



Banque de France

Responsible Investment Report

2018

Based on the provisions of article 173 of the French law on the energy transition for green growth (LTECV) and recommendations from the Task Force on Climate-related Financial Disclosures (TCFD)



The governor's foreword

» Global warming presents long-term risks to financial stability - physical risks linked to climate change and transition risks linked to the required adaptation to a low-carbon economy. It is now the responsibility of central banks to provide their support to States - who play a lead role in combating global warming - to respond to the financial challenges created by climate change.

At an international level, the Banque de France created the Network for Greening the Financial System (NGFS), launched during the One Planet Summit in December 2017, of which it is an active member and acts as the permanent secretary. The Banque de France is also involved in a range of international initiatives bringing together central banks and supervisors around the topic of green finance (One Planet Summit, G20, G7, ESRB, ECB, SSM, European Commission, EBA, EIOPA).

At a national level, the Banque de France and the ACPR (the French Prudential Supervision and Resolution Authority) have launched an ambitious working programme on integrating climate risks and greening the financial system. The ACPR is finalising in 2018 its assessment on the implementation of article 173 of the law on the energy transition for green growth by the insurance system and major French banking groups. The report will

supplement the initial observations published in March 2017, as part of a report submitted to the Government and supported by the French Treasury (Direction générale du Trésor), pursuant to provision V of article of this law. It is an initial step to complete forward-looking stress tests on the entire French financial system. The Banque de France is also reinforcing its support for green finance research (e.g. via the launch of a young researcher grant), and it is extending its partnerships with universities, research centres and think tanks.

Alongside its statutory tasks relating to monetary strategy, financial stability and public economic service, the Banque de France is also an institutional investor which must act in the best interest of the employees covered by the pension fund, the State, its shareholder, and the public. The Banque de France believes that beyond the climate issues, all environmental, social and governance (ESG) factors have an impact on the long-term performance of its investments and the balanced and sustainable development of the economy; consequently it adopted a responsible investment charter in March 2018, that it intends to implement on the assets for which it exercises full responsibility for the investment strategy, namely the Portfolios backed to its own funds and to the pension

liability. This innovative approach within the central bank community aims to ensure the consistency of the Banque de France investor approach with its Financial stability mandate. In accordance with the commitments taken in this charter, we present for the first time in this report an analysis of our Portfolios in accordance with the provisions of article 173 and the TCFD¹ recommendations.

This analysis, by setting a baseline, will enable us to change our investment policy in order to comply with the objective of a 2°C alignment. This will be done as a first step, for the own funds portfolio by 2020. Through the publication of its first responsible investor report, the Banque de France hopes to support and encourage learning and transparency by all investors.



François Villeroy de Galhau

¹ Task Force on Climate-related Financial Disclosures: <https://www.fsb-tcfd.org/>



NGFS: The network of central banks and supervisors

The Network for Greening the Financial System (NGFS)¹ is a Banque de France initiative launched during the “One Planet Summit” in Paris on 12 December 2017. Its objective is to provide recommendations for the entire financial system and best practices amongst central banks and supervisors. This commitment by the Banque de France is based on two core beliefs:

- Climate risks are financial stability risks in the long-term. The work of the NGFS involves understanding how these risks affect the financial sector and developing identification and prevention tools.
- The transition to a low-carbon economy is a financial challenge requiring large amounts of capital, and a qualitative challenge aiming to avoid any risk of greenwashing.

To support States, which are responsible for energy related public policies, the NGFS aims to reinforce the response required at a global level to reach the “Paris Agreement” targets. Encouraging a structured and healthy development of “green” finance is one of the major current challenges for central banks and supervisors.

Institutions involved in the NGFS (30 members and 5 observers across 5 continents at the end of February 2019) proactively discuss their experiences, share best practices, contribute to the development of climate and environmental risks management in the

financial sector and mobilise the financial resources required to support a large-scale transition to a sustainable economy.

The NGFS has appointed Frank Elderson, a member of the Netherlands Central Bank management board, as its chair. The Banque de France is the secretary of the NGFS and its working groups, which are organised around the following three lines:

- Micro-prudential supervision and regulations (chaired by the People’s Bank of China, Ma Jun),
- Macro-financial scenarios and impacts (chaired by the Bank of England, Sarah Breeden),
- The role of central banks in financing the transition (chaired by Deutsche Bundesbank, Joachim Wuermeling).

The first report of the NGFS, representing a full year of work, will be published on 17 April 2019² during an international conference in Paris, and will highlight the recommendations and best practices to promote in terms of greening the financial system.

¹ <https://www.banque-france.fr/node/50628><https://www.banque-france.fr/node/50628>

² The NGFS published a progress report, “NGFS First Progress Report”, in October 2018
<https://www.banque-france.fr/sites/default/files/media/2018/10/11/818366-ngfs-first-progress-report-20181011.pdf>

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Overview of Banque de France's responsible investment strategy

In March 2018, the Banque de France adopted a Responsible Investment Charter (see appendix 2) applicable to the assets for which the Banque de France is fully responsible for investment strategy: portfolios backed to own funds and to the pension liability, hereinafter referred to as the Portfolios. These Portfolios represent €19 billion of stock as of 31 December 2018. Portfolios held in relation to tasks entrusted to the European System of Central Banks by the Treaty on the Functioning of the European Union are excluded from the scope of the Charter.

1 A responsible Investment strategy based on three pillars and five objectives

The Banque de France has chosen three pillars and five objectives to operationalize its responsible investment charter.

The first pillar for the Banque de France involves aligning its investment strategy with France's climate commitments, i.e. achieving carbon neutrality by 2050. To do this, the Banque de France will reduce the climate impact of the Portfolios. As a first step, the own funds portfolio will be aligned on a 2°C trajectory by 2020 (Objective 1). The Banque de France also commits to financing the energy transition, by increasing from 2019 its investments in green bonds and funds dedicated to the energy and ecological transition (Objective 2).

The second pillar involves including ESG criteria in asset management, i.e. selecting issuers based on their Environmental, Social and Governance performance. The Banque de France makes the commitment that equity portfolio management (directly or via its asset managers) will meet the requirements of pillar III of the certification supported by the Ministry of the Economy and Finance on

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

Pillar 1: Align investments with France's climate commitments

Objective 1: Get aligned with a 2°C trajectory. Horizon set for 2020 for the own funds portfolio

Objective 2: Contribute to financing the energy and ecological transition by increasing from 2019 investment in green bonds and funds dedicated to the energy and ecological transition

Pillar 2: Include ESG criteria in asset management

Objective 3: Equity portfolios meeting the requirements of pillar III of the French SRI label in 2019

Pillar 3: Exercise its right to vote and influence issuers

Objective 4: Adopt a voting policy which includes provisions on non-financial transparency in 2019

Objective 5: Reach a general meeting attendance rate over 40% in 2019 and 80% by 2020



Socially Responsible Investment (SRI²) by the end of 2019³ (Objective 3). In other words, the Banque de France will not invest in issuers with poor performance in terms of sustainable development, considering the three aspects of Environmental, Social and Governance impacts. Thus in accordance with pillar III of the French SRI certification, at least 20% of issuers will be excluded from investment. This change to the Portfolios will be consistent and it will reflect the commitment to the 2°C alignment goal. Furthermore, pursuant to the commitments made in the responsible investment charter, some assets are systematically excluded from Portfolios. Specifically, the Banque de France does not invest in coal mining companies and coal-based power producers, where over 20% of revenue is linked to thermal coal.

The third pillar for the Banque de France is exercising its right to vote to encourage greater consideration of Environmental, Social and Governance issues by companies. By exercising its right to vote, a shareholder can encourage issuers to change their practices with regards to ESG factors. The Banque de France will formalise a voting policy in 2019 and undertakes to vote during the general meetings of companies in which it holds a direct stake (Objective 4). On the other hand, BdF Gestion, Banque de France's main asset manager, changed its voting policy in 2018 so that from 2019 it includes provisions on non-financial disclosures. The capital ownership threshold triggering the vote has also been lowered to 0.05% so that from 2019, the attendance rate at general meetings is greater than 40%, with a target of 80% by 2020 (Objective 5).

These pillars are developed in parts 1, 2 and 3 of the report, and the scope of application of the different objectives is detailed in appendix 1.

2 An integrated responsible investment strategy at all levels of governance

The Banque de France has chosen an integrated governance. This means that the responsible investment strategy is considered at all levels of governance, and a dedicated committee is not created: it is the responsibility of existing committees in charge of the financial management of Portfolios to consider Environmental, Social and Governance impacts on investments. This choice aims to guarantee effective long-term management of this initiative, to ensure consistency between the financial objectives assigned to management, the strategic allocation, and the five responsible investment policy objectives. A project team will assist these committees with the implementation of the strategy.

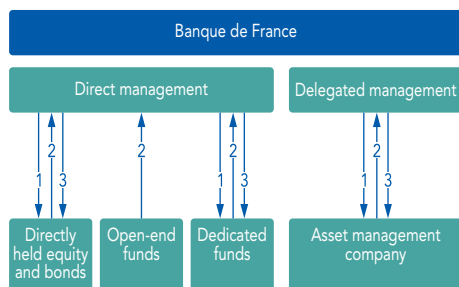
The Banque de France directly manages a portion of its assets, the rest of the asset management being delegated. The responsible investment strategy will therefore be applied as follows:

- for investments made as part of mandate management, the Banque de France will change the mandates;
- for investments made outside the scope of the mandate:

² The French SRI (Socially Responsible Investment) certification is supported by the Ministry of Finance, which aims to offer improved visibility to savers regarding SRI products, by ensuring that their management is based on solid methodologies with a strong requirement for transparency and high-quality information. SRI certification reference: <https://www.lalabelisr.fr/wp-content/uploads/2019/01/R%C3%A9f%C3%A9rentiel-du-label-MAJ-novembre-2018.pdf>

³ Excluding passive open-end index funds, i.e. 3% of Portfolios

Diagram 1 Breakdown of the responsible investment strategy



Key
 1. RI policy
 2. Reporting
 3. Control

Source: Banque de France.

- for direct investments, the Banque de France will apply the chosen strategy directly;
- for investments made in dedicated funds, the prospectuses will be modified;
- for investments in open-end funds, alternative investment options in SRI funds will be reviewed on a case-by-case basis.

3 A responsible investment strategy which results will be measured

The management of the Portfolios has not systematically integrated extra-financial criteria up to now. At the

end of 2018, the Banque de France conducted the first analysis of the extra-financial performance of its Portfolios. The results are presented in this report. They demonstrate that Banque de France Portfolios have better non-financial performance than their reference indices:⁴ they are less carbon-intensive, are better aligned on a 2°C trajectory and further support the energy and ecological transition. However, they are not yet aligned on a 2°C trajectory.

The Banque de France is committed to continuous improvement and transparency. The Bank's ambition is to change its asset management practices, systematically integrate the extra-financial performance of issuers and align its Portfolios with a 2°C trajectory. The first results of this strategy will be assessed at the end of 2019 and disclosed at the beginning of 2020 when this report will be updated.

4 A responsible investment strategy publicly disclosed

The Banque de France openly discloses the implementation of its responsible investment strategy to the public, the State being its shareholder as well as the employees covered by the pension fund through:

- this report, which is updated annually with monitoring indicators and changes to the implementation of commitments made as part of the responsible investment strategy. It is made public on the Banque de France website.
- a staff representative information session as part of the works council economic and social committee.

⁴ See the box page 13



Pillar 1: align investments with France's climate commitments

The Banque de France undertakes to consider issues linked to global warming in its investment strategy by setting two objectives:

- the first is to reduce the climate impact of its Portfolios and align them with a 2°C trajectory (Objective 1).
- the second is to contribute to the financing of the energy and ecological transition: the Banque de France commits to increase its investments in the energy and ecological transition through green bonds and thematic funds (Objective 2).

The Banque de France also monitors the climate impacts of its Portfolios and their exposure to the risks linked to climate change.

1 The Banque de France commits to a 2°C trajectory – Objective 1

To reduce the climate impact of its Portfolios and align them with a 2°C trajectory (Objective 1), the Banque de France tracks the carbon footprint and carbon intensities of its assets, as greenhouse gas emissions resulting from

human activities are a known factor in global warming. The Banque de France also measures the consistency of the composition of its Portfolios with this 2°C target. It will change their allocation to meet this objective.

Carbon footprint and intensities

Carbon footprint

The carbon footprint⁵ which measures the greenhouse gas emissions of the companies and States financed by its Portfolios is an initial indicator to measure their climate impact.

To calculate a company's carbon footprint, greenhouse gas emissions from its own activities (i.e. direct emissions) and direct suppliers (i.e. upstream indirect emissions) are taken into consideration:

- direct emissions includes emissions caused by fossil fuel combustion (fuel, gas, etc.) of resources owned or controlled by the company, e.g. a boiler or fleet of vehicles;
- upstream indirect emissions includes emissions linked to all other relevant expenses in the company's income statement, such as the purchase of electricity, plane tickets, taxi journeys and the purchase of equipment and services.

⁵ Greenhouse gases other than carbon dioxide (CO₂) are considered when measuring carbon footprint, such as methane (CH₄) and nitrous oxide (N₂O). Emissions of these other greenhouse gases are expressed as CO₂ equivalent and added to CO₂ emissions.



For sovereign bonds, we consider the country's greenhouse gas emissions for its own consumption, including imports, and for the production of exported goods and services. This is a broad definition which is not limited to government emissions. It also includes emissions by companies in the country. Considering this definition, sovereign carbon emissions cannot be validly added to company emissions without double counting.

The carbon footprint of a portfolio represents the total greenhouse gas emissions of financed companies

Scopes 1, 2, 3

Greenhouse gas emissions are divided into three levels, or 'scopes', corresponding to emission perimeters:

- Scope 1 corresponds to direct emissions from fossil fuel combustion, such as gas, petrol, coal, etc.
- Scope 2 relates to indirect emissions linked to the consumption of electricity, heat or steam needed to produce the product;
- Scope 3 corresponds to other indirect emissions, such as the mining of materials purchased by the company to create the product, or emissions linked to employee transport or customers travelling to buy the product. This is the largest portion of a company's emissions.

Based on this classification, carbon emissions calculated in this report consider scope 1, scope 2 and part of scope 3, in the absence of a satisfactory methodology for measuring the full scope 3 on diversified portfolios.

or States in this portfolio, i.e. the emissions of each company or each State multiplied by Banque de France's stake in the capital and the bond debt for companies and the gross debt for States. Thus if the Banque de France holds 1% of the value of issuer A, the Banque de France will be allocated 1% of this issuer's greenhouse gas emissions.

The carbon footprint was measured in accordance with the requirements imposed by the law on the energy transition for green growth and TCFD recommendations. It was calculated by Trucost, a research firm selected by the Banque de France which specialises in environmental research.

The carbon footprint of the Portfolios at 31 December 2018 is compared to their reference indexes, which is necessary to understand the contribution of asset management and tactical allocation choices to this intensity.

Task Force on Climate-related Financial Disclosures – TCFD

The TCFD, appointed by the Financial Stability Board (FSB) in December 2015, is a working group which is responsible for proposing recommendations on how to report and publish risks and opportunities linked to climate change. The TCFD published its final report in June 2017, which contains a series of recommendations aimed at companies in the financial sector and non-financial sector.

Reference index

As part of its management and in order to measure performance, the Banque de France uses reference indexes. These indexes are representative of the market(s) in which the Portfolios are invested. They represent the strategic portfolio allocation.

In this report, six reference indexes are used:

- a reference index for the equity component of the portfolio backed to the pension liability;
- a reference index for the bond component of the portfolio backed to the pension liability;
- a reference index for the equity component of the portfolio backed to own funds;
- a reference index for the bond component of the portfolio backed to own funds;
- a reference index for the equity component of Portfolios;
- a reference index for the sovereign bond component of Portfolios;

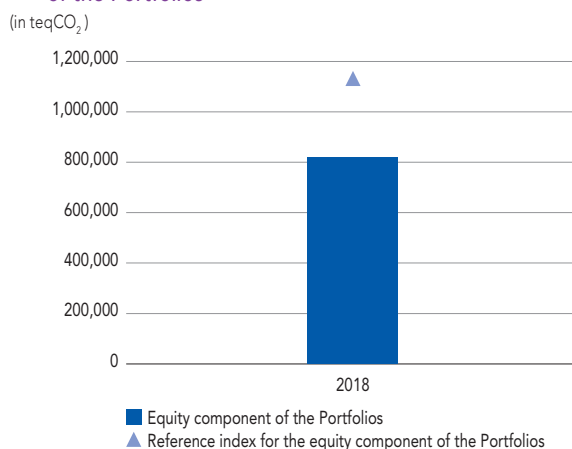
Portfolio performances in terms of environmental or social factors are compared to performances of the reference indices in this report.

Equity Portfolios

Over 99%⁶ of equity portfolios are covered by the analysis for carbon footprint. In 2018, the total footprint

⁶ There are several cases where securities are not covered: the security is new (IPO, merger, etc.) and is not yet covered by the service provider; the issuer does not report their revenue or the annual report is missing, or data needed to calculate the carbon footprint is missing.

C1 Carbon footprint of the equity component of the Portfolios



Source: Trucost, Banque de France analysis.
Note: teqCO₂ for tonne equivalent of carbon dioxide.

of these portfolios amounted to 821,000 tonnes equivalent of carbon dioxide (teqCO₂). It is lower than its benchmark.

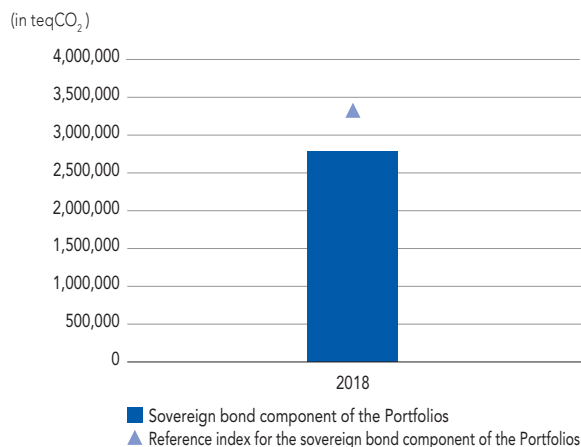
At the end of 2018, sectors considered to emit the highest amounts of greenhouse gas (energy, electricity production and utilities, materials - cement, steel) represented around 16% of the Banque de France equity investments, but over 74% of its equity Portfolio carbon footprint. The ten companies emitting the most greenhouse gases represented around 7% of equity investments, but over 48% of the carbon footprint.

Sovereign bond Portfolios

100% of sovereign bond Portfolios are covered by the analysis for carbon footprint. In 2018, the total footprint of these portfolios amounted to 2,789,000 tonnes equivalent of CO₂. It is lower than its benchmark.



C2 Carbon footprint of the sovereign bonds component of the Portfolios



Source: Trucost, Banque de France analysis.

Note: teqCO_2 for tonne equivalent of carbon dioxide.

The presented indicators are not calculated for certain Banque de France bond portfolio securities: debt securities issued by supranational institutions and certain public sector companies (5.5% of the bond component, i.e. 2.5% of Portfolios), due to a lack of data, and to a lesser extent, debt securities issued by private companies (3.0% of the bond component, i.e. 1.4% of Portfolios), a residual component. Sovereign bonds explicitly issued or guaranteed by States are covered, which represent 91.5% of the bond component.

All things being equal, the carbon footprint of a portfolio varies depending on the invested sums: the past fluctuations of this footprint partially reflect variations in portfolio size. For this reason, the carbon intensity, or carbon footprint as revenue (an independent indicator of investment size) supplements the analysis.

The carbon intensity or carbon footprint as revenue

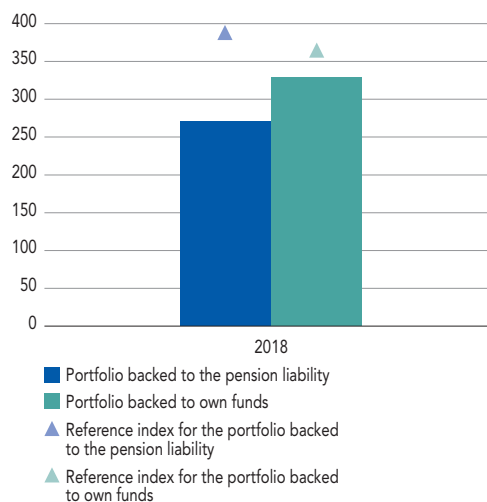
The carbon intensity indicator, which links the carbon footprint of the portfolio to the share of revenue or GDP held, can circumvent the previously mentioned carbon footprint limit. We report carbon emissions at the revenue or GDP allocated to the portfolio depending on the stake. For example, if the Banque de France holds 1% of the value of issuer A, the Banque de France will be allocated 1% of this issuer's revenue or GDP. By dividing the sum of greenhouse gas emissions allocated by the sum of revenue allocated (or GDP allocated), we obtain the carbon intensity per million of revenue or GDP.

Equity Portfolios

Over 99% of the equity Portfolios are covered by the analysis for carbon intensity. In 2018, the carbon intensity

C3 Carbon intensity of the equity portion of the Portfolios

(in teqCO_2 / EUR million revenue)



Source: Trucost, Banque de France analysis.

Note: teqCO_2 for tonne equivalent of carbon dioxide.

of the equity portfolio backed to the pension liability was lower than the reference index (271 tonnes equivalent of CO₂ per million euros of revenue, vs. 386), and the carbon intensity of the equity portfolio backed to the Bank's own funds was also lower (329 tonnes equivalent of CO₂ per million euros of revenue, vs. 367).

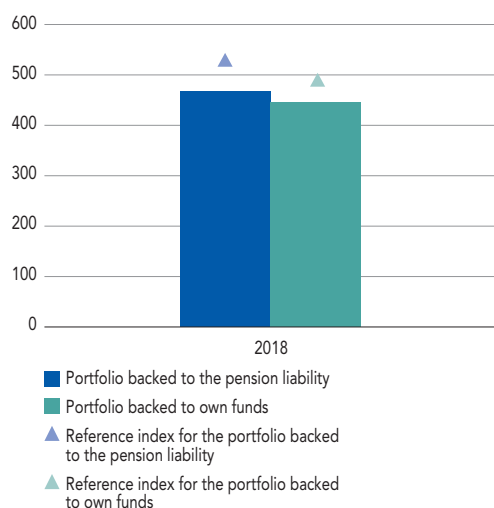
Sovereign bond Portfolios

100% of the sovereign bond Portfolios is covered by the analysis for carbon intensity. In 2018, the carbon intensity of the sovereign bonds component of the portfolio backed to the pension liability was lower

⁷ The term energy mix refers to the distribution of different primary sources of energy used for energy requirements in a given geographic zone. It includes fossil fuels, nuclear and various renewable energies. These primary energies are used to produce electricity, fuel for transport, heating or cooling for homes or industry, etc.

C4 Carbon intensity of the sovereign bonds portion of the Portfolios

(in teqCO₂ / EUR million GDP)



Source: Trucost, Banque de France analysis.

Note: teqCO₂ for tonne equivalent of carbon dioxide.

than the reference index (468 tonnes equivalent of CO₂ per million euros of GDP, vs. 527), and the carbon intensity of the sovereign bonds component of the portfolio backed to the Bank's own funds was also lower (446 tonnes equivalent of CO₂ per million euros of GDP, vs. 493). This difference is mainly explained by the portfolio's overweighting with securities issued by France, a country with one of the lowest carbon intensities, considering the large proportion of nuclear power in its energy mix⁷.

Weighted average carbon intensity

The weighted average carbon intensity indicator is an indicator recommended by the TCFD to measure a portfolio's exposure to companies or States considered carbon-heavy, i.e. with a high proportion of greenhouse gas emissions linked to revenue or GDP. This indicator is calculated as the weighted average of the carbon intensity ratios of portfolio securities. Unlike carbon intensity (also known as carbon footprint as revenue), this indicator does not consider the stake or value of the company, and therefore does not provide information on emissions caused or attributable to a portfolio: it should therefore be seen as an indicator of exposure to climate risk. It therefore has the advantage of being less sensitive to changes in the prices of equity or bonds.

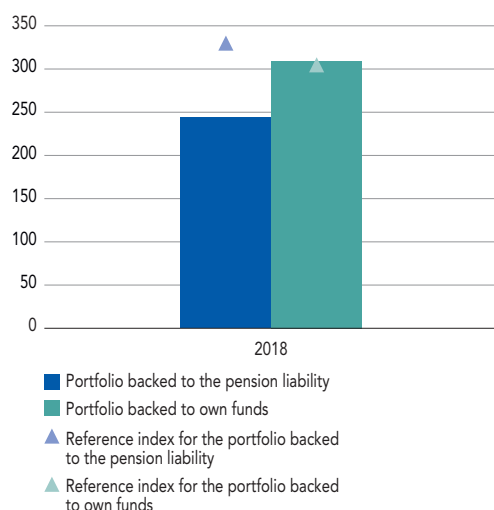
Equity Portfolios

Over 99% of the equity Portfolios is covered by the analysis for this indicator. In 2018, the weighted average carbon intensity of the equity portfolio backed to the pension liability was lower than the reference index (244 tonnes equivalent of CO₂ per million euros of revenue, vs. 328), and the weighted average carbon



C5 Weighted average carbon intensity of the equity portion of the Portfolios

(in teqCO_2 / EUR million revenue)



Source: Trucost, Banque de France analysis.
Note: teqCO_2 for tonne equivalent of carbon dioxide.

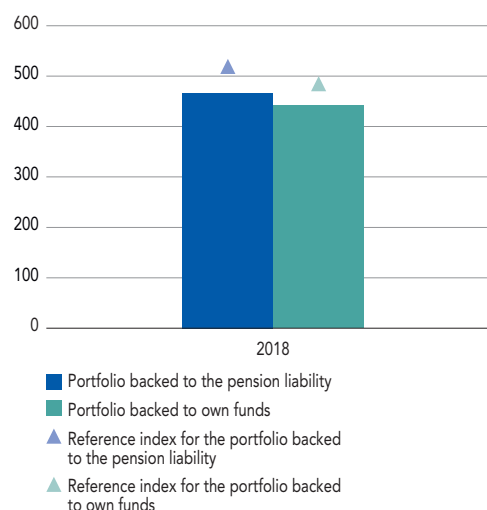
intensity of the equity portfolio backed to the Bank's own funds was slightly higher than the reference index (309 tonnes equivalent of CO_2 per million euros of revenue, vs. 303).

Sovereign bond Portfolios

100% of the sovereign bond Portfolios is covered by the analysis. The weighted average carbon intensity for the sovereign bonds component of the portfolio backed to the pension liability is lower than the reference index (467 tonnes equivalent of CO_2 per million euros of GDP, vs. 513). The weighted average carbon intensity for the sovereign bonds component of the portfolio backed to the Bank's own funds is lower than the reference index (442 tonnes equivalent of CO_2 per million euros

C6 Carbon intensity of the sovereign bonds portion of the Portfolios

(in teqCO_2 / EUR million GDP)



Source: Trucost, Banque de France analysis.
Note: teqCO_2 for tonne equivalent of carbon dioxide.

of GDP, vs. 479). This difference is mainly explained by the portfolio's overweighting with securities issued by France, a country with a low carbon intensity, as explained above.

Whilst the carbon footprint and carbon intensities are relevant indicators of portfolios' climate impact, they have limits.

- They do not take into account the entire life cycle of a company or a country production. A scope 3 carbon footprint including the entire upstream supply chain and the use of the product or even its downstream recycling would correct this bias. But current methodological limits for this type of indicator do not allow this to be expanded to a portfolio.

- They give an overview of current emissions (or those from the very recent past) without looking forward. "Portfolio temperature" or "2°C alignment" type indicators include this dimension.

2°C alignment

The 2°C alignment indicator is measured for equity Portfolios. It aims to assess the consistency of investments to align with an average temperature increase limited to 2°C (Objective 1)

Methodology

The Banque de France referred to two external experts (Trucost and 2° Investing Initiative) to assess the 2°C alignment of its Portfolios. This dual analysis allows it to compare the methodologies used to better interpret these indicators, whose methodologies continue to develop.

To create its 2°C alignment indicator, Trucost follows two approaches recommended by the Science Based Targets (SBT)⁸ initiative, which allocate carbon emissions to each company which are consistent with global warming limited to 2°C.

- The first approach involves companies which emit the most carbon and uses the SDA (Sector Decarbonization Approach) reference. The SDA methodology is based on an adaptation of the International Energy Agency's (IEA) 2°C scenario, which allocates maximum carbon dioxide

emissions compatible with global warming limited to two degrees to different geographic zones and economic sectors. It thus proposes, for several activity sectors such as energy production or cement production, 2°C trajectories between 2010 and 2050, including absolute levels of target carbon intensity in 2050 (expressed as tCO₂/activity unit, such as tCO₂/GWh or tCO₂/tonne of cement produced), as well as annual reduction rates for this carbon intensity. For each company, a theoretical 2°C trajectory is estimated to reach the target carbon intensity by 2050, starting with its carbon intensity 6 years ago, in 2012. Note that the 2°C scenarios of the IEA, although internationally recognized and used, are not exempt from criticism: they rely, for example, on fairly optimistic assumptions about nuclear energy and the potential of carbon capture and storage technologies. However they remain a reference at this stage.

- The second approach uses the GEVA (greenhouse gas emissions per unit of value added) reference, and it is applied to companies which emit less or which have several activity sectors. The GEVA methodology sets carbon intensity reduction targets for companies (expressed in tonnes equivalent of CO₂ per million euros of value added), which do not depend on the activity sectors. As with the SDA methodology, each company is allocated a theoretical 2°C trajectory, starting with its carbon intensity 6 years ago, in 2012.

Secondly, the theoretical trajectory to be followed by each company, determined using one of the two approaches above, is compared with the past trajectory noted for the previous five years and the expected future trajectory over 5 years in view of its strategy (investment projects, published decarbonisation objectives): the difference between the past and future trajectory and

⁸ The Science Based Targets (SBT) initiative founded by the United Nations Global Compact in 2015 aims to allocate a greenhouse gas emissions reduction target to each company which is scientifically relevant and specific to its activities, its sector and/or its location in order to limit climate change to 2°C.



the theoretical trajectory helps determine if the company is 2°C aligned or not.

Results

The analysis covers 71% of the value of the equity component of the portfolio backed to the pension liability for the 2°C alignment indicator. The covered companies represent 78% of total portfolio emissions in 2018: they are therefore more significant in terms of carbon emissions. Over 85% of the value of the equity component of the portfolio backed to own funds is covered by the analysis for the 2°C alignment indicator.

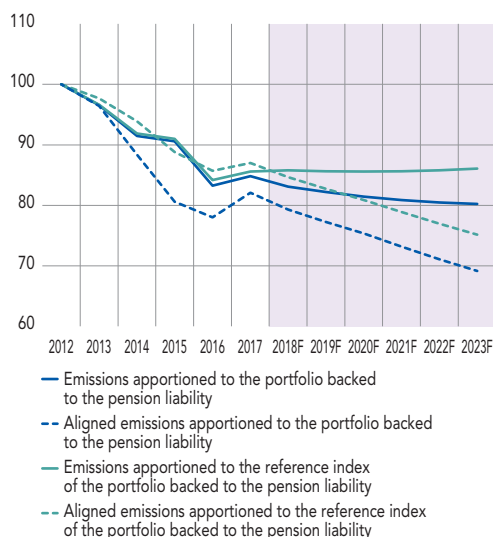
As for the carbon footprint and carbon intensities, the 2°C alignment analysis of the Portfolios is compared to the reference indices.

The 2°C alignment indicator here presented shows improved performance in terms of 2°C alignment for equity Portfolios compared to their reference index, as well as an improvement in the carbon performance of portfolio companies since 2012. However this improvement is insufficient and the portfolios are not currently 2°C aligned. They have a global warming trajectory above 3°C⁹. To meet Objective 1, the Banque de France will change its asset allocation to align the Portfolios to a 2°C trajectory. As a first step, it will align the portfolio own funds by 2020.

⁹ The 2°C alignment indicator here presented gives a result on the following scale: under 2°C, between 2°C and 3°C, above 3°C.

C7 2°C alignment of the portfolio backed by the pension liability

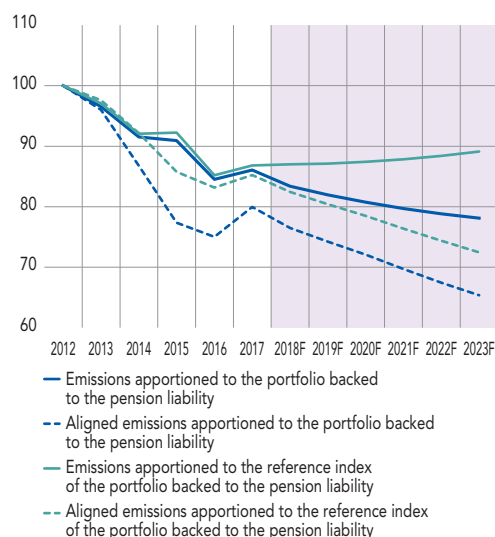
(base 100 in 2012)



Source: Trucost, Banque de France analysis.
Note: F stands for Forecast.

C8 2°C alignment of portfolio backed to own funds

(base 100 in 2012)



Source: Trucost, Banque de France analysis.
Note: F stands for Forecast.

2°Investing Initiative indicators

Analysis of the 2°C scenario by 2°Investing Initiative aims to compare assets and investment plans by portfolio companies with the technological deployment plans contained in climate scenarios. The analysis is focused on the next 5 years, the period over which companies usually prepare their investment plans.

This analysis provides an indicator at the level of the equity portfolio for each of the technologies covered, including: electricity production capacity by primary energy, oil and gas mining, car production by engine type. It compares current assets and planned changes in the next 5 years with what would be required, considering the geographic exposure of the assets, in different scenarios.

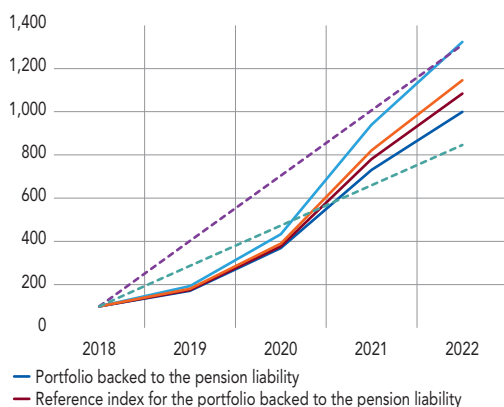
The model uses the +2°C scenarios of the International Energy Agency, entitled "Sustainable Development

Scenario" and "Beyond 2°C scenario". The "SDS" scenario corresponds to a trajectory to maintain the temperature increase under 2°C by 2100, and the "B2DS" scenario to a trajectory for limiting global warming to 1.75°C in 2100. This framework is internationally recognized. However, these scenarios are not exempt from criticism: for example, they rely on fairly optimistic assumptions about nuclear energy and the potential of carbon capture and storage technologies. However they remain a reference at this stage. Because of the differences in the assumptions about the technology mix in the renewable energy sector between the "B2DS" and the "SDS", the "SDS" may appear more ambitious for renewable energy than the "B2DS". However, the generation of electricity from renewable energies should still be more important in the "B2DS" despite the reduction in capacity

C9 Alignment of equity portfolios

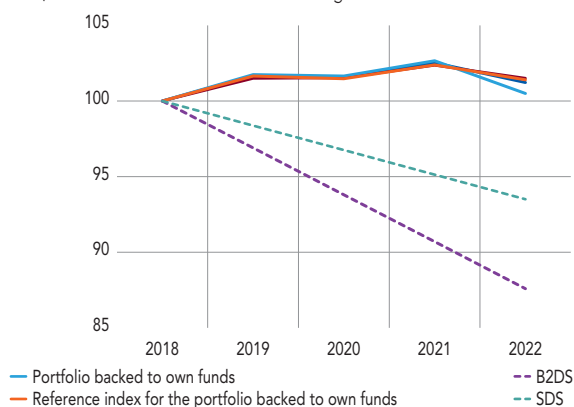
(base 100 in 2018)

a) Production of electric vehicles



These graphs show that the forecasted evolution of electric vehicle production from Portfolio companies is in line with 2°C trajectories. However, the forecasted evolution of the production of vehicles with internal combustion engines from Portfolios companies is better than those of companies constituting their reference index but do not appear in line with the 2°C trajectories.

b) Production of internal combustion engine vehicles



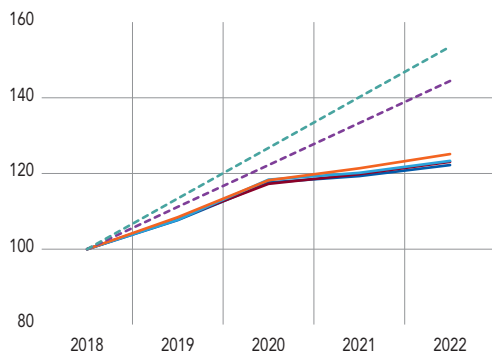
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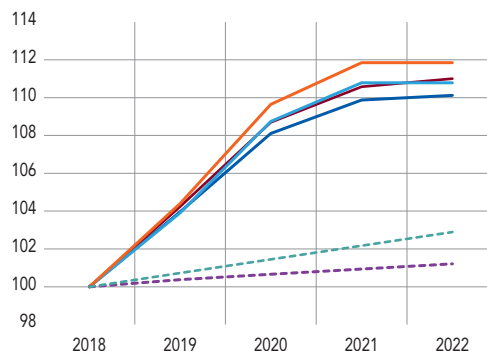
C9 Alignment of equity portfolios

(base 100 in 2018)

c) Energy production capacities from renewable energy

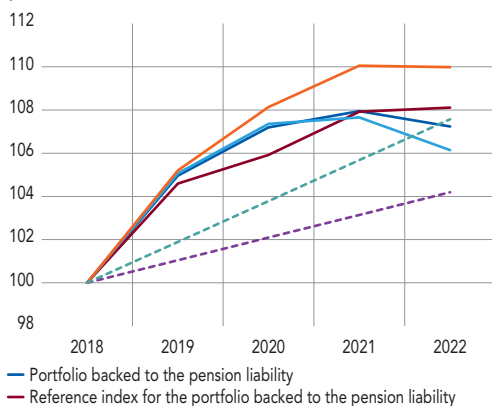


d) Energy production capacities from gas

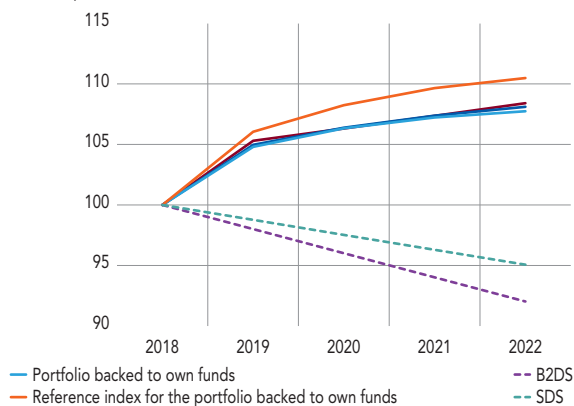


The forecasted evolution of energy capacities from renewable energies and gas from Portfolios companies do not appear in line with 2°C trajectories. However, they are better than those of companies constituting their reference index.

e) Gas production



f) Oil production



Source: 2° Investing Initiative.

Note: The SDS scenario (Sustainable Development Scenario) represents a pathway to stabilizing temperature rises to 2 °C by 2100. The Beyond 2 Degrees Scenario (B2DS) represents a pathway to limit warming to 1.75 °C.

The forecasted evolution of gas production from Portfolios companies are better than those of their benchmark and are in line with the 2°C trajectories. The forecasted evolution of oil production of companies in portfolios are better than those of companies constituting their reference index but do not appear in line with 2°C trajectories.

The indicators proposed by 2°Investing Initiative show improved behaviour by Banque de France portfolios compared to their reference indices. However, excluding the electric vehicle production indicator, the portfolios do not seem to be aligned with trajectories to maintain

the temperature increase below 2°C. This analysis confirms that the Banque de France must change its asset allocation to gradually align its Portfolios with a 2°C trajectory.

2 The Banque de France contribution to financing the energy transition – Objective 2

In accordance with its goal to manage its Portfolios with an investment trajectory compatible with a 2°C scenario, the Banque de France wants to finance investments in favour of the energy and ecological transition (EET). These investments often cover renewable energy production, energy efficiency and green infrastructures.

The work carried out by the European Commission on classifying green assets, which the Banque de France participates as an observer under the NGFS Secretariat, will help define the assets in question in a more precise and rigorous manner. At this stage, and pending conclusion of these works, the Banque de France agrees to increase its net funds invested in green bonds and funds dedicated to the energy and ecological transition (Objective 2).

Funds dedicated to the energy and ecological transition (EET)

Funds dedicated to the energy and ecological transition invest in projects or companies whose activity (water, energy, waste management, etc.) offer an environmental benefit. To encourage the funding of the energy and ecological transition, the ministry of the ecological and solidarity transition launched the TEEC (Energy and Ecological Transition for Climate) label at the end of 2015. This label certifies that the invested funds effectively finance the energy and ecological transition.

The Banque de France also monitors the green share of its issuers, namely the evolution of the activities “contributing to the Ecological and Energy Transition” presented below.

Green share

The green share measures the proportion of issuers in a portfolio that contribute positively to the energy and ecological transition through their products and services, as well as the share of revenue of issuers in the portfolio which corresponds to a green activity. It should be noted that actions carried out to target 2°C alignment of portfolios should result in an increased green share. The results are presented for equity portfolios.

Methodology

There is no methodological consensus on the sectors included when calculating the green share. For this first report, the Banque de France has chosen a restricted definition¹⁰ based on the methodology of its service provider, which considers the following sectors when calculating the green share (sectors contributing to the EET):

- the production of renewable energies: wind, solar, tidal, geothermal, hydroelectric;
- sustainable transport: operation and production of rail transport as well as passenger public transport;
- waste management services;

¹⁰ The Trucost approach does not take into account certain activities such as electric vehicles, biofuels, organic farming or green buildings, which are considered to contribute to the energy and ecological transition according to the TEEC certification.



- water management services;
- alternative energies: biomass and landfill gas energy.

Investments contributing to the energy and ecological transition

- At an international level, investments contributing to the energy and ecological transition do not yet have an official definition.
- At a European level, the European Commission is currently creating a “green taxonomy”, i.e. a European reference for so-called “sustainable” activities. This reference should be published during 2019.
- At a French level, the framework of the French TEEC label¹ created in December 2015 to support green growth lists a series of activities within this investment field.
- The Banque de France relies on the Trucost methodology to define an activity as “contributing to the energy and ecological transition” (EET). It lists 13 “sectors contributing to the EET” amongst the 464 sectors in the US industry classification (NAICS classification).

¹ <https://www.ecologie-solidaire.gouv.fr/>

Initially, the production and revenue of each company is broken down by activity sector, then analysed to identify if they belong to a sector contributing to the energy and ecological transition. For example, the green share of an energy company is defined as the share of revenue earned in renewable energies.

At a portfolio level, two indicators characterise the contribution to the transition:

- the weight of companies with all or part of their activity in sectors contributing to the energy and ecological transition;
- the share of revenue of companies in sectors contributing to the energy and ecological transition.

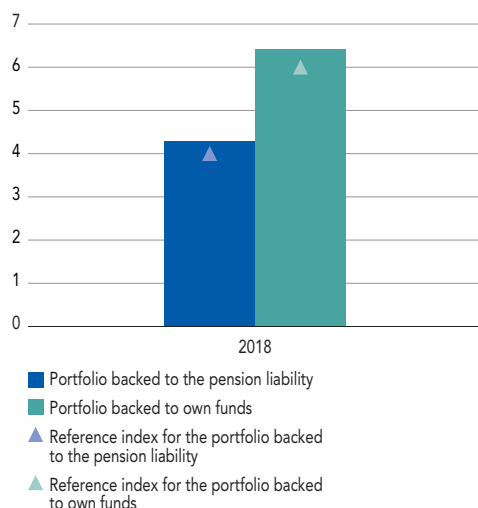
Results

Equity Portfolios

Over 99% of equity Portfolios are covered by the analysis for the green share. In 2018, the weight of companies with part (or all) of their activity invested in sectors contributing to the EET was 4.3% for the equity component of portfolios backed to the pension liability and 6.4% for the equity component of portfolios backed to own funds. The share of revenue generated by portfolio companies in sectors contributing to the EET was 0.7% for the equity component of portfolios backed to the pension liability and 0.8% for the equity component of portfolios backed to own funds.

C10 Weight of companies contributing positively to the EET and comparison with the green share of indexes

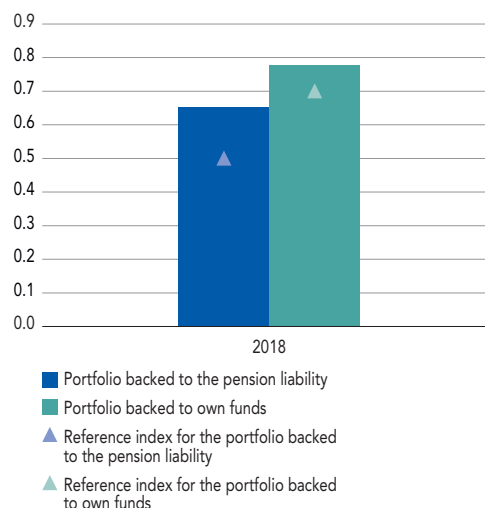
(in %)



Source: Trucost, Banque de France analysis.
Note: EET stands for energy and ecological transition.

C11 Share of revenue generated contributing positively to the EET and comparison with the green share of reference indexes

(in %)



Source: Trucost, Banque de France analysis.
Note: EET stands for energy and ecological transition.

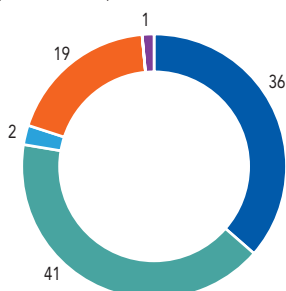
The graphs below represent the distribution of revenue generated by companies in sectors contributing to the

EET: they are mostly in renewable energies and waste management services.

C12 Distribution of revenue generated by companies in sectors contributing to the EET

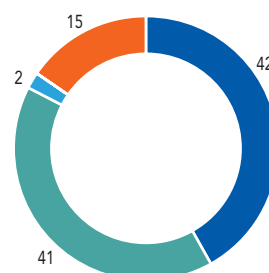
(in %)

a) for the equity component of the portfolios backed to the pension liability



■ Renewable energies ■ Waste management services

b) for the equity component of the portfolio backed to own funds



■ Alternatives energies ■ Water management services ■ Sustainable transport

Source: Trucost, Banque de France analysis.



3 Portfolio exposure to physical and transition risks

There are two risks that climate change can cause to Portfolios: the physical risk and the transition risk. The exposure of Banque de France Portfolios to these risks is evaluated through several specific indicators.

Exposure to physical risks

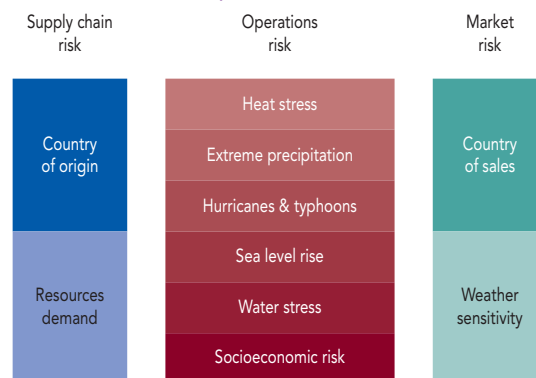
Physical risks can result from extreme events such as droughts, floods, storms or sea-level rise, but also from gradual changes in climate and weather conditions such as rising temperatures. They include the impacts of these events and changes, such as property damages and productivity declines, as well as those that may occur indirectly in subsequent events such as global supply chain disturbance. Article 173 of the law on the energy transition for green growth and the TCFD require transparency when evaluating climate risks, including physical risks, in investor portfolios.

Methodology

The Banque de France referred to the service provider Four Twenty Seven (427) to evaluate the effects of climate change on its Portfolios.

The company climate risk score is designed to reflect the relative exposure of these companies to climate risks, depending on the distribution of their assets worldwide, i.e. the risk that their production activity is disturbed by extreme climate events (operational risk for company goods, supply chain risk and market risk for opportunities).

Diagram 2 Method to evaluate the effects of climate change on the equity portfolios



Source: Four Twenty Seven.

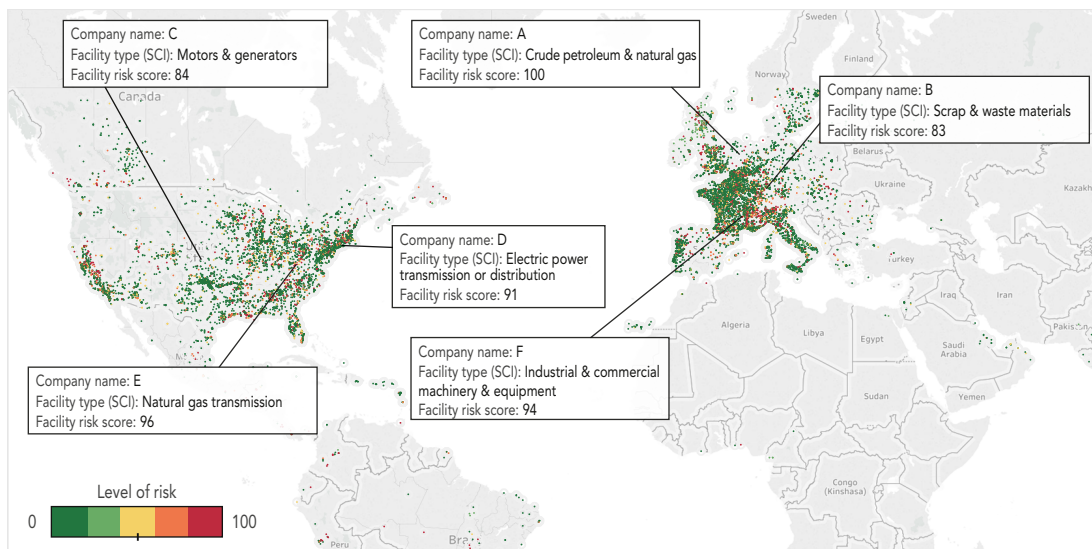
Ten indicators are evaluated and grouped into three pillars. Each indicator is scored from 0 to 100, where 0 is a low risk and 100 is a very high risk. The 10 indicators are added together to obtain the company's final physical risk score, with the following weighting:

- operational risk: 70%
- supply chain risk: 15%
- market risk: 15%.

As an example, the maps a) and b) illustrate the exposure to flooding of portfolio company water management sites and energy sites. Each point corresponds to a site. The colour of the points represents the level of exposure. Red is the highest level of risk, and green is the lowest.

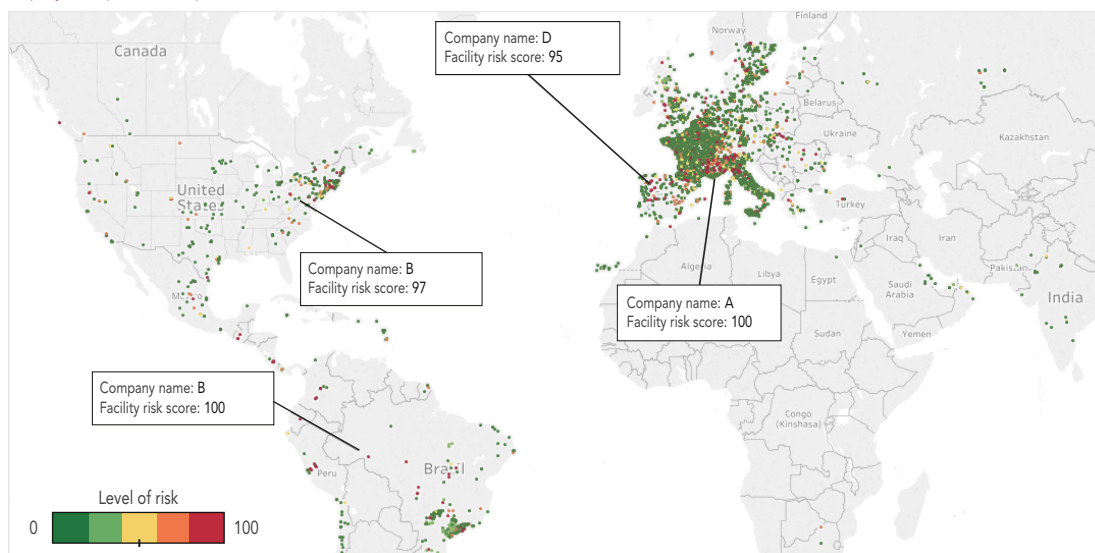
Maps Exposure to flooding at water and energy authority sites

a) for the equity component of portfolios backed to the pension liability



Note: SCI, Site of Community Importance.

b) for the equity component of portfolios backed to own funds



Source: Four Twenty Seven.



The country climate risk score is a summary indicator created for a country. It considers the exposure of each country to climate risk and its ability to resist and respond to physical impacts. It summarises 31 indicators organised into several categories (economic, social, environmental and governance risk and risks linked to natural disasters). Countries are scored from 0 to 100. For a given country, when exposure to climate risk is variable depending on the regions, the regions which contribute the most to economic activity are prioritised in terms of exposure to climate change. The socio-economic data comes from the World Bank, the United Nations and university databases. The country risk is used to create supply chain and market risk indicators, as well as to measure the risk of sovereign bonds.

Results

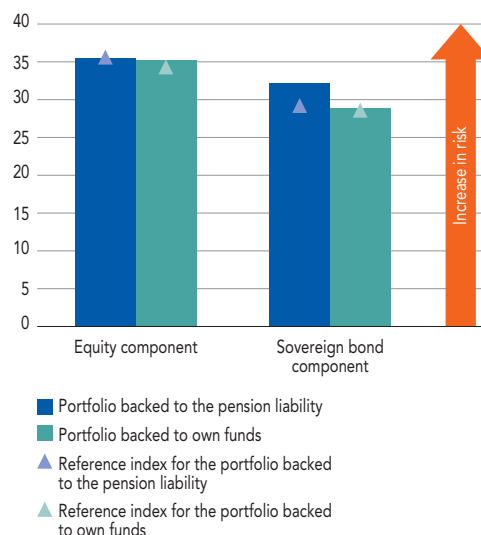
86% and 100% respectively of the equity Portfolios and sovereign bond Portfolios are covered by the analysis for the physical risk exposure score. Overall (equity and sovereign bonds), the Portfolios have a low risk of exposure to climate change impacts. The risk scores for different components of the Portfolios were all below 40 on a scale from 0 to 100 (where 100 is the risk score of the most exposed company). The Banque de France assets are mostly focused on world regions with low exposure to climate change, mainly in Europe. In addition, the equity component includes companies belonging to industries which have relatively low exposure to climate change due to their activities and markets.

Equity Portfolios

The equity component of the Portfolio backed to the pension liability has low exposure to climate change

C13 Consolidated physical risk score for equity and sovereign bond components of Portfolios, 2018

(y-axis: physical risk score)



Source: Four Twenty Seven.

impacts. It has a total risk score similar to the reference portfolio. Whilst it is slightly less exposed to operational risk (risk relating to production processes), its market and supply chain risk scores are a little higher. The portfolio companies are focused in industries which are more dependent on resources exposed to climate change (e.g. water and energy), such as the healthcare industry or consumer goods.

The equity component of the portfolio backed to own funds also has low exposure to climate change impacts. It has a total risk score similar to the reference index. The portfolio and its reference index have the same operational score, reflecting medium exposure to the risk of water stress and heat stress. However the portfolio has a market and supply chain risk score slightly higher than the reference index, due to higher exposure to

T1 Detailed physical risk score for the equity component of portfolios backed to the pension liability and portfolios backed to own funds, 2018

	Overall score	Operational score	Market score	Supply chain score
Portfolio backed to the pension liability	36	32	46	42
Reference index for the portfolio backed to the pension liability	36	32	45	40
Portfolio backed to own funds	35	31	47	43
Reference index for the portfolio backed to own funds	34	31	45	41

Source: Four Twenty Seven.

T2 Percentage of companies highly exposed to climate variations

(in%)

	Heat stress	Water stress	Flooding	Rise in sea level	Hurricanes
Portfolio backed to the pension liability	1.3	0.4	6.8	1.1	0.6
Reference index for the portfolio backed to the pension liability	2.4	0.8	7.4	2.3	0.5
Portfolio backed to own funds	1.7	0.0	5.2	0.0	0.0
Reference index for the portfolio backed to own funds	2.3	0.0	6.0	0.7	0.0

Source: Four Twenty Seven.

T3 Detailed physical risk score for the sovereign bond component of portfolios backed to the pension liability and portfolios backed to own funds, 2018

	Overall score	Water stress	Heat stress	Extreme rainfall	Rise in sea level	Hurricanes	Socio-economic vulnerability
Portfolio backed to the pension liability	32	40	49	34	22	33	15
Reference index for the portfolio backed to the pension liability	29	43	48	33	31	9	16
Portfolio backed to own funds	29	44	51	31	25	13	16
Reference index for the portfolio backed to own funds	29	40	48	34	29	13	15

Source: Four Twenty Seven.

sectors more exposed to climate change, such as basic consumer goods and energy.

Certain companies are “highly exposed to climate variations”, which means that at least 25% of their sites are exposed to an identified climate variation. This is specifically the case for the risk of flooding: in terms of value, around 7% of companies in the equity component of the portfolios backed to the pension liability and 5% of the equity

component of the portfolio backed to own funds have over a quarter of their production sites exposed to flooding risk.

Sovereign bond Portfolios

The sovereign bond components of Portfolios have low exposure to climate change impacts as the majority are invested in European State bonds, which have limited exposure to climate change impacts.



The sovereign bond component of the portfolios backed to the pension liability have a slightly higher exposure score than the reference index. This is explained by its higher hurricane risk score due to a higher financial concentration in the United States, a country exposed to the risk of hurricanes. The sovereign bond component of the portfolios backed to own funds have a similar exposure score to the reference index.

Exposure to transition risk: brown share

The transition risks is the financial risk that can result from the adjustment process towards a less carbon-based economy, for example, through changes in climate policy, technological changes or evolutions of market sentiments.

The Banque de France measures Portfolio exposure to transition risk through a brown share indicator, in comparison to the green share. It evaluates Portfolio exposure to companies whose value is linked to the ownership or use of fossil fuel reserves. The results are presented for equity portfolios.

Methodology

There is no methodological consensus on the assets included when calculating fossil fuel exposure. The Banque de France uses the methodology of its service provider, which considers assets exposed to fossil fuels if they extract these fuels¹¹ or produce energy from them¹².

At a portfolio level, fossil fuel exposure can be classified with two indicators:

- the weight of companies involved in activities linked to fossil fuels in portfolios;
- the share of revenue generated by companies in activities linked to fossil fuels.

Results

Over 99% of equity Portfolios are covered by the analysis for the brown share. In 2018, the share of companies involved in fossil fuels reached 9.2% in the equity component of the portfolio backed to the pension liability, a slightly lower result than the reference index measured at 12.5%. However the brown share of the equity component of the portfolio backed to own funds reached 14.7%, higher than the reference index (12.9%).

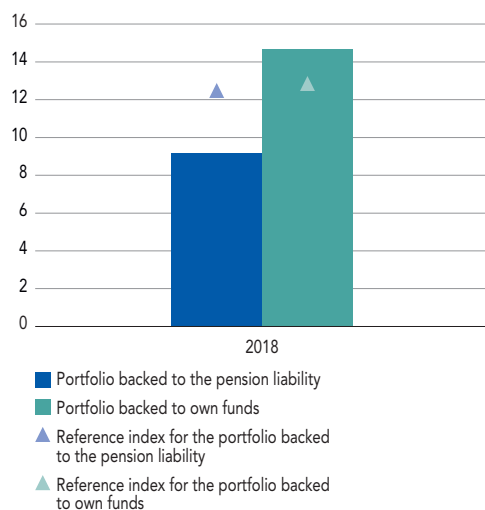
The proportion of revenue derived from activities linked to fossil fuels in the equity component of the portfolios backed to the pension liability reached 1.8%, which is lower than the reference index. This proportion reached 2.6% for the equity component of the portfolio backed to own funds, a similar value to the reference index.

¹¹ Fossil fuel extraction: Crude oil and natural gas extraction, oil sands, liquid natural gas, underground bituminous coal, open-pit coal and bituminous lignite, oil and gas well drilling, activities to support oil and gas operations

¹² Fossil fuel based electricity production: oil, coal or natural gas based production

C14 Weight of companies involved in activities linked to fossil fuels

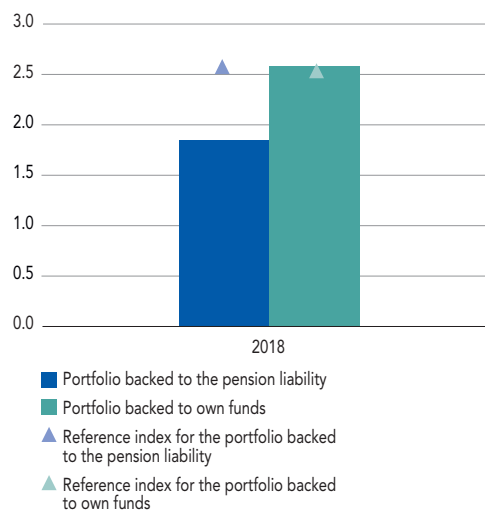
(as a %)



Source: Trucost, Banque de France analysis.

C15 Share of revenue generated by companies in activities linked to fossil fuels

(as a %)



Source: Trucost, Banque de France analysis.

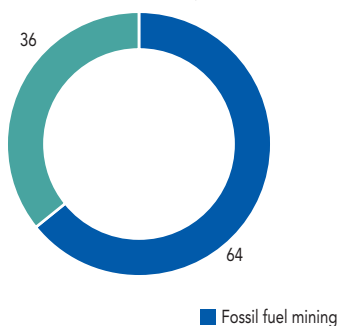
The graphs below show the distribution of revenue generated by companies involved in activities linked to fossil fuels. The Portfolios are mainly exposed

to transition risks due to the extractive activities of issuers.

C16 Distribution of revenue generated by companies in activities linked to fossil fuels

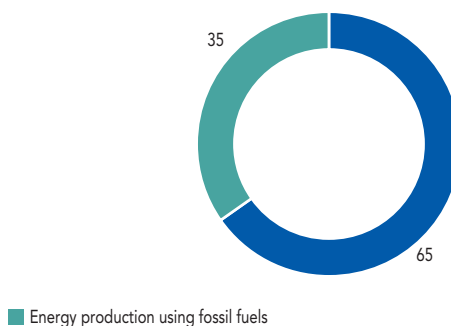
(in %)

a) for the portfolio backed to the pension liability



Source: Trucost, Banque de France analysis.

b) for the portfolio backed to own funds



Pillar 2: include ESG criteria in asset management

The Banque de France makes the commitment that its Portfolios invested in equity¹³ meet the requirements of pillar III of the Socially Responsible Investment label issued by the Ministry of Economy and Finance (Objective 3). By the end of 2019 at the latest, at least 20% of issuers will be excluded from the investable universe based on ESG (Environmental, Social and Governance) scoring criteria.

¹³ Excluding passive open-end index funds, i.e. 3% of Portfolios

Issuer ESG performance

The Environmental, Social and Governance (ESG) criteria generally constitute the three pillars of non-financial analysis. Based on these criteria, company responsibility towards the environment and their stakeholders (employees, partners, subcontractors and clients) can be evaluated.

The environmental criterion specifically considers waste management, greenhouse gas emission reduction and preventing environmental risks. The social criterion specifically considers accident prevention, staff training, respect of employee rights, the subcontractor chain and labour relations. The governance criterion verifies the independence of the board of directors, the management structure and the presence of an account audit committee.

The Banque de France uses the Vigeo Eiris database to monitor ESG scores and requires its managers and agents to have an ESG database so that they can comprehensively apply its ESG criteria selection policy.

1 A regulatory and sector-based exclusion policy

Companies and States which do not respect national and international regulations in terms of combating terrorist financing, corruption and tax havens (embargoes, non-cooperative States and regions in term of exchanging tax information, Financial Action Group - GAFI) as well as

The French SRI label

The French SRI label, supported by the Ministry for the Economy and Finance, aims to encourage the development and visibility of SRI products. It is based on a decree and ruling published in January 2016 to create the certification, and define its specifications and control methods.

To receive the SRI label, the funds must meet different criteria, specifically:

- the share of ESG analysed issuers in the portfolio must be above 90% long-term;
- the investable universe must be reduced by at least 20% by excluding the lowest scores from an ESG point of view.



the International Labour Organization (ILO)¹⁴ principles are excluded from Portfolios. Similarly, the Banque de France does not invest in the public or parapublic debt of a company considered very high-risk according to the European Commission¹⁵.

The following companies are also excluded from the Portfolios:

- companies which do not adhere to the Ottawa (1999) or Oslo (2010) Conventions prohibiting the production, use, storage, sale and transfer of anti-personnel mines and cluster bombs;
- companies registered in a country which does not respect human or citizen rights as defined in the Universal Declaration of Human Rights;
- coal mining companies and coal-based power producers, where over 20% of revenue is linked to thermal coal.

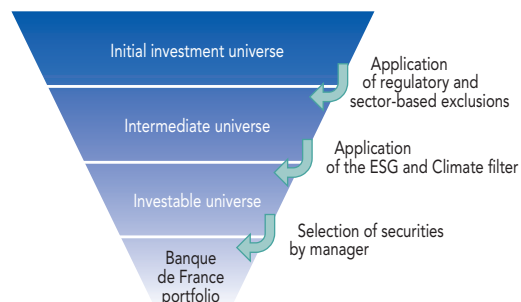
These exclusions apply to all Portfolios, excluding passive open-end index funds (i.e. 3% of Portfolios).

2 A filter based on the ESG scores of companies and climate indicators – Objective 3

Methodology

In collaboration with its main asset manager BdF Gestion, the Banque de France has committed to implement a filter by the end of 2019 to exclude at least 20% of issuers with the lowest ESG scores and climate indicators. This filter will be effective for all

Diagram 3 Portfolio creation process



Source: Banque de France.
Note: ESG stands for environmental, social and governance.

equity portfolios, excluding passive open-end index funds at this stage.

The investable universe in which managers select issuers to create the Banque de France equity portfolio contains at least 20% fewer issuers than the initial investable universe. The climate indicators, other than global ESG scores, will be given a specific weight to improve the climate performance of the portfolio and align assets to a 2°C trajectory (Objective 1).

The latest information regarding issuers are taken into account in this filter, thanks to the monitoring of controversies which may cause, on a case-by-case basis, additional exclusions. At the end of 2018, the Banque de France with the expertise of Vigeo Eiris, implemented a monitoring and alert system on controversies which

¹⁴ Specifically respect for the freedom of association and the right to collective bargaining, elimination of forced labour and child labour and employment discrimination.

¹⁵ Very high-risk countries: Countries recently listed as "high-risk third countries" by the European Commission: https://ec.europa.eu/info/policies/justice-and-fundamental-rights/criminal-justice/anti-money-laundering-and-counter-terrorist-financing/eu-policy-high-risk-third-countries_fr#eulistofhighriskthirdcountriesstatusfebruary2019

could impact or potentially impact Portfolios. The controversies monitored are related to the violation of:

- the Universal Declaration of Human Rights
- the principles of the International Labour Organisation (ILO),
- national and international regulations on the fight Against the financing of terrorism, corruption and tax havens.

Results of issuer ESG performance

99% and 100% respectively of the equity portfolios and sovereign bond portfolios are covered by the analysis for ESG scoring. At the end of 2018, the overall ESG performance of the equity component and sovereign bond component of the Banque de France Portfolios is similar to the reference index, except the sovereign bond component of the portfolio backed to the pension liability, which is underperforming compared to its reference index. This slight difference is mainly explained by overexposure to the United States, a zone where the ESG scores are lower.

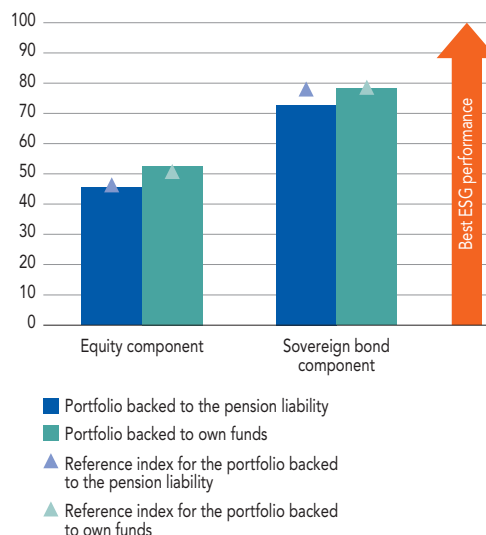
Focus on social performance

The Banque de France will pay special attention to the social performance of issuers. As such, it specifically monitors the evolution of two social indicators for equity portfolios:

- occupational health and safety;
- non-discrimination.

C17 ESG scores for Banque de France portfolios

(average ESG score)



Source: Vigeo Eiris, Banque de France analysis.
Note: ESG stands for Environmental Social and Governance.

The score relating to occupational health and safety considers the following information:

- company commitment and actions to protect the right of employees to a safe working environment, giving them safe working conditions, and protecting their physical and emotional wellbeing;
- the result of several performance indicators such as accident frequency and severity.

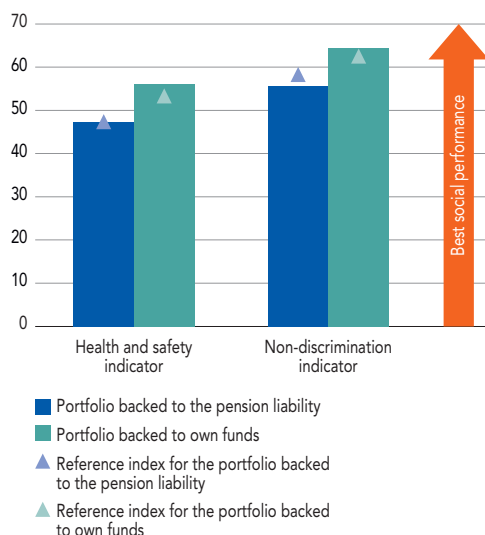
The non-discrimination score considers the following information:

- the way that the company prevents any form of discrimination in the workplace: training and awareness, whistleblowing or reporting procedures, positive action



C18 Social performance score for Banque de France equity portfolios

(average score)



Source: Vigeo Eiris, Banque de France analysis.

initiatives, risk evaluations, networking initiatives, monitoring wage gaps, flexitime initiatives, etc.

- the result of several performance indicators such as the percentage of women in management positions and the representation of disabled workers.

Over 99% of equity portfolios are covered by the analysis for monitored social indicators. The portfolio backed to the pension liability has social performance slightly lower than the reference index, whilst the portfolio backed to own funds is performing slightly better than the reference index.

Support provided to develop microcredit

In line with tasks entrusted to the Banque de France by the legislator to handle excessive debt and the right to a bank account, the Banque de France is committed to banking inclusion and actively supports the development of microcredit, a driver of economic and social inclusion for people in difficult financial situations, including through the use of its own funds. This support does not strictly relate to Portfolio management. However it is included here to reflect Banque de France's consistent approach to exercise its statutory and legal duties when managing its own funds and investments.

On 9 October 2018, Denis Beau, Deputy Governor of the Banque de France and Olivier Sichel, deputy managing director of Caisse des dépôts et consignations, signed an agreement which allows the Bank, in collaboration with the Ministry of the Economy and Finance, to provide €5 million to the social cohesion funds, to act as a guarantee for microcredit transactions. The Bank therefore helps support the development of this instrument, so that it can reach €2 billion stock by the end of 2020, and support the economic and social inclusion of people in difficult financial situations.

Pillar 3: exercise its right to vote and influence issuers – objectives 4 and 5

The Banque de France agrees to reach a general meeting attendance rate and to exercise its voting rights at 100% of the companies in which it is a direct shareholder, based on a voting policy which will be defined in 2019. This will include provisions on company non-financial disclosures, which will become a voting criterion (Objective 4). The Banque de France abstain from directly holding equity in companies which it supervises (banking and insurance) to avoid any risk of a conflict of interest between its role as supervisor and party responsible for financial stability and its role as shareholder in these companies.

For companies in which it is shareholder via funds or delegated management, the Banque de France has asked the asset manager to develop its voting policy, lowering the stake thresholds, above which it agrees to take part in general meetings, so that the right to vote can be exercised in at least 40% of securities held in Portfolios in 2019, representing over 70% in value. This ambition will be reinforced in 2020 with an objective to exercise voting rights in 80% of securities (Objective 5).

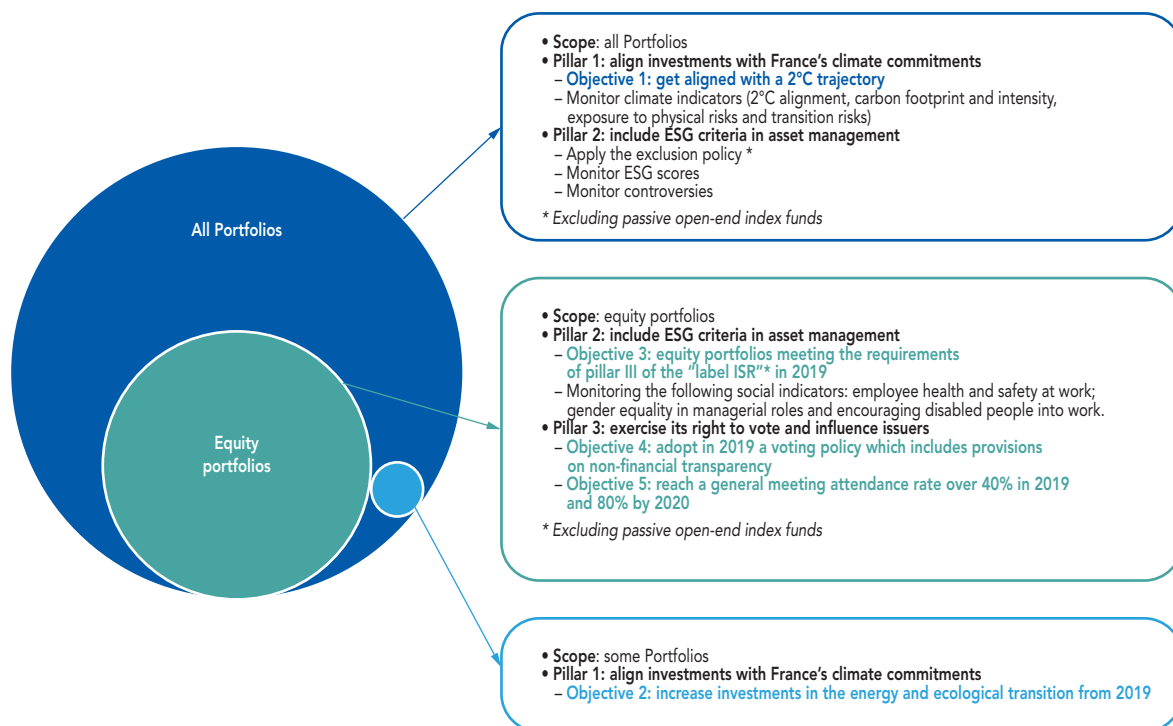


Appendix 1

Scope

- All measures and analyses performed as part of this report relate to Portfolio stock as of 31/12/2018. The sums indicated in this report are given at market value.
- The Portfolio sums amount to €19bn, distributed as follows: 27% in equity (€5bn), 45% in bonds (€9bn), and 28% in monetary investments and cash flow (€5bn).
- The responsible investment strategy applies to all Portfolio assets. However it is not practical with regards to cash flow and monetary funds.
- The exclusion policy applies to all Portfolios, excluding passive open-end index funds (representing 3% of Portfolios).

Scope of application of objectives:



Source: Banque de France.



Appendix 2

Banque de France responsible investment charter



RESPONSIBLE INVESTMENT CHARTER OF THE BANQUE DE FRANCE

MARCH 2018



1●

As an institution of the French Republic and a Eurosystem central bank, the Banque de France carries out a broad range of tasks for the benefit of the community. These tasks relate to monetary strategy, financial stability and the provision of services to the economy. The Banque de France thus helps to create a balanced and sustainable economy, by ensuring the public can have confidence in their currency and payment instruments, by safeguarding the stability of the financial system, which is fundamental for economic growth, by contributing to the sound financing of businesses and especially SMEs, and by assisting those who are overindebted or financially excluded.

The corporate social responsibility (CSR) of the Banque de France towards the public was reinforced via the adoption of its CSR Charter in December 2016. This Charter comprises 4 key commitments (educational and cultural, economic and civic, environmental, towards staff). These commitments are incorporated into its strategic "Ambitions for 2020" plan.

2●

The Banque de France's Responsible Investment Charter falls within this framework. It also reflects the Bank's aim to be exemplary in the inclusion of CSR in all its forms – economic, social and environmental – applied to its role of institutional investor. This covers the management of assets for which it has the full and sole responsibility, i.e. own funds and pension liabilities investment portfolios, excluding those it holds in the framework of the tasks entrusted to the European System of Central Banks by the Treaty on the Functioning of the European Union.

With the adoption of this Charter, the Banque de France is acting fully in line with the views expressed in its CSR Charter, with its fiduciary responsibility as a long-term investor, which is to be mindful of all types of risks that could have an impact on its asset returns, and with one of its tasks which is to safeguard financial stability, to which the mitigation of environmental risks contributes.

3●

As per its fiduciary responsibility as an investor, the Banque de France strives to implement an own funds asset management strategy consisting in ensuring regular growth in their value over the long term and mitigating any associated risks. In this respect, the Banque de France decided to deepen the analysis and formalise the inclusion of Environmental, Social and Governance (ESG) factors in its investment decisions. Indeed, experience and academic studies show that these factors may have an impact on the risks and performance of investments. As an experiment, it has been already incorporating for several years ESG criteria in its own company ratings system.

4●

The Banque de France is committed to publishing appropriate non-financial information, in particular regarding the impact of environmental changes. Article 173-VI of the Energy Transition Act adopted on 17 August 2015 in France constitutes, from this point of view, a reference at the international level.

5●

The Banque de France supports the objectives of the international community such as the Sustainable Development Goals adopted by the United Nations in 2015 and the 10 principles of the United Nations Global Compact of 2000. It is committed to contributing to the global response in order to comply with the Paris Climate Agreement of 2015.

Through this charter, it is committed to complying with the four general principles that guide the inclusion of ESG criteria in appropriate ways for each financial asset class.

- *Respect of human and civil rights as defined in the Universal Declaration of Human Rights:* the Banque de France shall neither invest in the public and quasi-public debt of a very risky country nor in a company registered in any such country. In this respect, the Bank does not invest in companies that do not respect the Ottawa (1999) and Oslo (2010) Conventions. These conventions prohibit the use, stockpiling, production and transfer of anti-personnel mines and cluster bombs;





- *Respect of regulations governing anti-money laundering and counter-terrorist financing, corruption and tax havens* (embargoes, Non-Cooperative Countries and Territories (NCCT) regarding Tax Information Exchange Agreements, Financial Action Task Force (FATF);
- *Respect of the principles of the International Labor Organization (ILO)*, notably respect of the freedom of association and right to collective bargaining, the elimination of forced and compulsory labour for children and discrimination in employment and occupation;
- *Initiatives to protect the environment, the energy and environmental transition*, initiatives aimed at reducing climatic change or adapting to it (such as the Charter for public investment in support of climate action). In this framework, the Banque de France does not invest in mining companies and coal-based energy producers that derive more than 20% of their revenues from thermal coal.

Lastly, the Banque de France does not invest in instruments that promote agricultural commodity speculation.

6.

The Banque de France's Responsible Investment Charter thus reiterates and broadens its existing commitments in terms of the incorporation of environmental, social and governance criteria into its management of financial assets. **It defines three commitments and nine associated implementing actions to be rolled out gradually over time.**

The Banque de France shall report specifically on the progress made each year in implementing this Charter.

Responsible investor commitments on the own funds portfolio¹ of the Banque de France



1 Enhance the inclusion of Environmental, Social and Governance (ESG) factors in investment decisions.

1. Formalise the inclusion of ESG factors in the investment processes of Banque de France and external managers, in a gradual and differentiated way according to the asset class and investment horizon.
2. Provide training on ESG-related challenges to all Banque de France staff involved in the investment decision-making process.
3. Define and, where necessary, improve the analysis tools required for incorporating ESG factors, and acquire the instruments to implement portfolio exclusion decisions.
4. Incorporate the monitoring of the implementation of these actions into both the mandate of the Bank's various bodies and the objectives of the operational teams involved in defining the implementation of its investment policy.



2 Improve the measures and the development of the contribution of asset portfolios to the environmental transition.

5. Formalise the approaches used to identify and assess the risks and opportunities related to the environmental transition, in particular to climate change, in asset portfolios.
6. Improve analysis tools and environmental impact indicators in order to ensure the gradual alignment of asset portfolios with the target of limiting global warming to 2°C.
7. Mobilise research resources to contribute, in particular, to a better knowledge of techniques to incorporate environmental factors into risk management tools and asset allocation construction.



3 Report on the progress made in reaching objectives and replicate the best practices of other institutional investors.

8. Implement and steadily improve an annual public reporting format specific to the Banque de France and which incorporates best practices.
9. Keep abreast of developments in best practices in the area of responsible investment as well as the studies by the different French and international institutional investor networks in this area.

^{1/} Own funds and pension liabilities investment portfolios excluding those it holds in the framework of the monetary tasks entrusted to the Eurosystem.



Appendix 3

Operational adaptation of the responsible investment strategy

The Banque de France Responsible Investment charter published in March 2018 defines three commitments and nine corresponding actions, taken as an investor and financial stability player. The Responsible Investment strategy declines the Charter commitments in three pillars and five objectives, which are the implementation

priorities for the coming years for the management of its portfolios. The following table reflects the progress of implementation of the commitments and actions defined in the Charter. It presents how each of the operational objectives relates to the commitments set out in the Charter.

Responsible Investor Commitments	Operational adaptation
Reinforce the inclusion of Environmental, Social and Governance (ESG) criteria in investment decisions.	
1. Formalise the inclusion of ESG criteria in the investment process of Banque de France managers and external managers, on a gradual and differentiated basis depending on the asset class and investment prospects.	The Banque de France makes the commitment that the actively-managed equity component of its Portfolios will be fully managed based on the requirements set out by pillar III of the French SRI certification by the end of 2019 See Pillar II of the responsible investment strategy, objective 3.
2. Implement an ESG training plan for all Banque de France employees involved in investment decision making.	Training on the basics of responsible investment has been provided by Novethic in 2018 for all people in charge of Portfolio management, as well as employees of the main Banque de France asset manager. Additional training will take place in 2019.
3. Define and, where needed, reinforce the analysis measures needed to include ESG factors, and provide instruments to introduce exclusions in the chosen portfolios.	The Banque de France has made use of the external expertise of Vigéo Eiris to include ESG factors in its asset management and introduce exclusions in the chosen portfolios.
4. Include monitoring of the implementation of these actions in the mandate of different Bank bodies, and the objectives of its operational teams involved in the definition and implementation of its investment policy.	In order to control this approach in the long-term, integrated governance has been implemented: all strategic decisions are made by existing committees, and a management team attend these committees to operationally adapt the strategy.
Improve measures and the development of the contribution of asset portfolios to the environmental transition.	
5. Formalise the processes to identify and evaluate risks and opportunities linked to the environmental transition, specifically climate, in asset portfolios.	The Banque de France uses the external expertise of Trucost, Four Twenty Seven, and 2° Investing Initiative to measure its carbon footprint and carbon intensity, its green share and brown share, its 2°C alignment and its physical risks. The Banque de France will publish the result of these indicators each year.
6. Reinforce analysis tools and environmental impact indicators to gradually align financial asset portfolios with a 2°C trajectory.	The Banque de France commits to aligning with a 2°C trajectory, to finance the energy transition (by increasing its investments in green bonds and funds dedicated to the energy and ecological transition). As a first step, the Portfolio own funds will be aligned by 2020. See Pillar 1 of the responsible investment strategy, objectives 1 and 2.
7. Mobilise the research resources to contribute to improved understanding of techniques to include environmental factors in risk management and asset allocation tools.	In addition to its internal research programme on the economic and financial impact of climate change, the Banque de France is actively contributing to the work of the NGFS on the development of scenarios integrating climate risk. In addition, it has signed a partnership with I4CE (Institute for Climate Economics), a think tank founded by the Caisse des Depots and the French development agency.
Provide information on progress made to reach objectives, and monitor the best practices of other institutional investors.	
8. Implement and gradually improve a public annual report format unique to the Banque de France, which takes best practices into consideration.	For the first year, the Banque de France has published article 173, and commits to updating it annually by presenting progress made in implementing the responsible investment strategy.
9. Carefully monitor changes to best practices in terms of responsible investment and work carried out by different French and international institutional investor networks in this matter.	With seven other central banks, the Banque de France has created the NGFS and serves as secretary: one of the working groups of this network aims to define and promote best practices in terms of responsible investment.

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