were worth EUR 23 billion at 30 November 2020.[1]

Responsible investment approach

In 2018, the Banque de France published its **Responsible Investment Charter**. In it, the Bank committed itself to including climate issues, and ESG questions more generally, in its asset management. Since that time, it has applied a **double materiality** principle to its own funds and pension liabilities investment portfolios.[2] Accordingly, it considers not only the impact of climate risks on its own assets but also the impact of its portfolios on the environment and the climate. By doing this, the Banque de France hopes to limit the physical and transition risks to which its portfolios are exposed, while simultaneously improving the overall environmental impact of the assets that it finances. In this regard, it contributes to meeting the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015.[3]

Through its charter, the Banque de France also committed itself to publishing an annual **responsible investment report**. In 2019, the Banque de France published its first report, which described the Bank's strategy and performances. With this publication, the Banque de France became the first central bank to conduct this kind of transparency exercise. This year's report marks the third time that the Banque de France has reported on the execution of its strategy. The report, the Banque de France's Responsible Investment Charter and the associated voting policy are all publicly available on the Banque de France's website as well as on the Climate Transparency Hub[4] set up by the French Environment and Energy Management Agency (ADEME) and the General Commissariat for Sustainable Development (CGDD).

While the Banque de France is not subject to **French and European extra-financial disclosure requirements**, it endeavours to comply with them wherever possible and appropriate. For this reason, its annual *Responsible Investment Report* incorporates the ground-breaking provisions contained in Article 173-VI of the French Energy Transition for Green Growth Act of 17 August 2015, which introduced extra-financial reporting obligations for institutional investors. The Banque de France's next report will take into account French and European regulatory requirements that are currently under development. These include the provisions of Article 29 of French Energy and Climate Act No. 2019-1147 of 8 November 2019, which will introduce new requirements in March 2021, for example on biodiversity, as well as the requirements set down by Regulation EU 2019/2088 on sustainability-related disclosures in the financial services sector and by Regulation EU 2020/852 on sustainable investment (known as the "European Taxonomy" Regulation).[5]

The Banque de France's report additionally refers to publications by French and European supervisors, such as AMF positions and recommendations on disclosures to be provided by funds incorporating extra-financial approaches, and the joint ACPR-AMF report on the climate commitments of French financial institutions.

Over and above this legislative and regulatory framework, the Banque de France's report draws on the recommendations made in 2017 by the **Financial Stability Board's** Task Force on Climate-related Financial Disclosures (TCFD).[6]

Moreover, the Banque de France's strategy complies with the recommendation issued in 2019 by the **Network of Central Banks and Supervisors for Greening the Financial System (NGFS)** on sustainable and responsible investment, which calls for sustainability factors to be integrated in the management of assets for own account.[7] The Banque de France was behind the initiative to set up this network in 2017 and acts as its permanent secretariat. As part of its responsible investment approach, it participates actively in the sub-working group on sustainable and responsible investment, which published a guide in 2019[8] and a progress report in 2020.[9] Based on the surveys presented in these reports, the Banque de France is continuing to lead the way, not just in terms of the strategy that it is implementing but also by publishing a dedicated annual report.

Finally, the Banque de France participates actively in work on sustainable and responsible investment by **euro area central banks**. This work led to the publication in February 2021 of a common stance whereby Eurosystem central banks made a commitment to establish and implement sustainable and responsible investment strategies for euro-denominated portfolios for which they have full responsibility, i.e. non-monetary policy portfolios, and to publish the results of these strategies by end-2022 or beginning of 2023 at the latest.

The three pillars of the responsible investment strategy

The Banque de France's responsible investment strategy is built on **three pillars**, which are further divided into **five objectives** (*see Table 1*).

The first pillar focuses on climate. The Banque de France pursues the goals set by Article 2 of the 2015 Paris Agreement. Accordingly, it seeks to align the equity components of its asset portfolios with a global warming trajectory of well below 2°C relative to pre-industrial levels (Objective No. 1). Having aligned the equity component of its own funds portfolio in 2019, it will align the equity component of its pension liabilities portfolio by 2022.

T1 The Banque de France's responsible investment strategy: three pillars and five objectives

Pillar 1: Align investments with France's climate commitments
Objective No. 1: Align equity components with a 2°C trajectory. Horizon set at end-2020 for the own funds portfolio and end-2022 at the latest for the pension liabilities portfolio
Objective No. 2: Contribute to financing the energy and ecological transition (EET) by increasing investment in green bonds and thematic funds with an EET focus from 2019
Pillar 2: Include environmental, social and governance (ESG) criteria in asset management
Objective No. 3: Exclude 20% of the equity investment universe based on ESG criteria (Pillar III of the French SRI label) from 2019
Pillar 3: Exercise voting rights and engage with issuers
Objective No. 4: Adopt a voting policy that includes extra-financial provisions in 2019
Objective No. 5: Achieve a general meeting attendance rate of over 40% in 2019 and 80% by 2020

1 These assets exclude securities held for monetary policy purposes under the mission entrusted to the European System of Central Banks by the Treaty on the Functioning of the European Union (TFEU).

2 Each portfolio comprises several asset classes: a sovereign bond component, an equity component, a corporate bond component and a liquidity component.

3 In particular Goals 7 (energy services) and 13 (climate change prevention).

4 *https://climate-transparency-hub.ademe.fr/*

5 At the time of writing, the delegated acts intended to clarify these two regulations had not yet been published.

6 TCFD recommendations cover financial materiality, i.e. the climate risks to which portfolios are exposed. The Banque de France also includes a social and environmental materiality analysis, which covers the social and environmental impact of its portfolios.

7 *A call for action*, NGFS, April 2019.

8 *A sustainable and responsible investment guide for central banks' portfolio management*, NGFS, October 2019.

9 *Progress report on the implementation of sustainable and responsible investment practices in central banks' portfolio management*, NGFS, December 2020.

BOX 1:
FOSSIL FUEL EXCLUSIONS POLICY

- Thermal coal: since adopting its Responsible Investment Charter in 2018, the Banque de France has excluded from its investments companies that derive over 20% of their revenue from coal. In 2021, it will lower this threshold to 2%, and will exclude thermal coal completely from its investments by the end of 2024. Between 2021 and 2024, it expects companies in which it holds shares and which are involved in coal to prepare an exit plan.

- Oil and gas: by 2024, the Banque de France will align itself with the exclusion thresholds contained in the European Regulation on sustainability benchmarks and more specifically with the thresholds applicable to EU Paris-aligned benchmarks. As part of this, the Banque de France will exclude companies that derive over 10% of their revenue from oil or over 50% from gas. Also, in 2021 it will introduce an additional threshold for unconventional hydrocarbons and will exclude companies that derive over 10% of their revenue from such hydrocarbons.

- New projects linked to fossil fuels: as a shareholder, the Banque de France will oppose any new development project involving fossil fuels. In the absence of a dedicated resolution on the topic, it will vote against approving the accounts.

1 Shale oil, shale gas, oil sands and/or Arctic or deepwater exploration-development.

BOX 2:
OPERATIONAL STRATEGIES FOR RESPONSIBLE INVESTMENT

The NGFS guide to sustainable and responsible investment by central banks identifies five main types of operational strategies:

- Negative screening, i.e. systematically excluding issuers from the investment universe based on certain criteria. The Banque de France uses negative screening to align its portfolios with a sub-2°C warming trajectory (Pillar 1, equity component);

- Overweighting or underweighting companies in investments on a sector-by-sector basis (best-in-class approach). The exclusions applied by the Banque de France based on environmental, social and governance (ESG) scores are an example of this (Pillar 2, equity component). Compared with negative screening, best-in-class exclusions have the benefit of maintaining portfolio sector diversity;

- Integration of ESG factors in the financial decision to invest: the Banque de France uses this approach in Pillars 1 and 2 of its strategy as it recognises issuers' climate and ESG performances at an upstream stage of its investments (Pillars 1 and 2, equity and sovereign bond components);

- Thematic or impact investing: the Banque de France pursues this approach by buying green bonds and investing in thematic funds with an energy and ecological transition (EET) focus (Pillar 1);

- Voting and engagement aimed at influencing portfolio companies: this is the goal of the voting policy adopted in 2019 (Pillar 3, equity component).

The Banque de France combines all of these strategies, tailoring them to the constraints and characteristics of portfolios and asset classes. Combining operational strategies is also a way to take account of the availability of climate data, which continues to vary across asset classes.

To do this, it factors companies' carbon emissions trajectories into its investment choices, to ensure that its portfolios comply with the warming target. In addition, the Banque de France contributes to financing the energy and ecological transition (EET) by buying green bonds[10] and investing in thematic funds with an EET focus (Objective No. 2). The Banque de France thus finances the production of renewable energies, energy refits for buildings, marine pollution reduction as well as small and mid-sized enterprises (SMEs) that are EET innovators, i.e. in areas such as energy storage, smart cities and waste management.

The second pillar is focused on integrating ESG criteria more broadly in asset management. The Banque de France excludes 20% of its equity investment universe based on ESG criteria and scores (Objective No. 3). In this way, it complies with the minimum exclusion ratio required by the Socially Responsible Investment (SRI) label established by the French Ministry for the Economy and Finance. The Banque de France applies several types of exclusions, including norm-based (e.g. compliance with certain international conventions), sector-based and ESG score-based exclusions. For example, in its 2018 charter, the Banque de France introduced an exclusion threshold for companies involved in thermal coal: until 2020, it excluded from its investments companies that derive over 20% of their revenue from thermal coal (extraction or coal-based energy production). In late 2020, the Banque de France decided to step up and widen its fossil fuel exclusions. It will completely exclude the coal sector by end-2024, apply exclusion thresholds to oil, gas and unconventional hydrocarbons, and incorporate fossil fuel-specific provisions in its voting policy (*see Box 1*).

The third pillar concerns the Banque de France's engagement with companies in which it holds shares. In 2019, the Banque de France adopted a voting policy including extra-financial provisions (Objective No. 4). For example, the Banque de France expects companies to disclose information on the environmental impact of their activities. It also expects executive remuneration to recognise extra-financial performances. In addition, the Banque de France is targeting a general meeting attendance rate of at least 80% from 2020 onwards as it seeks to exercise its influence as a shareholder (Objective No. 5). The Banque de France thus combines several types of operational responsible investment strategies, including exclusions, over- and underweights, ESG integration, thematic investing and voting (*see Box 2*).

2020 results

In 2020, the Banque de France **met and expanded its commitments** by achieving all the targets that it had set for the year, by improving its portfolios' climate and ESG performances, and by developing new aspects of its strategy.

In terms of the **targets set in 2019** (*see Table 2 below*), the equity component of the own funds portfolio was again aligned with a 2°C trajectory, as in 2019. The Banque de France is committed to setting the same target for the equity component of its pension liabilities portfolio by the end of 2022. Moreover, the target of allocating EUR 1.7 billion to EET financing by the end of 2021 has been almost achieved already: total purchases of green bonds now stand at EUR 1.5 billion and three new thematic funds have been added to the funds in which investments have already been made, bringing EET financing via this type of fund to EUR 205 million. The ESG exclusion ratio was maintained at 20% of the investment universe. In 2020 the Banque de France attended 90% of general meetings, as it sought to enforce the principles set down in its voting policy. As an example of this, it questioned a major company at its general meeting on the integration of extra-financial performances in executives' variable remuneration.

In addition to achieving these targets, the Banque de France improved the **climate and ESG performances of its two portfolios**, which it measures through a series of indicators (*see Table 3 below*).[11] These indicators are tracked portfolio by portfolio, asset class by asset class (sovereign bonds and equities), and are compared against benchmarks. Overall:

- The **carbon impact** of the portfolios, measured via their carbon footprint and carbon intensity, fell significantly between 2018 and 2020: the capital carbon footprint recorded for the equity component of the own funds portfolio decreased by 51.5% compared with 2018 to reach 97 tCO2eq per EUR million invested, while the footprint of the pension liabilities portfolio's equity component was down by 34.7% to 94 tCO2eq per EUR million invested).

10 The Banque de France has set itself a purchasing target of EUR 1.7 billion by the end of 2021.

11 The Pillar 1 and 2 presentations detail the results and methodologies for the sovereign bond and equity components, which form the portfolios' two primary asset classes, making up 94% of the value of the own funds portfolio and 97% of the pension liabilities portfolio at 30 November 2020.

T2 Implementation of the strategy in 2020

Pillar 1: Align investments with France's climate commitments	
Objective No. 1: Align equity components with a 2°C trajectory. Horizon set at end-2020 for the equity component of the own funds portfolio and end-2022 at the latest for the pension liabilities portfolio	Equity component of the own funds portfolio 2°C aligned from end-2019
Objective No. 2: Provide EUR 1.7 billion in financing for the energy and ecological transition (EET), including EUR 330 million in investments in thematic funds with an EET focus	EUR 1.5 billion invested in green bonds EUR 205 million invested in EET thematic funds
Pillar 2: Include environmental, social and governance (ESG) criteria in asset management	
Objective No. 3: Equity components meeting the requirements of Pillar III of the French SRI label in 2019	20% of equity issuers excluded on the basis of ESG criteria from end-2019
Pillar 3: Exercise voting rights and engage with issuers	
Objective No. 4: Adopt a voting policy that includes extra-financial provisions in 2019	Voting policy adopted at end-2019
Objective No. 5: Achieve a general meeting attendance rate of over 40% in 2019 and 80% by 2020	Attendance rate of 90% at end-2020

- The **share of sustainable activities** recorded for the equity components and measured by specialised data provider S&P Trucost according to the European taxonomy stood at 27% and 28% respectively.[12]

- The **brown share** of the equity components, which measures exposure to fossil fuels, also fell drastically compared with the 2018 reading, decreasing by 41.4% for the equity component of the own funds portfolio and by 7.4% for the equity component of the pension liabilities portfolio. The Banque de France uses this ratio to calculate its exposure to transition risks.

- **Exposure to physical risks**, which measures not the social and environmental impact of portfolios but the physical climate-related risks to which portfolios are exposed, is higher than that of the benchmarks overall. The sovereign bond component of the pension liabilities portfolio is particularly exposed to the risk of flooding and rising sea levels in Europe and North America, and to the risk of water stress in Southern Europe.

- In terms of **ESG performances**, the Banque de France portfolios continue to record results that beat those of the benchmark indices overall, both for average ESG scores and for social indicators. In particular, the average ESG score of the equity components was up by approximately 10% compared with 2018.

These indicators and the underlying climate and ESG data are supplied by specialised data providers S&P Trucost, Carbon4 Finance, Four Twenty Seven and Vigeo Eiris.

In 2020, the Banque de France also expanded and strengthened **its strategy**:

- First, fossil fuel requirements were widened beyond thermal coal (*see Box 1*), and the Banque de France's voting policy now incorporates provisions covering these sectors: two clauses were added to the policy to require companies involved in fossil fuels to have a coal exit plan and to refrain from financing new projects aimed at developing fossil fuels.

12 Since the European regulations on sustainable activities are not yet finalised, this ratio represents an estimate calculated by S&P Trucost. The Pillar 1 presentation describes the limitations linked to the calculation of this estimate.

T3 Portfolio climate and ESG performance indicators at end-2020

a) Own funds portfolio

Asset class	Indicator	Portfolio	Coverage (% of total assets)	Benchmark
Sovereign bond component	Capital carbon footprint	528 tCO_2eq/MEUR invested	99	567 tCO_2eq/MEUR invested
	Carbon footprint per unit of GDP	480 tCO_2eq/MEUR GDP	99	505 tCO_2eq/MEUR GDP
	Weighted average carbon intensity	461 tCO_2eq/MEUR GDP	99	488 tCO_2eq/MEUR GDP
	ESG score	80/100	100	80/100
	Exposure to physical risks	69.2/100	100	65.9/100
Equity component	Capital carbon footprint	97 tCO_2eq/MEUR invested	100	156 tCO_2eq/MEUR invested
	Carbon footprint per unit of revenue	231 tCO_2eq/MEUR revenue	100	341 tCO_2eq/MEUR revenue
	Weighted average carbon intensity	206 tCO_2eq/MEUR revenue	100	281 tCO_2eq/MEUR revenue
	Implied temperature rise	1.75°C-2°C	90	>3°C
	Green share EU taxonomy	28%	99.19	33%
	Brown share	7.4%	99.3	9.5%
	ESG score	56.5/100	99.8	53.5/100
	Biodiversity score	53.4/100	46.2	55.3/100
	Involvement in chemical products	4.4%	99.8	7.8%
	Eco. and social development	55.1/100	85.2	51.5/100
	Societal impact of products-services	52.9/100	53.8	48.3/100
	Workplace health and safety	58.7/100	99.8	54.9/100
	Non-discrimination	68.3/100	99.8	65/100
	Exposure to physical risks	45.9/100	100	43.6/100

b) Pension liabilities portfolio

Asset class	Indicator	Portfolio	Coverage (% of total assets)	Benchmark
Sovereign bond component	Capital carbon footprint	492 tCO_2eq/MEUR invested	97	573 tCO_2eq/MEUR invested
	Carbon footprint per unit of GDP	472 tCO_2eq/MEUR GDP	97	514 tCO_2eq/MEUR GDP
	Weighted average carbon intensity	466 tCO_2eq/MEUR GDP	97	499 tCO_2eq/MEUR GDP
	ESG score	74/100	100	79/100
	Exposure to physical risks	77.4/100	100	67.3/100
Equity component	Capital carbon footprint	94 tCO_2eq/MEUR invested	100	132 tCO_2eq/MEUR invested
	Carbon footprint per unit of revenue	224 tCO_2eq/MEUR revenue	100	327 tCO_2eq/MEUR revenue
	Weighted average carbon intensity	224 tCO_2eq/MEUR revenue	100	266 tCO_2eq/MEUR revenue
	Implied temperature rise	2°C-3°C	78	2°C-3°C
	Green share EU taxonomy	27%	99	30%
	Brown share	7.1%	98.9	7.9%
	ESG score	49.5/100	99.4	48.5/100
	Biodiversity score	50.6/100	37.4	49.1/100
	Involvement in chemical products	5.9%	99.6	6.5%
	Eco. and social development	47.4/100	72.5	45.9/100
	Societal impact of products-services	45.9/100	59.9	42.4/100
	Workplace health and safety	50/100	99.4	47.6/100
	Non-discrimination	60.6/100	99.4	60.9/100
	Exposure to physical risks	51.9/100	99	52/100

Sources: S&P Trucost, Vigeo Eiris, Four Twenty Seven.
Notes: In green: performances are better than or in line with the benchmark; in orange: performances are not as good as those of the benchmark.
ESG: environmental, social and governance criteria.

BOX 3: BIODIVERSITY ISSUES

Loss of biodiversity is now one of the most pressing environmental issues. The financial sector faces several questions in this regard, including how to measure the impact of finance flows on biodiversity and how to contribute to reducing the main factors of biodiversity loss, namely habitat destruction/alteration (e.g. deforestation), direct development (e.g. intensive fishing), climate change (e.g. impact of global warming on coral reefs), pollution (e.g. green tides) and invasive non-native species. Article 29 of the French Energy and Climate Act of 8 November 2019, which will come into application in March 2021, provides for the integration of biodiversity-related risks in the disclosures that portfolio management companies must publish on sustainable investments and risks. In addition, at the One Planet Summit in January 2021, France supported work aimed at establishing a Task Force on Nature-related Financial Disclosures (TNFD), i.e. a biodiversity equivalent of the Task Force on Climate-related Financial Disclosures (TCFD) climate recommendations.

- Second, the Banque de France began calculating biodiversity impact indicators for its portfolios *(see Box 3)*. Its strategy already contributes to preserving biodiversity through efforts to prevent global warming (2°C alignment of portfolios, which implies a reduction in carbon emissions), exclusions covering fossil fuels (which cause significant carbon emissions, pollution and deforestation) and investments in an EET fund aimed at reducing marine pollution (blue finance). In 2020, the Banque de France also decided to start monitoring the biodiversity impact of its asset portfolios through two indicators calculated by data provider Vigeo Eiris: an overall impact score and an indicator of exposure to companies involved in producing substances harmful to biodiversity. The data provider rated the 2020 performances of the equity components as "robust" in terms of overall impact, while exposure to companies involved in producing harmful substances was well below that of the benchmarks.

- Third, the Banque de France strengthened the social component of its strategy: at the end of 2020, it decided to expand its bond purchases to include social and sustainability (i.e. green and social) bonds from 2021. Two indicators tracking the social impact of the portfolios' equity components were also added this year to the social indicators used in 2018 and 2019, namely an indicator measuring the societal impact of the goods and services produced by companies, and an indicator measuring engagement in terms of promoting economic and social development in the local areas where companies operate. The results recorded by the portfolios' equity components for these two new indicators beat those of their benchmarks.

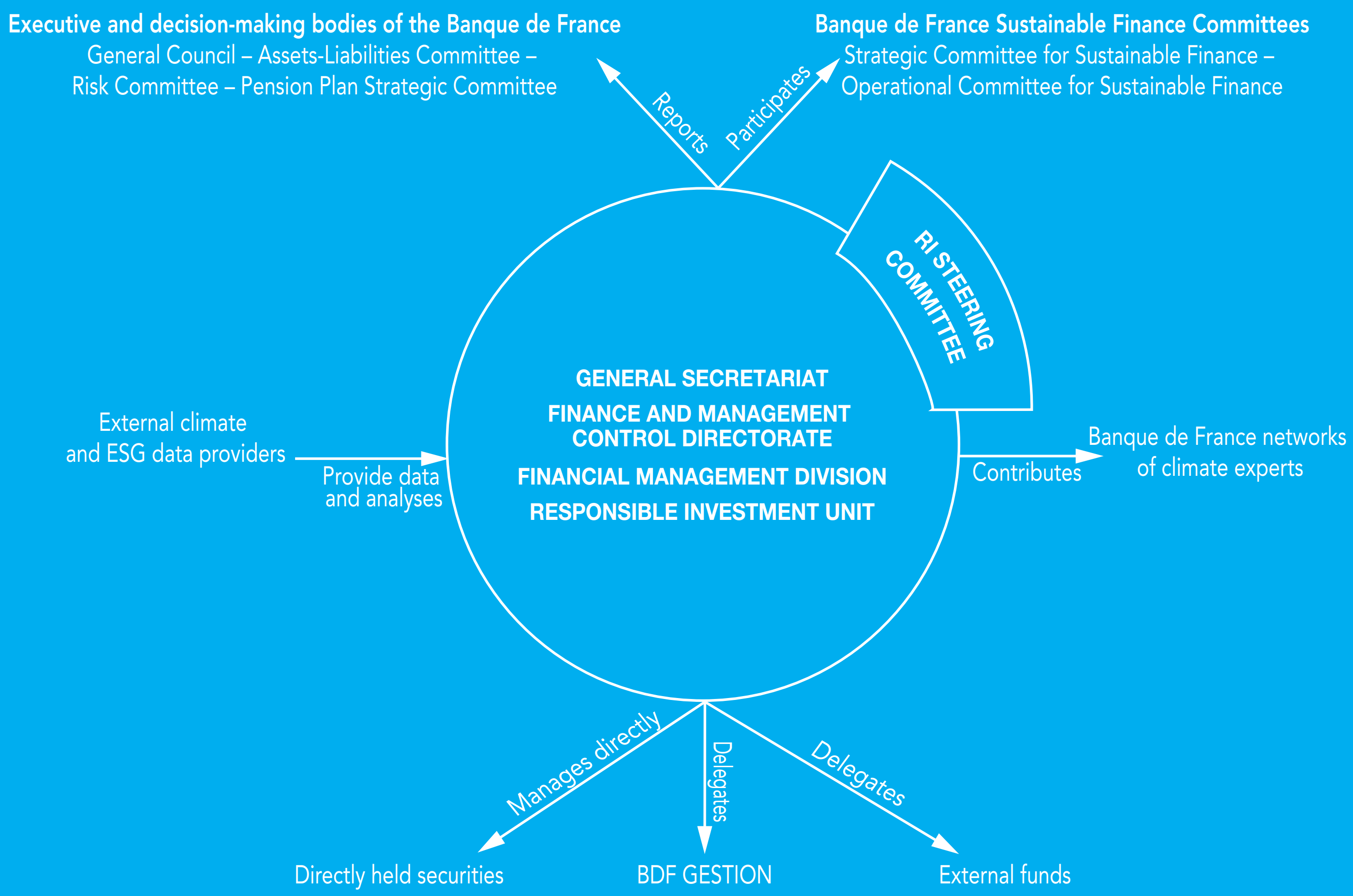
Governance

The Banque de France's responsible investment strategy is implemented by the Finance Directorate, which is part of the General Secretariat. The Banque de France manages only a small portion of the total assets of its portfolios directly. The vast majority of the assets are held through investments in dedicated funds[13] and open-end funds[14] with its subsidiary or other management companies.

The Banque de France has chosen an integrated governance approach to ensure that the responsible investment strategy is applied at all levels and to ensure consistency between the financial objectives assigned to portfolio management and those of the responsible investment strategy. The strategy is thus presented at least once a year to the General Council and determined by the Banque de France's decision-making bodies, namely the Assets-Liabilities Committee, the Pension Plan Strategic Committee and the Risk Committee. Operational implementation of the responsible investment strategy is steered by a quarterly investment committee on which the Risk Directorate sits alongside the Finance Directorate and the Secretary General. The Banque de France also established a new governance body in 2020, the Responsible Investment Steering Committee, which is chaired by the Deputy Secretary General and which meets quarterly for a detailed discussion of portfolio ESG issues.

The General Secretariat also participates in the Banque de France's Strategic Committee for Sustainable Finance and Operational Committee for Sustainable Finance, which bring together all of the General Directorates to coordinate the central bank's sustainable finance strategy. Finally, the General Secretariat is part of the Banque de France's climate expert networks on research and financial supervision.

RESPONSIBLE INVESTMENT GOVERNANCE



Source: Banque de France.
Note: ESG : environmental, social and governance criteria ; RI : responsible investment.

Risk management

The Banque de France's responsible investment strategy involves **monitoring and steering the climate-related risks** (physical and transition risks) to which the two asset portfolios are exposed *(see Pillar 1 below)*. Physical risks, such as heat stress, are measured using a composite indicator covering sovereign issuers and the entire value chain of portfolio companies. Exposure to transition risk is measured using the brown share of portfolios, which shows the proportion of revenue that portfolio companies derive from fossil fuels. In addition, the responsible investment strategy is integrated in the three lines of defence of the Banque de France's **risk management system**.[15]

13 It relies on its asset management subsidiary, BDF Gestion. BDF Gestion was created on 27 December 1995 and manages 30 collective investment schemes (dedicated, open to the public and employee savings schemes) as well as a number of individual mandates for institutional investors. Its activities are separated from those of the Banque de France by a strict Chinese wall and it does not benefit from any insider information on the economic sectors covered by the supervisory missions of the Banque de France.

14 Four external open-end index (i.e. passive) funds. These funds are included in the calculation of the temperature trajectory for Banque de France portfolios, but since they are open to other customers, they cannot be subject to application of the Banque de France's climate and ESG filters or specific voting policy. At 30 November 2020, they accounted for 3.3% of the total assets.

15 First line: Financial Management Division; second line: Finance Directorate Internal Control Unit; third line: Internal Audit.

PILLAR 1: CLIMATE

The Banque de France has undertaken to incorporate global warming issues into its investment strategy by setting two objectives:

- **Reduce the climate impact of its portfolios by aligning them with a greenhouse gas emissions trajectory compatible with global warming of less than 2°C above pre-industrial levels (Objective No. 1);**
- **Contribute to financing the energy and ecological transition (EET) by investing in green bonds and thematic funds with an EET focus (Objective No. 2).**

To this end, the Banque de France monitors the climate impacts of its portfolios and their exposure to climate-related risks. The following results are presented as at 30 November 2020.

2°C Alignment

The Banque de France has made a commitment to progressively align its portfolios with a global warming trajectory of well below 2°C. Accordingly, it ensures that its investments comply with the commitment made by France under the 2015 Paris Agreement. The Banque de France initially set – and then achieved – the goal of aligning the equity component of its own funds investment portfolio with a target of below 2°C by 2019. **In 2020, this component remained aligned with the 2°C target** because its implied temperature rise was between +1.75°C and +2°C. By the end of 2022, the Banque de France will apply the same target to the equity component of the pension liabilities investment portfolio, which in 2020 had an implied temperature rise of between 2°C and 3°C (*see Chart 1*).

To align its portfolios, the Banque de France considers the past and future annual carbon emissions trajectories of companies in its investment universe: when making its investment choices, it will not invest in companies whose trajectories are least compatible with the 2°C target and gives preference to companies that are aligned with the target. The trajectory indicator is therefore a forward-looking metric, unlike other indicators, such as the carbon footprint, which look only at historical data on portfolio companies. The carbon impact of issuers in the portfolio is allocated to the Banque de France on a proportional basis reflecting the share of the company's value held by the Banque de France. By applying this climate filter, the Banque de France excludes approximately 5% of the most harmful companies from its investment universe, under a best-in-universe approach. Exceptionally, some of these companies may be retained in the portfolio if (i) they implement a strategy that contributes significantly to the energy transition[1] and (ii) the equity component remains aligned with the 2°C target overall. The climate filter is applied in addition to the ESG exclusions under Pillar 2 of the strategy, on which basis the Banque de France excludes from all of its portfolios some companies involved in fossil fuels (*see Pillar 2 below*).

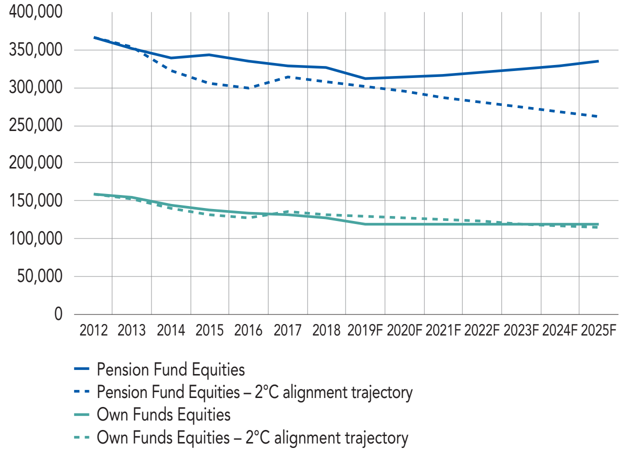
BOX 1: SCOPES 1, 2 AND 3 OF GREENHOUSE GAS EMISSIONS

The 2001 Greenhouse Gas (GHG) Protocol on measuring company GHG emissions distinguishes between three levels or "scopes" of emissions:

- Scope 1 corresponds to a company's direct emissions from sources that are owned or controlled by the firm, such as GHG emitted by vehicles owned by the company;
- Scope 2 corresponds to indirect emissions linked to the consumption of energy provided by other companies, such as GHG emitted during the generation of electricity consumed by the company;
- Scope 3 corresponds to indirect emissions linked to the upstream (supplier emissions) and downstream (emissions linked to the use of goods sold) portions of the company's value chain: for example, in the case of an auto manufacturer, this would include GHG emitted not only by suppliers but also by the vehicles produced and sold by the company.

C1 2°C alignment of portfolio equity components

(carbon emissions attributed to portfolios in tCO_2eq)



Source: S&P Trucost.
Notes:
- A portfolio is aligned with a 2°C trajectory if cumulative emissions over the 2012-2025 period attributable to it are below the cumulative emissions over the same period that are compatible with 2°C alignment.
- On the x-axis, "F" denotes forecast.
- Pension Fund: curve before implementation of the alignment strategy. The Pension Fund Equities curve will be gradually aligned with the theoretical curve between now and the end of 2022.

Carbon alignment data are provided by S&P Trucost (*see Box 6*). These cover Scope 1 and Scope 2 greenhouse gas emissions (*see Box 1*) over the 2012-2025 period. For this period, S&P Trucost calculates a carbon emissions trajectory for each company, which it compares against a theoretical emissions trajectory that would enable compliance with global warming of 2°C. Company carbon emissions trajectories are obtained from historical data and the targets set by firms themselves, or, failing that, from estimates and projections. The theoretical trajectory for 2°C alignment is calculated using the two methodologies recommended by the Science Based Targets initiative (SBTi):[2]

- In the case of companies that emit the most greenhouse gases and whose business activities are homogeneous, S&P Trucost refers to the sector carbon budgets established by the International Energy Agency (IEA),[3] then applies the "sectoral decarbonization approach" (SDA): within each sector, every company is assigned a carbon sub-budget based on its carbon intensity, production and market share. A company whose carbon intensity trajectory is above its theoretical budget is therefore not 2°C aligned.
- When considering other companies, S&P Trucost uses the 2°C scenario for global carbon emissions of the Intergovernmental Panel on Climate Change (IPCC),[4] then applies the greenhouse gas emissions per unit of value added (GEVA) approach: all companies must reduce their carbon intensity at the same pace (5% a year), irrespective of their sector. Companies that are unable to lower their carbon intensity at this pace are therefore not 2°C aligned.

1 This criterion is assessed using several data sources, including Carbon4 Finance and Carbon Disclosure Project (CDP) sources, as well as through interviews with broker analysts specialised in the relevant sectors.

2 The Science Based Targets initiative (SBTi) is a partnership between the United Nations Global Compact, the CDP, the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). It aims to help companies to lower their greenhouse gas emissions and thus target global warming of less than 2°C, based on scientific data.

3 ETP B2DS 2017 Scenario.

4 IPCC RCP 2.6 scenario.

BOX 2: GREEN OATS – FRENCH SOVEREIGN GREEN BONDS

Since 2017, the French State has issued sovereign bonds that are earmarked for financing green government expenditures. The framework document of 10/01/2017 covering the issuance of green OATs by Agence France Trésor (AFT) sets four objectives for these securities: mitigate climate risk, adapt to climate change, protect biodiversity and reduce air, soil and water pollution. Accordingly, green OATs finance "eligible green expenditures" in the budgets of different ministries. A second opinion, provided by Vigeo Eiris, is obtained to determine whether a green OAT qualifies as responsible.

Contribution to financing the energy and ecological transition

Under Pillar 1 of its strategy, the Banque de France also aims to make a contribution to financing the energy and ecological transition (EET). It measures this contribution through its purchases of green bonds and its investments in thematic funds with an EET focus. It has set itself an overall objective of EUR 1.7 billion by end-2021, including EUR 330 million for thematic funds alone. These investments come under the own funds portfolio. In 2021, the Banque de France will set additional impact investment objectives for its two portfolios.

At end-2020, **the total amount of purchases of green bonds came to EUR 1.5 billion**. These included sovereign and quasi-sovereign bonds, such as green *obligations assimilables du Trésor* (OAT – French Treasury bonds), *see Box 2*. These green bonds finance green public spending, such as investments in public transport, organic farming or waste recycling.

The **Banque de France continued** investing in thematic funds with an EET focus, **with total investments reaching EUR 205 million at end-2020**. The Banque de France also diversified its financing: in addition to financing the production of renewable energies, it now funds energy refits for buildings, reduction of pollution linked to marine infrastructure (blue finance) as well as SMEs that are EET innovators, i.e. in areas such as energy storage, smart cities and waste management. The Banque de France prioritises funds that have been awarded the Greenfin label created in 2015 by the Ministry for the Ecological Transition to guarantee the green qualities of activities financed by certified funds (*see Pillar 2, Box 1 below*).

Carbon footprint and intensity

In addition to the temperature pathway of its assets, the Banque de France measures the carbon impact of its portfolios, i.e. the greenhouse gas emissions[5] linked to issuers included in its investments. The carbon impact is calculated by means of three indicators, which offer different and complementary visions: the capital carbon footprint, the carbon footprint per unit of revenue (or GDP) and weighted average carbon intensity (*see Box 3 below*). For companies, the emissions covered correspond to Scopes 1 and 2, plus a portion of Scope 3 upstream emissions, as the indicators integrate direct emissions as well as emissions by direct suppliers.[6] For governments, the indicators cover emissions for the country's own consumption, including imports, as well as emissions linked to the production of exported goods and services. The way that carbon emissions are aggregated at the portfolio level does not address the risk of multiple counting, but this risk is mitigated by the partial exclusion of Scope 3.[7]

The carbon footprint of a portfolio corresponds to the carbon emissions of issuers that may be allocated to the portfolio. These emissions are allocated on a proportional basis according to the share of the investment relative to the value of the company (or, in the case of a sovereign issuer, on a proportional basis according to the share of the investment in government debt).

- The capital carbon footprint compares the carbon footprint of the portfolio to the amount invested by the Banque de France and can thus be used to measure tonnes of carbon equivalent per EUR million invested. In 2020, **the capital carbon footprint of the equity component of the own funds portfolio was 97 tCO_2eq per EUR million invested**, compared with 156 for the benchmark index. This was 51.5% lower than in 2018. **The capital carbon footprint of the equity component of the pension liabilities portfolio was 94 tCO_2eq per EUR million invested**, compared with 132 for the benchmark index. This was 34.7% lower than in 2018. Meanwhile, **the capital carbon footprint of the sovereign bond component of the own funds portfolio was 528 tCO_2eq per EUR million invested**, compared with 567 for the benchmark index. **The capital carbon footprint of the sovereign bond component of the pension liabilities portfolio was 492 tCO_2eq per EUR million invested**, compared with 573 for the benchmark index.

- The carbon footprint per unit of revenue (or GDP) compares the portfolio's carbon footprint to the share of revenue (or GDP) of issuers allocated to the portfolio (on a proportional basis according to the ownership share): it gauges the carbon efficiency of companies and states, measured in tCO_2eq per EUR million of revenue (or GDP). In 2020, **the carbon footprint per unit of revenue of the equity component of the own funds portfolio was 231 tCO_2eq per EUR million of revenue**, compared with 341 for the benchmark. This was 29.8% lower than in 2018. **The carbon footprint per unit of revenue of the equity component of the pension liabilities portfolio was 224 tCO_2eq per EUR million of revenue**, compared with 327 for the benchmark index. This was 17.3% lower than in 2018. Meanwhile, **the carbon footprint per unit of GDP of the sovereign bond component of the own funds portfolio was 480 tCO_2eq per EUR million of GDP**, compared with 505 for the benchmark. **The carbon footprint per unit of GDP of the sovereign bond component of the pension liabilities portfolio was 472 tCO_2eq per EUR million of GDP**, compared with 514 for the benchmark.

5 The calculated indicators take into account GHGs other than carbon dioxide (CO_2), such as methane (CH_4) and nitrous oxide (N_2O). These are aggregated and expressed in tonnes of carbon dioxide equivalent (tCO_2eq).

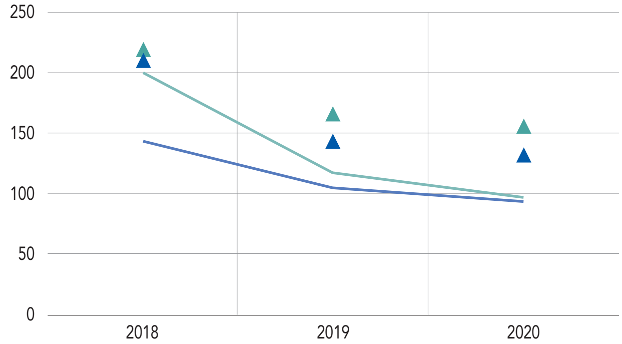
6 The remaining portion of Scope 3 (indirect suppliers and Scope 3 downstream emissions) suffers from a lack of transparency on the part of companies, such that data providers have to estimate about 80% of emissions.

7 For example, the carbon emissions of a portfolio company that is also a direct supplier of another company in the portfolio (hence included in its Scope 3 upstream emissions) could be counted twice. Partially excluding Scope 3 mitigates this risk, but not entirely. In the absence of information on supplier ties between companies, multiple counting cannot be totally eliminated.

C2 Portfolio carbon emissions, equity components

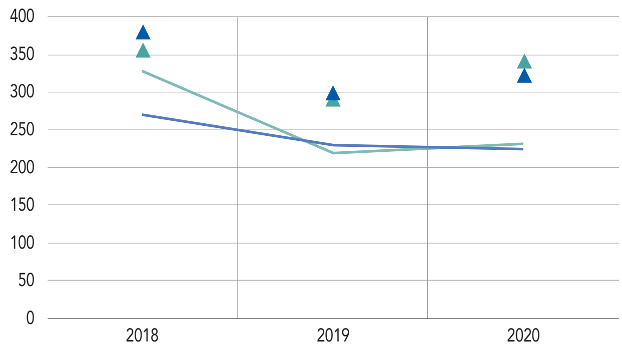
a) Capital carbon footprint

(in tCO_2eq/EUR million invested)



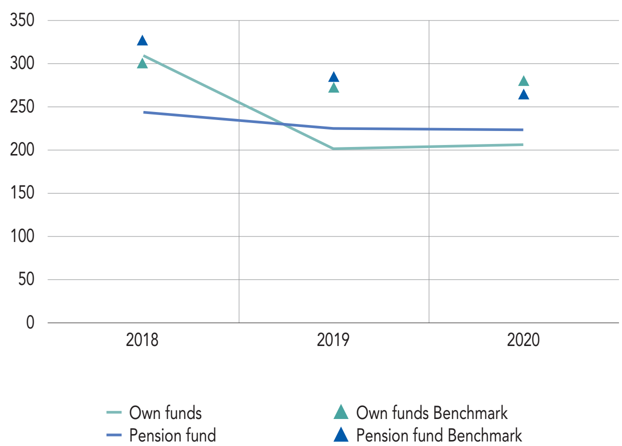
b) Carbon footprint per unit of revenue

(in tCO_2eq/EUR million of revenue)



c) Weighted average carbon intensity

(in tCO_2eq/EUR million of revenue)



Source: S&P Trucost.
Note: tCO_2eq – tonne of carbon dioxide equivalent.

BOX 3 : CALCULATING THE CARBON FOOTPRINT AND INTENSITY

Capital carbon footprint	$\dfrac{\sum_i \frac{M_i}{EV_i} \times Em_i}{\sum_i M_i}$
Carbon footprint per unit of revenue	$\dfrac{\sum_i \frac{M_i}{EV_i} \times Em_i}{\sum_i \frac{M_i}{EV_i} \times CA_i}$
Weighted average carbon intensity	$\sum_i w_i \times \frac{Em_i}{CA_i}$ où $w_i = \frac{M_i}{\sum_i M_i}$

Note: M is the amount invested; EV is enterprise value (market capitalisation + debt – cash)[a]; Em denotes carbon emissions; w is the weight in portfolio total assets.
a) Enterprise value = market capitalisation + total debt + total preferred equity + minority interest – cash & short term investments.

BOX 4: GREEN BONDS AND CARBON IMPACT

The carbon impact of portfolio companies and states is calculated at the level of the companies and states themselves, and not at the level of the securities that they issue, including in the case of green bonds. Accordingly, when an investor buys green bonds, that investment does not cause the carbon impact of a portfolio to go up by less than the purchase of conventional bonds would. But in the medium and long term, assuming like-for-like activities, green bonds may help to lower the carbon impact of issuers, as long as they finance investments that make it possible to reduce the carbon emissions linked to the activities of the company or state. In practice, to date we have seen no correlation between green bond issuance and a decline in the carbon intensity of companies issuing these bonds.[1] The Banque de France buys almost exclusively sovereign or quasi-sovereign green bonds. While market standards have been developed, green bonds are not currently covered by any specific regulations. The European Commission is in the process of preparing a draft EU green bond standard.

1 *Green bonds and carbon emissions: exploring the case for a rating system at the firm level,* T. Ehlers, B. Mojon and F. Packer, Bank for International Settlements, Quarterly Review, September 2020.

- Weighted average carbon intensities weight the carbon intensity of issuers (emissions/revenue or GDP) according to their weight in the portfolio. This indicator, which is recommended by the TCFD, does not assign emissions according to the proportion of the Banque de France's stake in the issuer's value/debt. In 2020, **the weighted average carbon intensity of the equity component of the own funds portfolio was 206 tCO_2eq per EUR million of revenue**, compared with 281 for the benchmark. This was 33.3% lower than in 2018. **The weighted average carbon intensity of the equity component of the pension liabilities portfolio was 224 tCO_2eq per EUR million of revenue**, compared with 266 for the benchmark. This was 8.2% lower than in 2018. **The weighted average carbon intensity of the sovereign bond component of the own funds portfolio was 461 tCO_2eq per EUR million of GDP**, compared with 488 for the benchmark. **The weighted average carbon intensity of the sovereign bond component of the pension liabilities portfolio was 466 tCO_2eq per EUR million of GDP**, compared with 499 for the benchmark.

The Banque de France has significantly reduced the overall carbon impact of its two portfolios since 2018 (*see Chart 2*). This is particularly true of the equity component of the own funds portfolio, whose carbon impact has fallen dramatically since 2018, notably owing to the climate screen.

Share of sustainable activities

In 2018 and 2019, the Banque de France monitored the share of portfolios corresponding to green activities, in accordance with a highly restrictive definition: specifically, only the production of renewable or alternative energies, sustainable transport and waste management were included. With the European Union adopting its regulation on a taxonomy for environmentally sustainable activities[8] in June 2020 (*see Box 5*), the Banque de France has now aligned its indicator with the European regulatory framework. Under the terms of this regulation, activities may be considered to be environmentally sustainable if they contribute substantially to at least one of the EU's six environmental objectives,[9] do not cause significant harm to the other objectives, and meet the OECD's minimum social standards. On top of the activities that contribute to these objectives substantially and directly, green activities may be transitional activities that contribute to the transition to a low-carbon economy or enabling activities that allow other activities to lower their emissions.

As at end-2020, the delegated acts required to complete the regulation had not yet been adopted. Consequently, the indicator calculated by S&P Trucost is an estimate based on work by the European Commission's Technical Expert Group.[10] At this stage, the published work concerns the EU's first two environmental objectives, namely climate change mitigation and climate change adaptation. S&P Trucost's analysis only covers the first objective. S&P Trucost also uses revenue exposure criteria but not yet performance criteria (e.g. tCO_2eq/unit of production).

Within this framework, the Banque de France estimates the average share of the revenues of portfolio companies (equity components) that may be considered as contributing to the EU's first two environmental objectives according to the European taxonomy. This is the average share weighted by the weight of each company in the total assets of the relevant component. This indicator does not integrate green bonds or investments in thematic funds with an EET focus. The Banque de France calculated this indicator for 2018 and 2019 in order to track the change over three years (*see Chart 3*). In 2020, **the average sustainable portion of the revenues of companies in the equity component of the own funds portfolio came to 28%**. This was 3.7% higher than in 2018. **The average sustainable portion of the revenues of companies in the equity component of the pension liabilities portfolio was 27%.** This was 17.4% higher than in 2018.

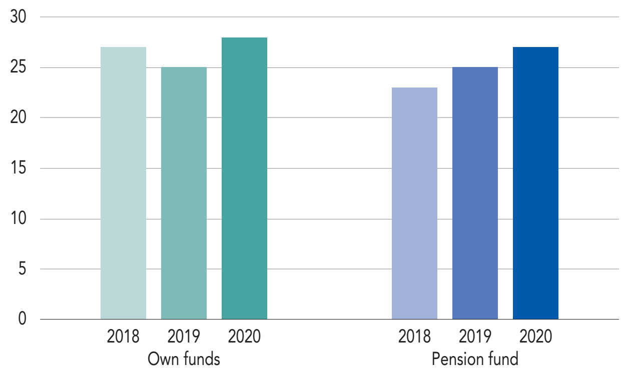
8 Regulation EU 2020/852 on the establishment of a framework to facilitate sustainable investment.

9 Climate change mitigation; climate change adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems.

10 *Taxonomy: Final report of the Technical Expert Group on Sustainable Finance*, March 2020.

C3 Portfolio sustainable activity shares, equity components

(as a % of revenues of portfolio companies)



Source: S&P Trucost.

BOX 5: WORK BY THE EUROPEAN COMMISSION ON SUSTAINABLE FINANCE

As part of its 2018 sustainable finance action plan and the green deal announced in December 2019, the European Commission prepared several pieces of draft legislation. Three have been adopted so far:

- Regulation EU 2020/852 on sustainable investment, which laid the groundwork for a European taxonomy of activities that may be considered to be sustainable;
- Regulation EU 2019/2088 on sustainability-related disclosures in the financial services sector, which established the framework for extra-financial disclosures by financial institutions;
- Regulation EU 2019/2089 on EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks.

Other draft projects include the adoption of a European ecolabel, the establishment of a framework for green bonds, and the review of Directive 2014/95/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

Exposure to physical and transition risks

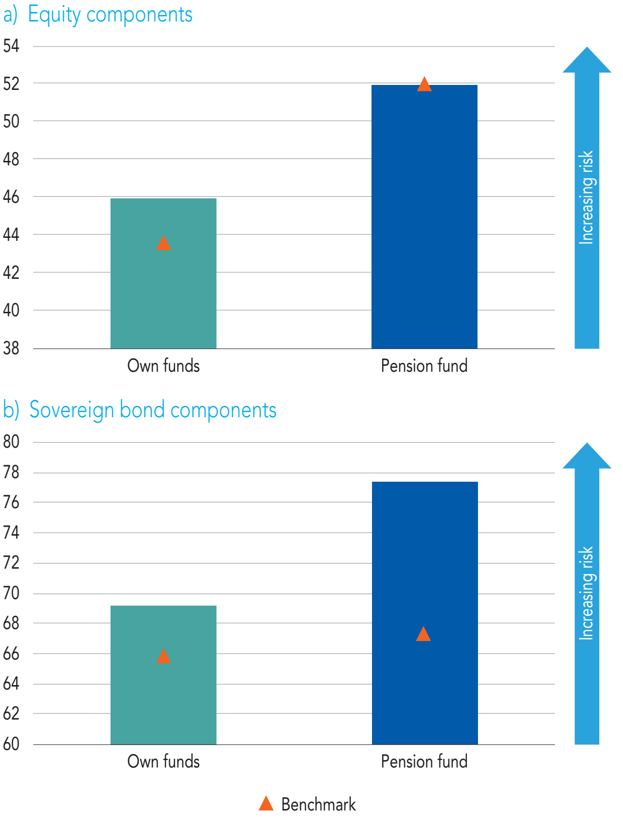
Climate-related risks include physical risks and transition risks.[11] Physical risks can result from one-off events such as droughts or floods, and also from gradual changes such as rising temperatures. They result in property damage, drops in productivity, and even disruptions to the global supply chains of portfolio companies. Transition risks are the financial risks that can result from the regulatory and technological transformations and market developments associated with the process of shifting towards a low-carbon economy.

In the case of physical risks, the Banque de France tracks a composite indicator calculated by specialised provider Four Twenty Seven, which analyses the exposure of each issuer to this type of risk. The indicator is scored from zero to 100, where zero is the world's lowest risk and 100 is the highest. In the case of companies, the score is based on ten underlying indicators, which are themselves grouped into three pillars: operations risk, supply chain risk and market risk. In this way, Four Twenty Seven's analysis covers the entire value chain of issuers. Regarding sovereign bonds, the indicator reflects the proportions of the population, GDP and farmland exposed to physical risks.

Over 2020, Four Twenty Seven recast its data and methodologies.[12] As a result, the portfolio results cannot be compared against those of previous years.

C4 Portfolio exposure to physical risks at 30/11/2020

(y-axis: physical risk score)



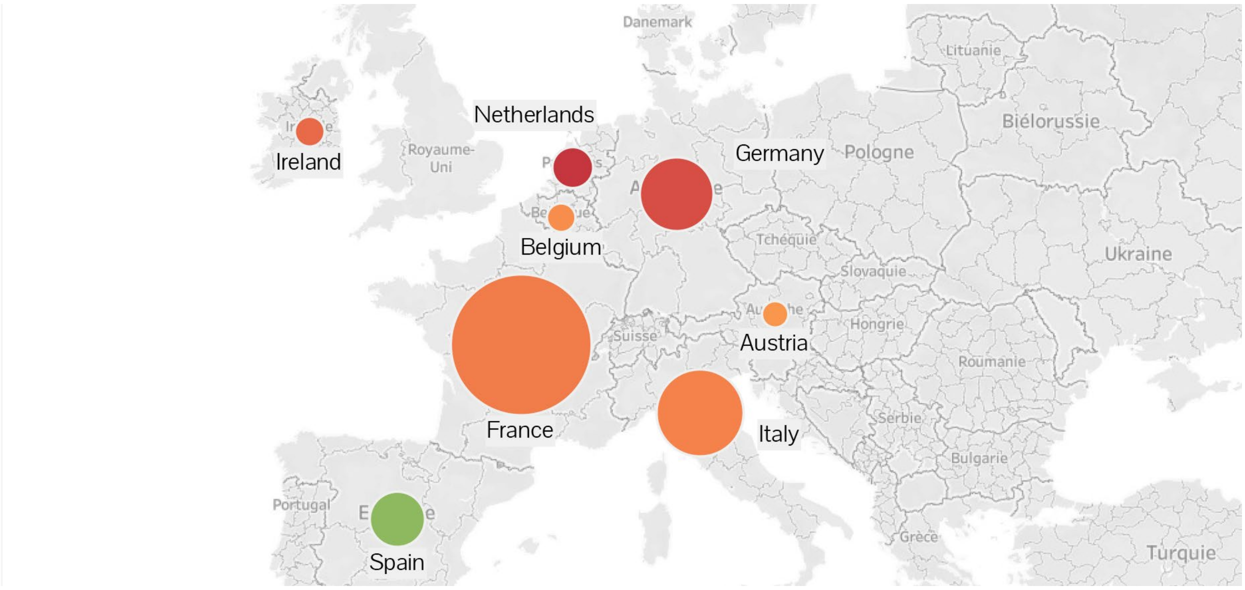
Source: Four Twenty Seven.
Note: The risk score ranges from 0 to 100.

Overall, in terms of the exposure to physical risks of the Banque de France's portfolios, the equity components are broadly in line with the benchmarks but the sovereign bond components have higher exposure than the benchmarks (*see Chart 4*).

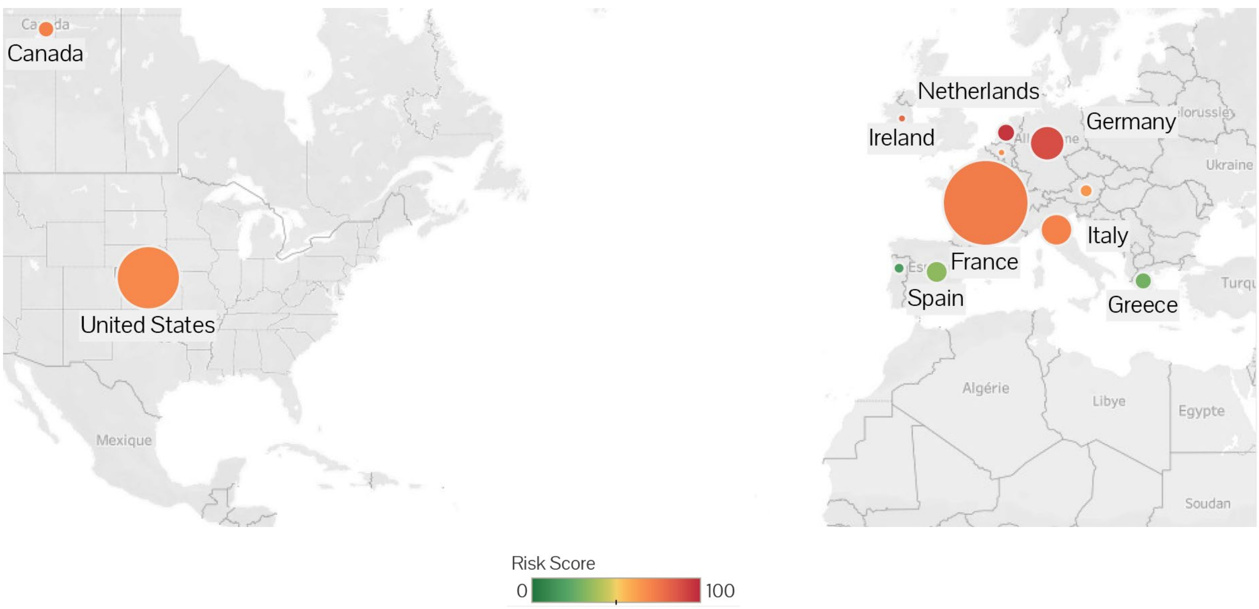
- In terms of equity components, **the own funds portfolio scored 45.9**, compared with 43.6 for the benchmark. While exposure to the physical impacts of climate change is described as "moderate" by Four Twenty Seven, exposure exceeds that of the benchmark owing to market risk and supply chain risk. **The equity component of the pension liabilities portfolio scored 51.9**, compared with 52 for the benchmark, reflecting "average" exposure to the physical impacts of climate change.
- In terms of sovereign bond components, **the own funds portfolio scored 69.2**, compared with 65.9 for the benchmark. **The sovereign bond component of the pension liabilities portfolio scored 77.4**, compared with 67.3 for the benchmark. The sovereign bond components thus have elevated exposure to physical risks, which reflects the portfolio share of issuers that are exposed to the risks of flooding and rising sea levels (in France, Europe and North America) and to the risk of water stress (Southern Europe). In addition, the score takes account of the shares of GDP, population and farmland exposed to these risks in the affected countries. The following maps illustrate the exposure of sovereign issuers to flooding risk (*see Chart 5*).

C5 Maps showing the exposure to flooding risk of portfolios' sovereign bond components at 30/11/2020

a) Own funds portflio



b) Pension liabilities portfolio



Source: Four Twenty Seven.

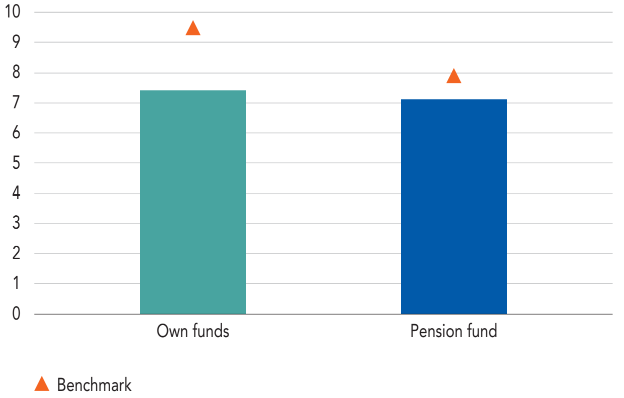
To track transition risks, the Banque de France has chosen to monitor the brown share of its portfolios, i.e. an indicator of exposure to fossil fuels. It thus measures its exposure to highly polluting assets that could become stranded owing to the energy and ecological transition. Other sectors, such as automotive or air transport, could see the value of their

11 Mark Carney added liability risks to this list in his 2015 speech entitled "Breaking the tragedy of the horizon – climate change and financial stability". This concept refers to future losses that could result from legal actions aimed at obtaining financial compensation for the effects of climate change.

12 For sovereigns, changes were intended to better reflect at-risk zones, integrate flooding and forest fire risks, and remove ESG indicators covering adaptive capacity. For equities, developments were aimed at dividing companies by percentiles, while in practice, methodological changes affecting sovereigns impacted the supply chain and market pillars of company scores.

C6 Portfolio brown shares, equity components at 30/11/2020

(as a % of revenues of portfolio companies)



Source: S&P Trucost.

assets severely impacted by new regulations, changes in market conditions or technological breakthroughs. However, the Banque de France uses the definition of the brown share established by its data provider S&P Trucost, which includes only companies involved in the extraction of fossil fuels or the production of electricity using fossil fuels.

In 2020, the Banque de France aligned its methodology for measuring the brown share of its equity components with the methodology for calculating the share of sustainable activities as defined by the European taxonomy. It now calculates the average revenue share of portfolio companies that is linked to brown activities. This corresponds to the average share weighted by the percentage represented by each company in the component's total assets. **The average brown share of companies in the equity component of the own funds portfolio was 7.4% of revenue**, compared with 9.5% for the benchmark (*see Chart 6*). This was 41.4% lower than in 2018. **The average brown share of companies in the equity component of the pension liabilities portfolio was 7.1%**, compared with 7.9% for the benchmark. This was 7.4% lower than in 2018. Overall, the brown share of the equity components has declined significantly since 2018, reflecting, among other things, the strategy of aligning the equity components with a sub-2°C global warming trajectory, as well as the exclusion of the main coal sector participants. This decline is set to continue following the decisions taken in 2020 to extend the strategy of alignment with a sub-2°C warming trajectory to all equity portfolios, to exit coal completely by the end of 2024, and to exclude the main participants in oil, gas and unconventional hydrocarbons.

Biodiversity impact

Through its responsible investment strategy, the Banque de France contributes indirectly to preserving biodiversity by fighting global warming (2°C alignment of portfolios, reduction of carbon emissions), by excluding fossil fuels (which cause pollution and deforestation), by investing in an EET fund aimed at reducing pollution linked to maritime infrastructures (blue finance), and by buying green OATs (since a portion of eligible green expenditures can be assigned to preserving biodiversity, *see Box 2 above*). In addition, the Banque de France pays close attention to the biodiversity impact of the EET funds in which it invests. In 2020, it brought up questions about the biodiversity impact of a wind farm project during the general meeting of one of these funds.

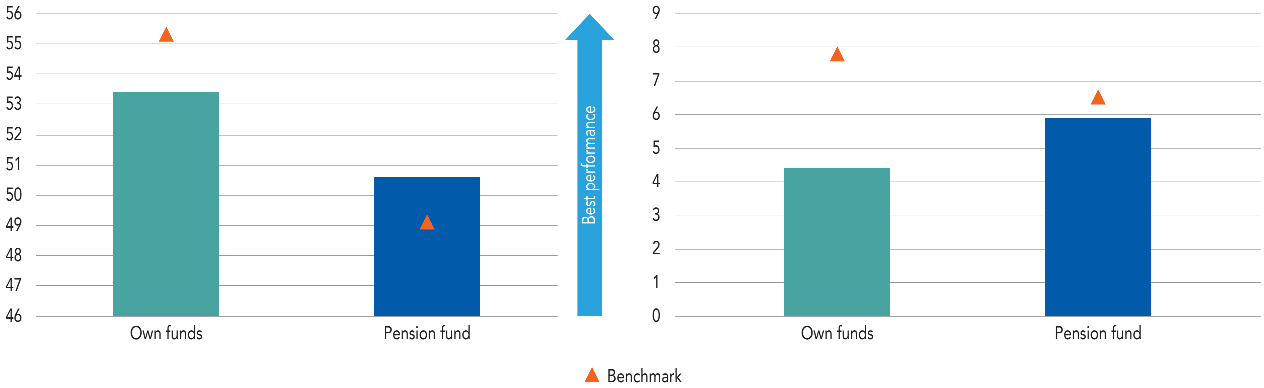
In 2020, the Banque de France also decided to begin measuring the impact of its portfolios on biodiversity. It now monitors two indicators, which cover the equity component of each portfolio (*see Chart 7*):

- A biodiversity impact score for portfolio companies, reflecting commitments (formal policy, information in annual reports), measures deployed (calculation of the impact of activities on ecosystems, measures to rehabilitate ecosystems) and actual outcomes (percentage of rehabilitated soils). In terms of results for this indicator, **ESG data provider Vigeo Eiris described the performances of the portfolios' equity components as "robust"**. **The equity component of the own funds portfolio scored 53.4**, compared with 55.3 for the benchmark. The portfolio was negatively impacted by the consumer goods sector, and particularly by companies in the French luxury sector, which are insufficiently transparent on the reduction in animal testing for cosmetic products. **The equity component of the pension liabilities portfolio scored 50.6**, compared with 49.1 for the benchmark. Vigeo Eiris calculates this score only for sectors for which it judges the biodiversity impact to be material, i.e. 19 of the 38 sectors analysed by the data provider.[13] These sectors account for 46.2% of the assets in the equity component of the own funds portfolio and 37.4% for the equity component of the pension liabilities portfolio.

C7 Portfolio biodiversity scores, equity components at 30/11/2020

a) Biodiversity impact scores
(y-axis: score out of 100)

b) Exposure to companies producing harmful products
(y-axis: as a % of total assets)



Source: Vigeo Eiris.

- An indicator of exposure (as a percentage of total investment) to companies involved in the production of chemical products that are harmful to biodiversity, including pesticides[14] as well as chemical substances banned under the 2001 Stockholm Convention, the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic and the Montreal Protocol on Substances that Deplete the Ozone Layer. **The exposure of the equity components to these companies is low and below the benchmarks**: in the equity component of the own funds portfolio, companies engaged in the production of harmful products account for 4.4% of total assets, compared with 7.8% for the benchmark. In the case of the equity component of the pension liabilities portfolio, the portion is 5.9%, compared with 6.5% for the benchmark.

In 2021, the Banque de France will keep up its efforts with regards to biodiversity impact.

BOX 6: METHODOLOGICAL LIMITS OF CLIMATE INDICATORS

Climate and ESG indicators are based on the data published by issuers, e.g. carbon emissions of companies and sovereigns, and on calculation methodologies and models, e.g. allocation of carbon emissions to a portfolio of financial assets. There is some debate over these data and methodologies, which are supplied to investors by specialised providers. Several indicators, such as Scope 3 emissions or the temperature alignment of portfolios, provide markedly different results depending on the data provider.[1] The Banque de France uses several data providers (S&P Trucost, Carbon4 Finance, 427 and Vigeo Eiris), which it selected after reviewing the quality of their data and methodologies. Several initiatives aimed at harmonising practices are emerging: for instance, in 2020 the Network of Central Banks and Supervisors for the Greening of the Financial System (NGFS) set up a task force on climate data, and from 2021 the *Autorité de contrôle prudentiel et de résolution* (ACPR) will work on convergence in the measurement methodologies for some of the indicators reported by French banks and insurers as part of monitoring their commitments, such as measurement of exposure to fossil fuels.

1 *The alignment cookbook*, Institut Louis Bachelier, 2020.

13 For example, analysed sectors include Food, Building Materials and Energy, while non-analysed sectors include Development Banks and Broadcasting & Advertising.

14 Any chemical product intended to protect crops and kill pests. Categories covered include insecticides, herbicides and fungicides.

PILLAR 2: ENVIRONMENTAL, SOCIAL AND GOVERNANCE CRITERIA

The Banque de France is committed to including environmental, social and governance (ESG) criteria in its asset management.

At the upstream stage, it excludes at least 20% of its equity investment universe based on ESG criteria and scores. Downstream, each year it calculates the ESG performances of its portfolios (composition as at 30 November) by means of a series of indicators, which are presented below.

ESG filter

To integrate ESG criteria in its asset management, the Banque de France has chosen to apply one of the requirements of the Socially Responsible Investment (SRI) label supported by the French Ministry for the Economy and Finance (*see Box 1 below*): specifically, it excludes at least 20% of its equity investment universe[1] based on ESG criteria and scores. The Banque de France therefore ensures that ESG factors have a real impact on asset management.

The ESG filter is constructed using three types of exclusions: norm-based, sector-based and ESG score-based.

Norm-based exclusions featured in the 2018 Responsible Investment Charter. They cover all investment universes, not just the equity components. The Banque de France does not invest in:

- Controversial weapons, i.e. companies involved in the production, use, storage, sale and transfer of anti-personnel mines and cluster bombs, which are banned under the Ottawa Convention (1999) and the Oslo Convention (2010).
- Companies and states that do not comply with anti-money laundering and counter terrorist financing (AML/CTF) regulations, i.e. states under embargoes, non-cooperative states and regions with regard to tax information exchange according to the Financial Action Task Force (FATF), and companies involved in AML/CTF controversies.
- Companies that do not comply with the principles of the International Labour Organization, including respect for the freedom of association and the right to collective bargaining, and elimination of forced labour, child labour and employment discrimination.

Sector-based exclusions concern fossil fuels. Since 2018, in accordance with its RI Charter, the Banque de France has excluded from its investments companies that derive over 20% of their revenue from thermal coal (extraction or coal-based energy production). The Banque de France has updated its charter in a bid to strengthen and widen these exclusions:

- Thermal coal: the Banque de France will exit the sector completely (extraction or coal-based energy production) by the end of 2024 and will lower its exclusion threshold to 2% of revenue by the end of 2021.
- Oil and gas: the Banque de France will align itself by 2024 with the exclusion thresholds provided for

BOX 1: FRENCH LABELS

In France, four responsible investment labels have the backing of the public authorities:

- Greenfin label: created in 2015 by the Ministry for the Ecological Transition to guarantee the green credentials of investment funds, this label primarily covers the nature of funded activities. Some activities, such as fossil fuels, are banned, while the green share – based on eight designated eco-friendly sectors – must account for the majority of the fund's assets. Funds must also take account of environmental, social and governance (ESG) criteria and measure the impact of their financing on the energy and ecological transition (EET). The Banque de France refers to this label when selecting EET thematic funds under Objective No. 2.

- Socially Responsible Investment (SRI) label: created in 2016 by the Finance Ministry, this label applies to the ESG practices of investment funds. A reference framework, which was updated in 2020, covers funds' ESG objectives, as well as their methodologies for conducting ESG analyses of companies, their engagement with financed companies, their transparency and their measurement of sustainability impacts. The Banque de France applies the most restrictive principle of this label to its equity components, which means that it excludes 20% of its investment universe based on ESG criteria.

- Finansol: created in 1997 to identify solidarity-based savings products, this label focuses on funds and saving products that finance social activities, such as access to employment or housing, or that regularly donate a portion of their interest payments to beneficiary entities.

- Relance (Relaunch): created in 2020 by the Ministry for the Economy and Finance, this label is aimed at funds that quickly raise new resources to support the equity and quasi-equity of French SMEs and mid-tier firms. Funds that are awarded the label must also comply with a set of ESG criteria, including a ban on financing coal-based activities and a requirement to monitor an ESG score or indicator.

by European Regulation 2019/2089 on sustainability benchmarks, and more specifically with the thresholds applicable to EU Paris-aligned benchmarks. The European Commission's Delegated Act of 17 July 2020 introduced the obligation for this type of benchmark to exclude companies that derive over 10% of their revenue from oil or over 50% from gas.

- Unconventional hydrocarbons: by the end of 2021, the Banque de France will exclude companies that derive over 10% of their revenue from these hydrocarbons, including shale oil, shale gas, oil sands and/or Arctic or deepwater exploration-development.

To implement these exclusions, the Banque de France relies on the data provided by its ESG partner, Vigeo Eiris, and on the data available to its asset management subsidiary, BDF Gestion. The thresholds are strictly applied, with no exemptions and no retention of securities in run-off mode. As at 30 November 2020, the own funds portfolio did not contain any company involved in coal, while just 0.2% of the total assets of the equity component of the pension liabilities portfolio was exposed to companies involved in thermal coal (extraction or coal-based energy production).

To achieve the 20% threshold, the Banque de France supplements its norm-based and sector-based exclusions by **applying a best-in-class filter to exclude companies with the lowest ESG scores on a sector-by-sector basis.** This is a composite score prepared by Vigeo Eiris for each company based on 330 underlying indicators. Regarding the environment, indicators cover, for example, the existence of an environmental strategy, prevention of risks of harm to biodiversity, or pollution control. Social indicators cover workplace health and safety, the absence of discrimination, and employee training. Governance indicators cover areas such as the prevention of conflicts of interest or executive remuneration arrangements. The scores for each of the criteria are then weighted according to the company's sector of activity so that the final score reflects the company's management of its most material risks. For example, the criterion covering the establishment of an environmental strategy accounts for a larger share of the final score for a company in the energy sector than for a company involved in personal services.

1 In practice, companies excluded under the ESG filter are left out of all portfolios (except index funds, which make up 3.3% of the portfolios), taking all asset classes into account.

ESG scores

In addition to the ESG scores calculated by Vigeo Eiris for each issuer in the portfolio, the Banque de France monitors the average overall ESG score of each portfolio, by asset class. For companies, the ESG score is calculated using the methodology described above. For states, the ESG score is based on 172 underlying ESG indicators divided into three areas: environmental protection, social protection and solidarity, and governance responsibility (including ratification of international conventions, press freedom and tax cooperation). Issuers' individual scores are then aggregated (average weighted by total assets) to calculate the portfolios' average scores.

Overall, **the portfolios' ESG scores have improved over the last three years, with the equity components outperforming their benchmarks** (*see Chart 1*).

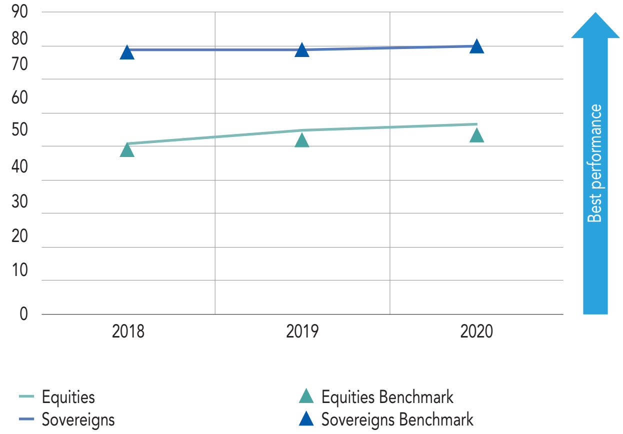
- **The ESG score of the equity component of the own funds portfolio was 56.5** compared with 53.5 for the benchmark and was up 10.8% compared with 2018. This strong performance was primarily attributable to the Environment aspect, with French issuers exerting an extremely positive influence. **The ESG score of the equity component of the pension liabilities portfolio was 49.5** compared with 48.5 for the benchmark and was up 10% compared with 2018. This score chiefly reflected strong performances by euro area issuers on Governance aspects (e.g. balance of powers and executive remuneration), but also poorer performances by issuers in the North America zone (e.g. on labour relations and union rights).

- Regarding the sovereign bond component, portfolios were in line with their benchmarks overall: **the ESG score of the sovereign bond component of the own funds portfolio was 80**, on a par with the benchmark and roughly the same as in 2018. **The ESG score of the sovereign bond component of the pension liabilities portfolio was 74**, or slightly higher than in 2018. This enabled it to narrow the gap with the benchmark, which scored 79. The small underperformance relative to the benchmark was mainly due to Governance and Environment results in the North America zone.

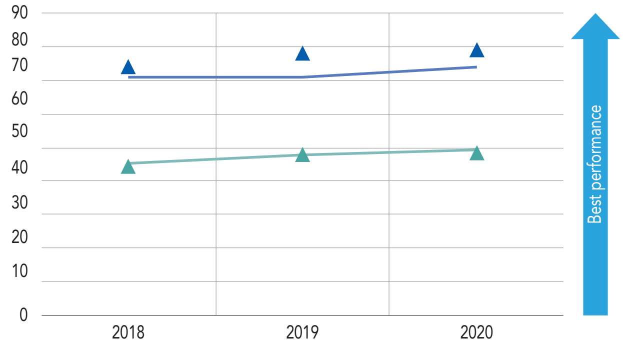
C1 Portfolio average ESG scores

(y-axis: average ESG score)

a) Own funds portfolio



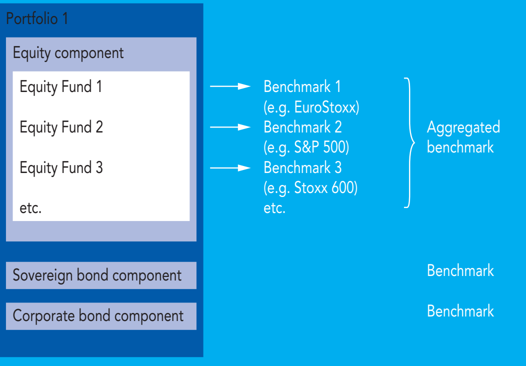
b) Pension liabilities portfolio



Source: Vigeo Eiris.
Note: The ESG score ranges from 0 to 100. ESG: environmental, social and governance criteria.

BOX 2: BENCHMARKS

Asset management compares portfolio results against those of their benchmarks. These benchmark indices are representative of the markets in which the portfolios are invested and are built from a composition of the main stock market indices, e.g. the EuroStoxx and the S&P 500. The Banque de France's portfolios are composed of several funds, each of which comprises one or more asset classes (equities, sovereign bonds or corporate bonds) and has its own benchmark. To monitor its assets' extra-financial performances, the Banque de France decomposes each portfolio into different components, which contain funds from the same asset class. For example, the equity component of the own funds portfolio contains funds from the portfolio that are invested in equities. It then compares each component against a benchmark that aggregates the indices for the funds in the component. The aggregation process involves weighting each index by the percentage of the component's total assets represented by the fund.



Social indicators

In 2020, the Banque de France decided to strengthen the social side of its responsible investment strategy. Starting in 2021, the Banque de France will expand its purchases of green bonds to include social and sustainability bonds.[2] In addition, the Banque de France diversified the indicators used to measure the social performance of the equity components of its portfolios. In 2018 and 2019, the Banque de France tracked two indicators: one measuring workplace health and safety, the other covering non-discrimination. In 2020, Banque de France added an indicator that looks at the societal impact of the goods and services produced by portfolio companies, plus an indicator of the contribution made by these companies to the economic and social development of the local areas where they operate.

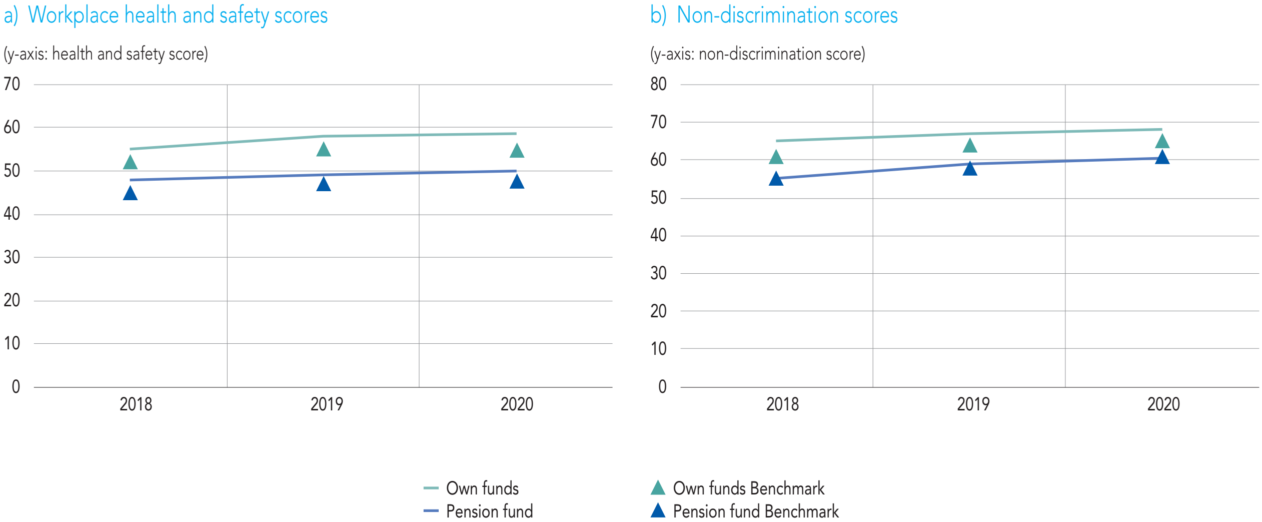
Overall, aside from two indicators (societal impact and economic development) recorded by the equity component of the pension liabilities portfolio, **the social performances of the equity components of the two portfolios were described as "robust" or "advanced" by ESG Vigeo Eiris** (*see Chart 2*).

- The workplace health and safety indicator concerns the working environment of people employed by portfolio companies and includes factors such as a safe working environment, safe working conditions, protection of physical and mental wellbeing, and accident frequency and severity. For this indicator, the equity components pursued their slight improvement since 2018 and continued to outperform their benchmark: the **equity component of the own funds portfolio scored 58.7**, compared with 54.9 for the benchmark, and is up 6.7% since 2018. **The equity component of the pension liabilities portfolio scored 50**, compared with 47.6 for the benchmark, and is up 4.2% since 2018. The scores were positively impacted by the industrial and basic materials sectors but were negatively affected by the media and telecommunications, health and tech sectors in the North America zone. The scores factored in company performances in dealing with the pandemic, through controversy monitoring.

- The non-discrimination indicator considers the way in which the company prevents discrimination in the workplace, including training and awareness,

2 Sustainability bonds are intended to be both green and social.

C2 Portfolio social scores, equity components



Source: Vigeo Eiris.
Note: The score ranges from 0 to 100.

whistleblowing and/or reporting procedures, monitoring of wage gaps, the percentage of women in management positions, inclusion of disabled people, and more. In terms of their score for this indicator, the equity components pursued their improvement since 2018, while continuing to outperform or match their benchmark: **the equity component of the own funds portfolio scored 68.3**, compared with 65 for the benchmark, and is up 5% since 2018. **The equity component of the pension liabilities portfolio scored 60.6**, compared with 60.9 for the benchmark, and is up 10.2% since 2018. The scores were positively impacted by the consumer goods sectors.

- The indicator that tracks the societal impact of the goods and services of portfolio companies reflects the measures taken by companies to prevent and/or mitigate the risks linked to dangerous products, such as tobacco and alcohol, or to facilitate access by vulnerable or needy people to beneficial products, such as certain basic medicines or banking services. The equity components scored better than the benchmarks on this indicator: **the equity component of the own funds portfolio scored 52.9, compared with 48.3 for the benchmark. The equity component of the pension liabilities portfolio scored 45.9**, compared with 42.4 for the benchmark, and was negatively impacted by the North America zone. The score is calculated only for the sectors for which Vigeo Eiris judges the societal impact to be material, i.e. 27 of the 38 sectors analysed by Vigeo Eiris.[3] These sectors account for 53.8% of the assets in the equity component of the own funds portfolio and 59.9% for the equity component of the pension liabilities portfolio.

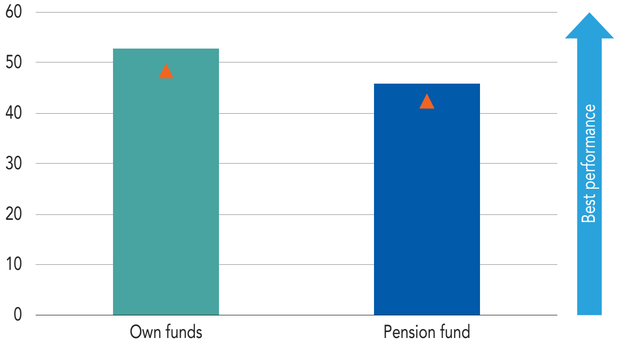
- The indicator of commitments to promote the economic and social development of the regions where portfolio companies operate reflects the investments made by these companies in their local areas, job creation (recruitment of local suppliers), management of restructuring measures within local labour catchment areas, skills transfers (establishment of local training courses) and technology transfers, and proper payment of taxes and levies (presence in offshore financial centres, tax transparency). The equity components scored slightly better than the benchmarks on this indicator: **the equity component of the own funds portfolio scored 55.1, compared with 51.5 for the benchmark. The equity component of the pension liabilities portfolio scored 47.4**, compared with 45.9 for the benchmark, and was negatively impacted by the North America zone.

3 For example, analysed sectors include Tobacco, Beverages, Pharmaceuticals and Biotechnology, while non-analysed sectors include Heavy Construction and Aerospace.

C2 Portfolio social scores, equity components (continued)

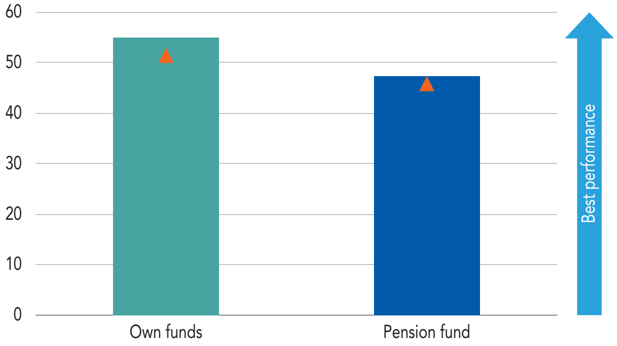
c) Societal impact scores, equity components at 30/11/2020

(y-axis: societal impact score)



d) Economic and social development scores, equity components at 30/11/2020

(y-axis: economic and social development score)



Benchmark

Source: Vigeo Eiris.
Note: The score ranges from 0 to 100.

PILLAR 3: ENGAGEMENT

In order to fulfil its role as a responsible shareholder, the Banque de France exercises its voting rights in accordance with a formal policy, promoting better recognition of ESG issues by the companies in which it invests. As a responsible investor, the Banque de France commits to taking a long-term outlook.

The Banque de France's voting policy

In accordance with Objective No. 4, in 2019 the Banque de France adopted a voting policy including extra-financial provisions. These cover, among other things, transparency about companies' environmental impact, recognition of extra-financial performances in executive remuneration, and gender balance on boards. The voting policy, which is published on the Banque de France's website, details the Bank's expectations with respect to companies in which it is a shareholder.

In 2020, the Banque de France bolstered its extra-financial requirements by adding two provisions on fossil fuels to its voting policy. First, between now and when it exits coal completely in late 2024, the Banque de France expects companies involved in this sector to have an exit plan. Second, the Banque de France will oppose any new project to develop fossil fuels. The Banque de France cannot approve the financial statements of companies that do not meet these two requirements.

The Banque de France's expectations can be summed up by the following principles, which are organised according to the types of resolutions proposed to shareholders:

- **Approval of financial statements and management: integrity of management and financial and extra-financial information**. The Banque de France expects companies to publish extra-financial disclosures on their climate strategy, especially in sectors with a major environmental impact.

- **Profit distribution, management of own funds and capital transactions: a distribution policy geared towards long-term investment**. For example, the Banque de France is in favour of paying bonus dividends as long as they reward long-term shareholder loyalty.

- **Board of directors or supervisory board: independence of the board, diversity and separation of powers**. In particular, the Banque de France aims to ensure gender balance (at least 40%) on boards.

- **Executive remuneration and workforce association: a transparent and consistent remuneration policy**. In particular, the variable remuneration of executives must take into account companies' extra-financial performances.

- **Amendments of company articles and shareholder rights: respecting shareholder rights**. For example, the Banque de France opposes head office transfers to legal and tax havens.

- **External resolutions:[1] improving environmental, social and governance practices**. In particular, the Banque de France supports external resolutions aimed at reducing the carbon intensity of activities and minimising the risks associated with climate change.

The Banque de France applied this voting policy for the first time during the general meetings that took place in 2020 on the 2019 financial year. In 2020, the voting policy of BDF Gestion, the asset management subsidiary, was aligned with that of the Banque de France.

In 2020, the Banque de France or BDF Gestion took part in over 360 general meetings (GMs), and voted on more than 6,000 resolutions, which included casting more than 1,400 votes "against". These mainly concerned resolutions on anti-takeover provisions, along with resolutions on remuneration and nominations. In addition to voting, the Banque de France has the ability to table questions during GMs. In 2020, it questioned a major company on integrating extra-financial performances in determining the variable remuneration of executives. Moreover, BDF Gestion had meetings with 261 companies, during which the environmental issues were almost systematically discussed.

Given its role as supervisor and guarantor of financial stability, the Banque de France refrains from directly owning equity in the companies that it supervises – banks or insurance undertakings – in order to avoid any risk of conflict of interest between its supervisory activities and its investment activities.

General meeting attendance rate

To maximise its influence as a shareholder at general meetings, the Banque de France wanted to significantly increase its attendance rate. In accordance with the target that it set itself, in 2020 it achieved a general meeting attendance rate of over 80%, which it intends to have as its minimum rate going forward. The Banque de France or BDF Gestion took part in 363 general meetings out of the 403 held in 2020, giving an overall attendance rate of 90%.[2]

1 Resolutions tabled by shareholders themselves. Over recent years, the climate has been a favoured theme for external resolutions.

2 Excluding external index funds, which make up 3.3% of the portfolios.

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