2021 SUSTAINABLE INVESTMENT REPORT

Race to Zero
As global temperatures increase and biodiversity declines at alarming rates, investing in a more sustainable world is essential to limit adverse impacts of global warming, loss of biodiversity and depletion of natural capital.

Investors and insurers have a key role to play and Allianz has fully endorsed it.

Allianz France’s sustainable investment report testifies to our commitment. Together with the Group – as a founding member of the Net-Zero Asset Owner Alliance – we are transitioning our investment portfolios to reach net-zero greenhouse gas emissions by 2050, with true reduction outcomes in the real economy. Being actively involved in the real economy also means investing locally for a sustainable transition. To go further, Allianz France continuously innovates and strengthens its methodologies to push back boundaries. In 2020 Allianz France signed the Finance for Biodiversity Pledge and is now presenting its early efforts to protect natural capital and address biodiversity.

Transparency is key to guarantee ambitious sustainable investments. With this report, we account for our latest actions and long-term ambitions. Our objective is still the same: to concretely contribute to a more sustainable world.
At Allianz, sustainability is rooted in our DNA and embedded into our daily activities.

As an insurer, we have a pivotal role to play in society. It is reflected in our contribution to growth, financial stability and social cohesion and expressed in our internal purpose – We secure your future.

As an investor, we are convinced that we must shape a more resilient and sustainable economy.

The current health crisis has confirmed the need for action and reinforced our ambition. Our target is clear: building a fair transition by bringing environmental and social aspects closer in our investment decisions. This objective is an inherent component of our Allianz France 2025 corporate strategy.

On a daily basis, our purpose is to create sustainable investment solutions together. How do we do it? By reducing real world emissions triggered by our investment portfolios into our investment portfolios’ carbon footprint to reach carbon neutrality by 2050. By expanding our sustainable investor’s frontier and including new aspects such as biodiversity and natural capital. By strengthening our local investments in companies, renewable energies and green buildings.

Joint effort is key to make a difference on a global scale.

At Allianz France, we leverage on both our local roots and our global footprint to create impact and shape the future of sustainable investment. Together we can rethink traditional business models and build a stronger ecosystem of sustainable actors. By doing so, we live up to the responsibility we bear towards our clients.

With this report, I am proud to present the concrete actions we take.
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Race to Zero
Sustainability strategy & climate commitment

Climate Neutrality Ambition
25% absolute emission reduction from our investment portfolios\(^{(1)}\) by 2025 & reaching Climate Neutrality by 2050

Sustainability leader
• Founding member of the Net Zero Asset Owner Alliance, an initiative launched in Sept, 2019 gathering 33 Asset Owners, with more than 5 trillion US $
• PRI rating: A+
• Dow Jones Sustainability Index 2020: 87/100

Environmental, Social and Governance
• Carbon Footprint coverage\(^{(2)}\): 70 %
• ESG coverage\(^{(2)}\): 100%
• Green investments\(^{(2)}\): 4.3 billion €
• General Assembly Voting\(^{(2)}\): 464 AGM, and 2183 resolutions

Our 13 sensitive business areas

Agriculture, fisheries and forestry
Animal welfare
Betting and gambling
Clinical trials
Animal testing
Defense

Human rights
Hydro-electric power
Infrastructure
Mining
Nuclear energy
Oil & gas
Sex industry

\(^{(1)}\) On Equity, Corporate Bonds and Real Estate portfolios
\(^{(2)}\) In terms of portfolio AUM as of end 2020
Environment risks

- Coal exit pathway: 0% Coal by 2040
- Mapping and monitoring of physical risks
- 1.5°C scenario analysis & portfolio pathways

Environment opportunities

- Renewable Energy: **460 million €**
- Green Bonds: **2.1 billion €**
- Green Buildings: **1.8 billion €**
- Signing of the **Finance for Biodiversity Pledge (2020)** gathering 4.8 trillion € of assets

Social and Real Economy impact

- Impact investing: **118 million €**
- Social bonds & Sustainability bonds: **647 million €**
- Award of the most active insurer in terms of real economy development – Prix des couronnes 2020

Governance

- Engagement: **68 direct engagements** discussions continued/opened in 2020
- Initiatives: Charte Parité

Allianz France
Executive summary

The ESG approach of Allianz France investment centers on sustainability. We consider ESG criteria in three forms applicable to our entire investment portfolio; each form is incorporated in the previous one.

• The first form is responsible investment by exclusion of harmful products based on ESG criteria: we generally do not invest in coal-based business and controversial or banned weapons. More importantly, the exclusion thresholds for the share of energy generated from coal power plants and the revenue share from coal mining will be tightened over time. We will lower the thresholds from the 30% in place since 2015 to 25% in 2025 and 0% by 2040 at the latest.

• The second form is ESG-compliant investment where ESG factors are actively addressed to ensure investments and companies are selected in line with our ESG values. ESG factors are integrated across all asset classes: through our ESG scoring for listed assets and our ESG referral process for unlisted assets. We furthermore consider ESG factors along the investment lifecycle: through governance, asset manager selection, monitoring and review, knowledge exchange with different stakeholders, voting and engagement. In this sense, we have developed tools for standardized assessments on Asset Managers and Funds, which help us track, compare, and challenge the ESG performance of our asset managers and investments strategies across the organization.

• The third form is impact investing, where consideration of ESG criteria leads to measurable positive environmental and/or social impacts along with market-rate returns. Since 2018, we have formalized an impact investing strategy to identify and select investments that we consider as “impact investing”. This strategy considers the intention of the investment, through environmental and social targets, the measurability and transparency of KPIs, as well as the review of these investments on a periodical basis.

In 2020, the integration of our sustainability ambitions for investment has been embedded in the Allianz 2025 strategic plan. The 2025 carbon neutrality targets, according to the Net-zero Asset Owner Alliance initiative, have been further defined through the announcement of our ambition to cut our carbon footprint by 25% across the equity, corporate bond and real estate portfolios.

These short and long-term objectives have been integrated into our climate change strategy called Carbon Smart (resting on three pillars: Identification, Assessment and Management). New tools and frameworks are currently being developed to address climate risks and opportunities, in line with our Climate Neutrality objective. This is supported through our continuous exchange within the UN Net Zero Asset Owner Alliance, to nourish our expertise in engaging with asset managers and industry stakeholders toward real-world decarbonization, in accordance with the IPCC 1.5°C pathways.

In terms of climate risks identification & assessment, we map transition risks through various analyses: assessment of portfolio level carbon footprint per asset class, conduction climate scenario analysis at portfolio and sectoral level, stress testing of the financial implications under transition risk specifically (to capture the impact of regulatory changes such as carbon pricing, for instance).

We also conduct physical risk assessments of our investment portfolios according to different climate hazards and scenarios. We similarly stress test financial resilience of our investments through integrated regulatory stress tests, accounting for both transition and physical risks.

We strive to drive real world emissions reduction through anchoring our investments in the real economy and by engaging with asset managers and companies. We invest in climate friendly assets such as green bonds, certified green buildings, renewable infrastructures, clean tech and nature-based solutions. As per the end of 2020, our green investments amount to € 4.4bn, including €2.1bn in green bonds (of which part comes from a dedicated green bond mandate), €1.8bn in certified green buildings and €500mn in renewable energies.

Cautious of greenwashing risks, we further assess the greenness of the before-mentioned assets through additional indicators such as green share/technology mix & avoided emissions. As the world is going through this low-carbon transition, we are constantly looking to support innovation and diversification within our investments and are eager to take on a broad range of sustainability-related investment opportunities to support the resilience of our investments.

Besides climate, we are expanding our focus on biodiversity. The year 2021 will see the launch of the Task Force for Nature related Financial Disclosure (TNF). In preparation to this, we are developing methods to assess how our investments have an impact beyond carbon, notably in terms of soil erosion, loss of species, water impacts and air pollution. As part of our biodiversity strategy, we joined Finance for Tomorrow’s working group on Natural Capital and Biodiversity, signed the Finance for Biodiversity Pledge as well as partnered with a team of Sciences Po students to conduct biodiversity research.
**Reading guide/TCFD & Art.29 correspondences**

**The TCFD:** The Task Force on Climate-Related Financial Disclosures (TCFD) is a set of voluntary climate-related financial risk disclosures, published by the Financial Stability Board (FSB) in June 2017. Allianz France, as an investor, advocates the adoption of TCFD by companies in their non-financial reporting, as we believe that, with more consistent, reliable disclosures related to climate-based risks and opportunities on company level, markets will be better equipped to evaluate, price and manage those risks. Allianz France, as a company, believes that one’s actions shall correspond with one’s words, therefore, please find an overview of this report through TCFD recommendations below.

### TCFD Section | Recommended disclosure | Reference
---|---|---
**Governance** | a) Describe the board’s oversight of climate-related risks and opportunities | Sections 1.1-1.3
 | b) Describe management’s role in assessing and managing climate-related risks and opportunities | |
**Strategy** | a) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term | Sections 2.1-2.2, 3.1, 3.2, 6.1-6.3
 | b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy and financial planning | |
 | c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario | |
**Risk Management** | a) Describe the organization’s processes for identifying and assessing climate-related risks | Section 2.1, 3.2
 | b) Describe the organization’s processes for managing climate-related risks | |
 | c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management | |
**Metrics & Targets** | a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process | Section 2.1, 3.2
 | b) Disclose Scope1, Scope2, and, if appropriate, Scope3 GHG emissions, and the related risks | |
 | c) Describe the targets used by the organization to manage climate-related risks and performance against targets | |

**The Article 29:** The Article 29 marks the end of Art. 173 and is a part of the energy-climate law of 8.11.2019, which sets the objective of carbon neutrality for 2050 in France. This French energy-climate law is a revised version of the European Disclosure Regulation (common standard for European countries on the reporting of financial products) which will come into force in Europe in 2021. Article 29 is part of an international context that calls for a standardization of climate reporting based on the TCFD framework (convergence of the SASB, CDSB, IR, CDP, GRI reporting frameworks in 2020).

Article 29 strongly reinforces the transparency requirements for financial actors on their activities and objectives of alignment with the Paris agreements (through the use of quantified metrics).

### Art. 29 Section | Recommended disclosure | Reference
---|---|---
**Sections 1, 2 & 3 – ESG approach & resources** | • Section 1: Overall description of the ESG approach | Section 1.1, 12, 13, 3.1
 | • Section 2: Description of financial, human, and technical resources, actions to reinforce the team ESG expertise | |
 | • Section 3: ESG governance in entity structure, risk management and internal committees | |
**Section 4 – Company & AM engagement strategy** | • Scope of the companies targeted by the engagement strategy | Section 1.3, 5.1-5.3
 | • Description of the voting strategy, resolutions and results | |
 | • ESG criteria in AM selection | |
**Section 5 - Taxonomy and fossil fuels exposure** | • AUM aligned with the EU taxonomy | Section 3.2, 5.3
 | • AUM exposed to fossil fuels activities | |
**Sections 6 & 7 - Alignment with climate & biodiversity objectives** | • Section 6: Quantified objective within 10 years aligned with Paris ambition, description of methodology, limitations, use, impact on portfolios and monitoring actions | Sections 2.1, 2.2, 3.1, 3.2, 4.1-4.4
 | • Section 7: Description of alignment strategy on biodiversity objectives, contribution to biodiversity preservation and impacts, description of a biodiversity indicator | |
**Sections 8 & 9 – ESG integration in risk management** | • Section 8: ESG risks descriptions, segmentation, prioritisation and monitoring analysis of methodology, scenarios, physical & biodiversity risks | Section 2.1, 2.2, 3.1, 3.2, 4.1-4.4
 | • Section 9: Continuous improvement plan: identification of improvement opportunities and actions |
1. Allianz Group

1.1. ESG Board

Established in 2012, the Group ESG Board(3) is the highest governing body for sustainability-related issues. Its structure was revised last September and gathers from now on, 5 Allianz Group Board members, with the Group Chief Risk Officer as voting member and includes other Group representative(s) from various departments like the Group Communications and Reputations (GCORE), the Global Sustainability Office and Group Compliance as non-voting members. Representatives from other Group functions and operating entities are invited to participate on a regular basis to provide updates on sustainability issues directly to the Group ESG Board.

The Group ESG Board meets quarterly and is responsible for ensuring ESG integration across all business lines and operational entities (including Allianz in France) and core processes dealing with insurance and investment decisions. It also defines the overall ESG strategy and ambition of the Allianz Group. The Group ESG Board:

• acts as an advisor to the Board of Management of Allianz Group
• oversees the Group’s ESG Strategy and manages projects related to ESG activities in the Group
• determines the overall ambition level for ESG integration into investment assets
• determines the specific ESG requirements towards asset managers, which will be incorporated in the request for proposal in the asset manager selection process for new mandates
• is operatively supported by the GCORE team in all its activities
• approves the Engagement List.

In addition to the ESG Board, other committees steer sustainability topics within their sphere of influence, supported by ESG Task forces:

• the Group Finance and Risk Committee (GFRC) oversees risk management, including sustainability risks, and acts as an escalation point for the ESG Board
• the Group Underwriting Committee monitors the underwriting business including sustainability integration (from opportunity and risk standpoints)
• the Group Investment Committee implements the Group investment strategy, overseeing the deployment of ESG investments, framework, and guidelines for the AIM community.

(3) For more information on ESG & climate governance structure at Allianz, see our Group Sustainability Report 2020 page 20
1.2. Global Sustainability Function

Until 31 December 2020, the Group Corporate Responsibility (CR) function was responsible for managing the strategic framework that drives group-wide sustainability activities. The CR function was part of Group Communications and Corporate Responsibility, under the responsibility of the CEO’s division of Allianz Group. In January 2021, responsibility for Allianz’s ESG agenda shifted to a new Global Sustainability function, headed by a Chief Sustainability Officer (CSO), who reports to the Group ESG Board. The move to a standalone sustainability function demonstrates the increasing importance of sustainability topics to Allianz.

Global Sustainability has the ambition to support Allianz operating entities to effectively integrate the Group’s strategic sustainability approach and policies into their business processes. Its scope includes sustainability governance, external reporting, and rating requirements.

The Global Sustainability function works with an expansive network of sustainability experts located in Allianz’s operating entities globally, who support the implementation of the group-wide sustainability approach. They include:

- ESG Leads responsible for assessing ESG-related transactions
- Local Environmental Officers responsible for managing the environmental footprint of our operations
- Non-Financial Data Coordinators responsible for sustainability reporting
- Corporate Citizenship/Societal Impact Coordinators who drive social Impact activities and partnerships

1.3. ESG Task Forces

To support the cross functional implementation of ESG within all the business lines, ESG task forces are set up to develop projects and proposals to support and facilitate ESG integration in global operations and core processes of Allianz.

ESG Task Forces made up of ESG experts and representatives of relevant local operating entities, global lines and Group functions were set up in 2019. Each taskforce is sponsored by senior executives from different functions and quarterly meetings between sponsors take place to ensure alignment between the different task forces.

There are currently 9 ESG task forces and the main ones related to investment management are:

- Corporate Responsibility Disclosures
- ESG integration in investments
- sustainability ratings
- societal Impact
- Sustainable Finance Regulation

1.4. Allianz Investment Management (AIM) - ESG Community

AIM, led by the Investment Management Board’s members, is accountable for all investment activities of the Allianz Group and oversees the implementation of ESG across the investment value chain all its assets portfolio. The AIM unit of the Allianz French entity possesses several areas of expertise: Investment Strategy & Portfolios Management, Asset Liabilities Management & Product Development, Finance, Payment & Operations, and finally, ESG Innovation & Governance.

Group AIM (based in Munich) and local AIM units (Stuttgart, Paris, Milan, Minneapolis, Singapore, FGE) collaborate and exchange on the various investment activities and projects animating the AIM ecosystem. The AIM ESG Community is a project-based community of Allianz in which relevant ESG contacts at multiple levels of participation inside/outside AIM interact regularly. The AIM ESG Paris team is part of and playing an active role in this Global community.

The community is led as per today, by ESG representatives from the Group, the French and the Italian ESG teams to:

- exchange on investment-specific needs and best practices among operating entities regarding sustainability
- enhance ESG approaches by combining the expertise of investment teams and that of ESG teams
- coordinate between the different operating entities in developing ESG related investment projects
Allianz France

2.1. We secure your Future

During the past year, Allianz Group strengthened its global sustainability approach and evolved its strategy along the group-wide purpose “We secure your future”. This purpose embraces a new phase of sustainability management where impact and action are at the forefront. We continue to strive towards leadership and shaping the global sustainability agenda. This means improving our business models to integrate sustainability parameters such as our climate neutrality commitment in our daily activities.

Allianz France vision for 2025 is fully aligned with the Allianz Group strategy and purpose. We secure your future. In addition, Allianz France has established a five-pillar ambition to embody its own purpose statement - we are dedicated to being a human, global, solid, committed and a market-shaper company. The pillar “Committed” encompasses the global ambitions driving Allianz France sustainability vision, with regards to the low carbon transition and its societal impacts. Each ambition corresponds to one piece of Allianz France's purpose: We (human) Secure (global and solid) your Future (committed and market shaper).

With Allianz France 2025, we want to strengthen a more human company, internally and externally for our clients, which will be able to take full advantage of the global dimension of the group to which it belongs. A company solidly rooted in what has made its strength and favoured its resilience in the past: its technical and financial excellence. Allianz France also aims for a responsible and committed company, resolutely involved in a more united and sustainable world, in which it can act on the following dimensions:

- HUMAN
- GLOBAL
- SOLID
- MARKET SHAPER
- COMMITTED

This network helps to share best practices and scale up positive impacts across the organization. For instance, since the beginning of 2021, the Group AIM ESG team coordinate virtual Allianz ESG Roundtables for one week, with the participation of the entire AIM ESG Community, Global Sustainability Office and ESG Task Forces. Each session is dedicated to a special set of ESG topics, among them exchanges on Net-Zero Asset Owner Alliance Targets, ESG Data discussions and limits, Climate Target implementation for different asset classes and Regulatory updates, ESG Investment Risks and Opportunities as well as ESG Communication and ESG Strategies.

**Figure 1 |** ESG organization Allianz Group level – example of the French Operating Entity

**Figure 2 |** Integration of Sustainability objectives in the Allianz France 2025 strategy

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(4) Responsible for i) Investment Management, ESG (Chair); i) Asset Management, US Life Insurance; ii) Operations, Allianz Services iv) Global Insurance Lines & Anglo Markets, Reinsurance, Middle East, Africa
(5) Group Reputation and Communication

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The Committed dimension aims at reinforcing sustainability in our business model, fuelled by our engagement in climate neutrality, social inclusion, and governance. Allianz France is committed to:

- be a leader in understanding and controlling its environmental and societal impact,
- foster the economic transition toward a low carbon economy,
- contribute to regional inclusion and strengthen our local engagement and
- continue to promote risk management, activities resiliency and people protection
2.2. ESG at Allianz IM Paris

The Allianz Investment Management contribution to the group efforts and purpose can be characterized as “together we create sustainable investment solutions”. In the direction of Allianz France strategy, the AIM ESG Paris team sees its mission shaped around a 4C framework: Conviction, Change, Communication, Credibility.

At Allianz we place our clients at the center of our innovation process. Recent studies and reports show the increasing demand for and willingness to learn about sustainability from our clients.

2.2.1. Conviction – the pursuit of Inclusive and effective ESG governance structure

Given that we consider governance to be the first aspect that allows companies to adopt a sustainable approach towards social and environmental issues we, at Allianz, have put in place an ESG governance process positioned at the heart of our investment activities.

Over the past years, ESG has become a central element of investment processes across Allianz Group, requiring an effective and transparent ESG governance structure. As described in the "Allianz Group" section, the ESG board oversees all key ESG activities, working directly with ESG taskforces and the Global Sustainability Office. This makes up the Allianz ESG Community, a large pool of engaged collaborators working on implementing ESG practices into our daily activities and operations.

At Allianz France, within the investment unit, the dedicated ESG team takes responsibility for all sustainability-related investment topics, reporting directly to the Chief Investment Officer (member of Allianz France Board of Management). This enables the team to integrate and lead ESG projects across the entire Investment value chain, in collaboration with Investment, Risk Monitoring, Product Development, ALM & Compliance teams. As illustrated on the organisation chart below, the ESG team remains an independent expertise at Allianz France, acting as the interface not only for ESG assessment of our existing portfolio and new investment opportunities, but also overseeing all ESG related topics among a wide range of stakeholders. The ESG, Innovation & Governance team at Allianz France answers to the following responsibilities:

• lead ESG & innovation projects for the French OE assets portfolio as well as actively contribute to the AIM ESG community, notably on portfolio decarbonization efforts, biodiversity, the implementation of the EU Taxonomy and impact investing
• screen, analyze and monitor the investment portfolios from an ESG and Innovation point of view: the ESG team is in charge of internal and external reporting (art.173) and is the main contact point for public institution like the French regulators, the French Insurance Federation and other market initiatives on sustainable finance topics
• ensure compliance with laws, regulations, and internal policies
• liaise with any internal/external stakeholders on ESG topics

The ESG Innovation and Governance team overviews ESG integration into Allianz France investment activities, while the integration of sustainability within Allianz is under the responsibility of the Corporate Sustainability team.

Figure 3 | CSR and ESG in investments functions at Allianz France
In 2020 an ESG team representative has been appointed to attend the Local Investment Management Committee in order to ensure that ESG integration into all investment decisions for the French portfolio is respected and consistent with the investment value chain. This committee is led by the local CIO – who remains in charge of ensuring that:

- all mandated Asset Managers have an appropriate ESG approach and apply it to their managed Investment Assets
- ESG-related topics are integrated in the Asset Manager selection and re-view process for all mandates.
- ESG-specific requirements are included in all Asset Manager mandates and guidelines.

The Local Investment Committee is supported by the ESG team to provide information for ESG related inquiries and ensure inclusion of ESG requirements into the ESG Guidelines for Asset Managers. The ESG Exclusion List is monitored at the Group level, updated by the Risk team and revised every trimester.

2.2.2. Change – ESG embedded investment activity shapes the new landscape

Through our commitment to making our investment activities carbon neutral by 2050, the need to change the frameworks for analysis, investment, risk and performance monitoring and product development is becoming more evident than ever. At Allianz France, the cross-functional integration of ESG expertise within the investment functions is a key issue that has been considerably strengthened in 2020. For each theme, each project, each investment idea or new product, we now have a strategic challenge: how consistent are we with the goal of carbon neutrality by 2050?

This ambition calls for the mobilization and collaboration of all teams to redefine the way we run our daily business. At Allianz France, we are working to integrate an extra-financial analysis that considers ESG risks and opportunities. Carbon neutrality is a first step towards building a more resilient portfolio to meet the challenges of the ecological transition, beyond the consideration of ESG risks. We also seek to anticipate investments’ positive or negative impact on the economy, using forward-looking indicators where possible, and at least, qualitative and quantitative metrics developed in house - to track, report and verify portfolio level ESG performance.

In addition to that, from a top-down perspective, we measure how ESG-climate risks may alter the strategic asset allocation. In other words, we build our understanding and expertise toward the monitoring of climate and ESG risks in different scenarios, across the different asset classes. On the other hand, we continuously seek to increase exposure to sustainable investment themes to improve both portfolio performance and portfolio resilience, such as climate positive solutions, biodiversity protection, societal impact and local impact.

From a bottom-up perspective, we monitor ESG criteria for our investment strategies, selection of asset managers and mandate review. We track ESG risk exposure and seek to influence issuers’ ESG performance by voting and corporate engagement with focus on ESG-climate risks.

We work with research organizations and think tanks on sustainability issues to help build a knowledgeable ESG expertise, in tune with the latest developments and discussions in the sustainable finance sphere.
Additionally, in 2020, on the Unit Linked (UL) offer, Allianz France explored thematic investment opportunities on sustainability, supporting companies in specific sectors or cross sectors. These sustainable thematic investments are a first step toward giving our clients opportunities to invest with a purpose.

In 2020, in parallel of exploring innovative sustainable investment themes for the UL selection, AIM Paris reinforced its ESG screening process for the UL universe. The ESG assessment tool below illustrates the main criteria reviewed to analyze the ESG approach of our UL universe, allowing us to capture both the general ESG qualification of fund managers as well as the distinct ESG considerations which they factor in during the construction of specific funds and across their corresponding fund management activities.

This process allows us to obtain a comparable score across the funds we invest in and also help us to align ESG standards applied to our portfolio and to the UL universe, so that our sustainability convictions are mirrored in both selection processes. This ensures our clients that the investment universe offered through our products is analyzed according to an harmonized Allianz ESG framework.

**Figure 5 | Fund ESG Assessment Framework**

<table>
<thead>
<tr>
<th>Fund level ESG strategy</th>
<th>Asset Manager ESG capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Funds’ ESG objectives</td>
<td>• Responsible Investment Policy</td>
</tr>
<tr>
<td>• Negative screening</td>
<td>• PRI disclosure score</td>
</tr>
<tr>
<td>• ESG assessment methodology</td>
<td>• ESG expertise &amp; governance</td>
</tr>
<tr>
<td>• ESG performance and impact KPIs</td>
<td>• ESG engagement</td>
</tr>
<tr>
<td>• KPIs monitoring</td>
<td>• Coal &amp; Fossil Fuels exclusion commitment</td>
</tr>
<tr>
<td>• ESG rating</td>
<td>Source: Allianz France</td>
</tr>
</tbody>
</table>

### 2.2.3. Communication – inform, convince, motivate, and seek mutual understanding

At Allianz France, we are keen to exchange and contribute to the integration of sustainability issues, first within our industry, but more importantly with the ambition to anchor the ecological transition in the real economy; walking the talk with all relevant and willing stakeholders. To do so, we seek to reach and discuss with a diverse ecosystem of actors on the following issues:

**• Strive to be sustainability leader**

Externally, we strive to share sustainability knowledge and practices with peers and NGOs (e.g. member of the ESG-climate committee at the French Insurance Federation). We also seek to discuss our sustainability ambitions at public events and partnerships, to inspire our community. Similarly, we regularly share with media and industry stakeholders our latest ESG policies and successes.

Internally, we put forth efforts on internal capacity building (e.g. regular ESG newsletter and workshops), notably through the ESG community. We also regularly interact with clients on ESG conviction and strategy. We always try to exchange with clients, in order to understand their expectations in terms of sustainable development, so that we can improve/adapt our products to their needs.

Our ambition as a sustainable investor is to support initiatives enabling institutional investors to join forces and speak with a unified voice on industry issues, such as engagement with industrial majors or on policy advocacy. We are willing to walk the talk with our peers, which is also why we are calling for Asset Owners to get on board with the Net Zero Asset Owners Alliance, as well as we encourage Asset Managers and Insurers to join their respective Net Zero Alliances.

**• Acknowledgment and exchange on current issues**

Data disclosure is a key element in responsible investment. Without reliable, relevant and objective data, it is impossible to evaluate and monitor sustainability strategies. We advocate for better disclosure among investee companies which is one important objective for our engagement taskforce in order to foster transparency and quality of available sustainability related databases.

In addition, we support international initiatives to standardize reporting on sustainability issues.
In this regard, we welcome the French government’s initiative to promote greater transparency in investment through Article 29 of the Climate and Energy Law.

**Advocate for efficient policy actions**

We actively participate in ESG-relevant public policy development. For example, Allianz participated in the European Commission’s consultation on sustainable finance strategy launched in July 2020. Building on the 2018 Action Plan on financing sustainable growth, the renewed sustainable finance strategy will provide a roadmap with new actions to increase private investment in sustainable projects and activities to support the different actions set out in the European Green Deal and to manage and integrate climate and environmental risks into our financial system.

Allianz has also joined the **European Alliance for a Green Recovery** in 2020. On the initiative of Pascal Canfin, chairman of the European Parliament’s Environment Committee, this alliance brings together 80 ministers, MEPs, business leaders, NGOs and trade unions. The alliance calls for green stimulus investment packages to serve as «gas pedals of the transition to climate neutrality and healthy ecosystems».

In 2020, Allianz France joined the **Sustainable Finance Observatory**, a French initiative supported by a consortium from the financial industry (investors associations, NGOs, think tanks and regulators) led by ADEME, and supported by the French ministry of the ecological transition. The sustainable finance observatory has the ambition to highlight on the impact of the financial sector on the real economy. The objective is to contribute to the understanding of sustainability issues (starting with climate change), tracking and evaluation of the progressive transformation of the financial sector to support the ecological transition.

**Communication with stakeholders**

In 2020, Allianz France realized a survey with our client’s community to assess their appetite toward various sustainability themes, whose results show significative interest for these types of investments.

We observe that our clients are, asking more and more for increased transparency on the saving solutions they invest in and want the latter to contribute tackling, or at least have an impact, on sustainability issues. This goes beyond climate mitigation. It’s about asking financial institutions, insurers, and asset owners to take into consideration the societal impacts of a more sustainable world.

**Figure 6** | Sustainable Investment themes

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>83%</td>
</tr>
<tr>
<td>Energy Transition</td>
<td>81%</td>
</tr>
<tr>
<td>Financing Real Economy</td>
<td>74%</td>
</tr>
<tr>
<td>Education</td>
<td>72%</td>
</tr>
<tr>
<td>Sustainable Development</td>
<td>70%</td>
</tr>
<tr>
<td>Social</td>
<td>61%</td>
</tr>
</tbody>
</table>

(6) Asset Owner Alliance, “Thirty of the world’s largest investors set unprecedented 5-year portfolio decarbonisation targets”, October 2020

"Reaching net-zero is not simply reducing emissions and carrying on with the business models of today. There are profound changes and opportunities that will come from the net-zero economy, we see new business opportunities and strong wins for those who are ready to lead”

**Gunther Thallinger**
Chairperson of the Group ESG Board
Allianz SE, Chairperson of the U.N. Net-Zero Asset Owner Alliance

(6) Asset Owner Alliance, “Thirty of the world’s largest investors set unprecedented 5-year portfolio decarbonisation targets”, October 2020
2.2.4. Credibility – Build a science based metric compass to steer as an asset owner

Allianz’s sustainability objectives take into consideration three key aspects to ensure consistency between the actions we take, and the issues we identify. Along our journey as sustainable investor, we recognized the following main principles of practice:

- **A scientific rationale recognized and supported by regulatory authorities**

Over the last few decades, the scientific community has refined its understanding of the impacts of an already internationally recognized acknowledgement of climate change. In 1988, the creation of the Intergovernmental Panel on Climate Change (IPCC), by the UN Environment and the World Meteorological Organization (WMO), attests to an increasing concern regarding a known but not well measured reality. The IPCC becomes responsible for providing detailed assessments of current knowledge on climate change, in all areas (scientific, technical, social, economic).

In 2013, the IPCC confirmed the primary role of human activities in climate change in its fifth assessment report. In October 2018, the IPCC published a special report on the magnitude of impacts related to climate change resulting from the difference between a global warming of 2°C or 1.5°C. This report was published three years after the Paris Agreements, initially setting the global ambition to keep global warming well below 2°C to ideally aim for 1.5°C. This illustrates once again the urgency of climate change and calls for an ambitious mobilization of actors to curb global warming not at 2°C, but at 1.5°C.

The IPCC report is now used as a scientific reference to define the emissions trajectory within the framework of the Net Zero Asset Owner Alliance. Indeed, to increase the likelihood of limiting warming to 1.5°C, the report indicates the need to achieve a net zero-carbon footprint around 2050 for anthropogenic emissions, and to reduce emissions by 50% every 10 years. Allianz has made a commitment in this regard, setting a 25% reduction in emissions from its equity, bond and real estate portfolios for an initial 5-year cycle (2020-2025).

(6) On Equity, Corporate Bonds and Real Estate portfolios
For more information on ESG & climate governance structure at Allianz, see our Group Sustainability Report 2020 page 20
Allianz Group joined in 2018 the Energy Efficiency Financial Institutions Group (EEFIG), established by the European Commission Directorate-General for Energy (DG Energy) and United Nations Environment Program Finance Initiative (UNEP FI). In February 2020, Allianz France joined two Working Groups of EEFIG, which aim at providing policy recommendations to the European Commission through the identification of the multiple benefits of promoting energy efficiency in the real estate and industries. The main goal sought by Allianz is to promote the acceleration of building renovation waves and supporting EU institutions in the implementation of solutions that could lead to decarbonizing the infrastructure sector.
For more details, please see the section engagement in section 5.1-5.3.
• A set of international frameworks to help guiding the assessment of both financial and sustainable performance

To monitor the integration of ESG dimensions into the analysis, Allianz bases its approach on the recommendations illustrated by international standards:

The PRI ESG Integration framework, with the participation of the CFA Institute, provides institutional investors with a comprehensive three-level ESG integration framework: a first level of ESG research that informs, among other elements, exclusion or watch lists, voting activities, engagement, as well as ESG risk and opportunity analyses for the portfolio. A second level of portfolio financial assessment covers credit analysis, valuation models, and financial forecasts. A third level of aggregation of financial and extra-financial indicators finally informs asset allocation, risk management and portfolio construction. At Allianz France, our ESG approach, which reconciles financial and extra-financial performance, as well as our Carbon Smart strategy of «identification, evaluation and management» are inspired by the PRI recommendations.

**Figure 7 | TCFD Framework**

The TCFD report from 2017 defining recommendations regarding climate related disclosure of financial institutions, on 4 pillars: governance, strategy, risk management and metrics & targets. It supports financial institutions in understanding and mapping risks and opportunities faced by the financial industry on climate change.

At Allianz, we work toward the integration of TCFD recommendations across all business units through the ESG community and ESG task forces.

**Figure 8 | Double Materiality chart**

**Double materiality**

2020 has witnessed the end of the debate on the definition of materiality(7). The concept of double materiality was recognized by the industry experts, the Global Reporting Initiative (GRI) and the Sustainability Accounting Standard Board (SASB). It defines double materiality as understanding and disclosing, at business level, not only financially material topics that influence enterprise value, but also topics material to the economy, environment, and people.

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On the one hand, a company identifies and assesses those **sustainability issues that influence its enterprise value**. We can also call this «financial materiality» or «impacts inwards». On the other hand, a company identifies and assesses impacts on the economy, environment, and people. This refers to «environmental and social materiality» or «impacts outwards».

Allianz France supports the announcement of the 5 lead global organizations, IIRC, GRI, SASB, CDSB and CDP, on developing financial and non-financial reporting guidance for companies, to establish work areas to progress towards more integrated and transparent published information. Allianz also welcomes the consultation paper on sustainability reporting from the IFRS Foundation as well as the latest report of the European Financial Reporting Advisory Group (EFRAG), both exploring and supporting the integration of double materiality into IFRS standards.

• **The socioeconomic context in which we operate**

The consequences of the health crisis experienced by our societies have called for a strong capacity to adapt at all levels. Allianz France has set as a priority to reinforce its adaptability and resiliency capacity to face extreme events, capitalizing on the 2020 covid-19 experience.

Throughout this crisis, we have fought **against isolation** and providing the best possible working conditions for our employees. People face multiple stress factors from the pandemic: fears and anxieties about sickness and loss of income, adaptation to tertiary sector closures, separation from family and friends, and the risks and traumas faced by frontline workers and other essential employees.

These efforts to adapt working and living conditions, along with ensuring the resilience of our activities and teams’ coordination in this period has been a witness of the criticality for a company to not neglect the social considerations within ESG integration across its business model. While the social thematic might have been sometimes overshadowed by environment and governance aspects, the covid-19 crisis clearly revealed its importance.

We believe that this crisis will support the momentum toward the promotion of comprehensive ESG integration in favor of companies capable of **demonstrating solid bases** on the three E, S and G pillars versus less balanced profiles.

As universal asset owner, managing large & diversified holdings representative of global capital markets, the financial returns of our portfolios depend not only just on the performance of individual investments but also on the **long-term stability** and health of the socio-economy, captured by ESG indicators.

As a sustainable investor, we believe that defining our investment and business development approaches with a systematic ESG lens is critical to ensure the **resilience** of our clients' assets. It is also continuously pushing Allianz to develop innovative solutions matching both **financial and extra financial** expectations. Through the implementation of the **4C framework**: conviction, change, communication, credibility - we want to be both a solution provider and a solution facilitator for a sustainable future.
3. ESG Investment Framework at Allianz

We consider ESG criteria at three levels applicable to our entire investment portfolio. Each form is integrated into and builds upon the previous one, as shown below:

**Figure 9 | Three-forms ESG integration**

### 3.1. ESG exclusions

In 2020, Allianz has published its ESG Integration Framework, a guideline document defining and aligning ESG processes across Allianz entities. This paper serves as a reference point for all ESG related issues and will evolve to reflect the latest best practices Allianz seeks to integrate into its ESG approach. In addition to this document, the ESG Functional rules framework on investments sets the rules, principles, governance and process for the integration and application of ESG factors within the investment portfolios.

The first layer of our ESG integration is the exclusion of industries associated with ESG negative impacts. The objective behind our exclusion policy is to signal to markets our position of not supporting businesses that are no longer in line with our convictions, and at a larger scale, that prevent our society from transitioning toward a more sustainable model.

**Figure 10 | Allianz ESG Integration Framework**

The Allianz Exclusion Lists are updated regularly based on data from external service providers and in-house research. Exclusions are made at sector, country, and company levels in the following cases:

1. **Exclusion and restriction of certain sectors**, such as companies producing or associated with controversial weapons.
2. **Exclusion of companies involved in coal-based business models**: Since 2015, we have not financed coal-based business models. In 2018, we introduced a relative threshold of 30% of revenues from coal-based extraction or coal-based power generation. In addition, we do not invest in companies having to retire more than 50% of their generation capacities in the next ten years to be in line with a 2°C target. We plan to lower the threshold accordingly with the scientific recommendations to support the economy toward a 1.5°C pathway. Therefore, this threshold is expected to decrease to 25% in 2023, and 15% in 2026, to reach 0% in 2040.
3. **Unconventional oils business models**: in 2020 we introduced an additional threshold on 20% of revenues from unconventional oils (oil shales) based business models.

4. **Restriction of certain sovereign bonds**: we also restrict investments in sovereign bonds from countries associated with severe human rights violations and significant issues managing ESG concerns.

5. **Exclusion generated from the engagement workstream** (8): as part of the ESG scoring and engagement processes, single issuers below the ESG threshold and where engagement has not been successful may be excluded after 6 weeks if:
   - answers to engagement questions are consistently insufficient, or
   - the company shows no willingness to improve its ESG performance, or
   - the company does not respond to any of Allianz’s engagement communications over the annual cycle.

**Figure 11** | Allianz’s coal exit pathway versus thermal coal share in power sector in leading 1.5°C scenarios.

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3.2. **ESG Integration**

As an Asset Owner, Allianz integrates ESG considerations systematically in all investment processes and asset classes. ESG investment approaches vary according to the asset type (listed or non-listed) and the kind of investment made (open-ended funds or mandates). Additionally, it requires not only the assessment of the investment strategy, but also the asset managers’ maturity on the ESG topic. We ensure systematic ESG integration through:

- ESG scoring for listed assets mandates
- ESG referral processes for non-listed assets
- Asset Managers selection: review of ESG framework and maturity

**Listed assets mandates - ESG scoring**

ESG scoring at Allianz France is an approach developed by the Allianz Group ESG Office and Allianz Investment Management Group (AIM SE). The methodology is used to systematically evaluate and manage material ESG risks for listed assets within our fixed-income and equity mandates and dedicated funds.

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(8) For more details, please see the section engagement in chapter 2.2.
The Allianz France ESG scoring is based on the ESG Weighted Average Key Issue (WAKI) score provided by MSCI ESG Research over their universe of rated issuers. The MSCI scoring assesses issuer sustainability profile over 35 Key ESG issues described in the table below:

<table>
<thead>
<tr>
<th>3 Pillars</th>
<th>10 Themes</th>
<th>35 ESG Key Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Climate Change</td>
<td>Carbon Emissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product Carbon Footprint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financing Environmental Impact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Climate Change Vulnerability</td>
</tr>
<tr>
<td>Natural Capital</td>
<td>Water Stress</td>
<td>Raw Material Sourcing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biodiversity &amp; Land Use</td>
</tr>
<tr>
<td>Pollution &amp; Waste</td>
<td>Toxic Emissions &amp; Waste</td>
<td>Electronic Waste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packaging Material &amp; Waste</td>
</tr>
<tr>
<td>Environmental Opportunities</td>
<td>Opportunities in Clean Tech</td>
<td>Opportunities in Renewable Energy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opportunities in Green Building</td>
</tr>
<tr>
<td>Social</td>
<td>Human Capital</td>
<td>Labor Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health &amp; Safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Human Capital Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supply Chain Labor Standards</td>
</tr>
<tr>
<td>Product Liability</td>
<td>Product Safety &amp; Quality</td>
<td>Privacy &amp; Data Security</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemical Safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Responsible Investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial Product Safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health &amp; Demographic Risk</td>
</tr>
<tr>
<td>Stakeholder Opposition</td>
<td>Controversial Sourcing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community Relations</td>
</tr>
<tr>
<td>Social Opportunities</td>
<td>Access to Communications</td>
<td>Access to Health Care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Access to Finance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opportunities in Nutrition &amp; Health</td>
</tr>
<tr>
<td>Governance</td>
<td>Corporate Governance</td>
<td>Ownership &amp; Control Board</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pay Accounting</td>
</tr>
<tr>
<td></td>
<td>Corporate Behavior</td>
<td>Business Ethics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tax Transparency</td>
</tr>
</tbody>
</table>

We have set ESG score thresholds to monitor the sustainability profile of our investment portfolio and identify companies with low ESG performance. The threshold is then set at the bottom 10 percent in ESG performance for each issuer regional group. These regional groups are defined by MSCI, and correspond to geographic zones: Europe, North America, Asia-Pacific and Emerging Markets. For sovereign issuers, the MSCI ESG Government score is used, with a relative threshold set at the bottom 10% of the lowest scoring sovereign.

**Taking action**

Currently, below threshold issuers are the focus of our discussions with asset managers. Three types of actions are generally defined: immediate *engagement*, upward *revision* and/or *divestment*.

Immediate divestment is conducted on a limited basis, only when we officially recognize the failure of our engagement efforts. Then, as a result we require our asset managers to divest from the position within 6 weeks for equity instruments and instruct them to classify the company bonds in “run-off”, with no additional investment on the fixed income portfolio.

However, as our objective is to pursue real-world impact, our first action is to engage with the company to influence its behaviors toward more sustainable practices. For details, see the section engagement on the following page.

Upward revision applies to cases where asset managers offer sufficient proof to show that some issuer’s specific positive information is not fully/accurately reflected in the scoring tool used by Allianz France, as a result of their active engagement with the underlying issuer.

(9) The Governance Pillar carries weight in the ESG Rating model for all companies.
• Non-listed assets - ESG referral process
All potentially sensitive businesses\(^{(10)}\) are screened, on a transaction-by-transaction basis, either directly or indirectly \(^{(11)}\) by Allianz France. We apply Allianz Group Sensitive Business Guidelines\(^{(12)}\) to help detecting ESG risks and to investigate whether these risks are sufficiently managed and addressed by potential investees. If necessary, an ESG-critical transaction is referred to Group ESG office for a final ESG assessment.
Based on the outcome of this assessment, we take the decision either to proceed with a transaction, to proceed and require the mitigation and management of ESG risks, or to decline a transaction on ESG grounds.

\(\text{Figure 12 | ESG integration across asset classes}\)

\(\text{Pre-defined exclusion applied to investment portfolio}\)

- Listed assets
  - Above threshold issuers > OK
  - Below threshold issuers > Quarterly delivery by asset managers (comply or explain)
  - Within SBA (Sensitive Business Areas) and/or (Sensitive Countries List) > Bi-annual ESG deep dive meeting with asset managers > Action defined
- Non-listed assets
  - Out of SBA and SCL > OK

\(\text{ESG SCORING}\)

- Above threshold issuers > OK
- Below threshold issuers > Quarterly delivery by asset managers (comply or explain)
- Within SBA (Sensitive Business Areas) and/or (Sensitive Countries List) > Bi-annual ESG deep dive meeting with asset managers > Action defined
- Out of SBA and SCL > OK

\(\text{ESG REFERRAL PROCESS}\)

• ESG in Asset Manager selection
All our asset managers adhere to their own ESG policies which fulfill the ESG requirements of Allianz and are signatories of PRI (Principles for Responsible Investment).
Enhanced in 2020, our ESG assessment framework captures both the general ESG qualification of fund managers as well as the distinct ESG considerations which they factor in during the construction of specific funds and across their corresponding fund management activities. Moving forward, we are looking into shaping it to match our sustainability expectations on ESG activities in which we have taken public commitments/leading positions such as climate decarbonization, biodiversity preservation and real-economy support.

• Voting activities – advancing active ownership
ESG criteria are well-integrated into Allianz France’s voting policy, serving as a guideline for our own voting practice and as a reference for our asset managers’ proxy voting. The consistency of asset managers’ voting policy with that of Allianz France is guaranteed in the asset manager selection process, and we review the reporting on proxy voting activity performed on Allianz France dedicated funds on a regular basis.
A small share of our investment portfolio is composed by listed equity, where we exercise our shareholder rights and vote directly or indirectly, through Allianz’s in-house Asset Manager (AGI) for all dedicated equity funds, at dedicated shareholders’ Annual General Meetings (AGMs). In case of delegated voting, we review the voting policies of asset managers to ensure that they are consistent with our views and values, as well as for the appropriate consideration of ESG topics.

\(\text{(10) “Sensitive” means within Allianz predefined perimeter (sensitive business areas and sensitive countries list), for more details, see }\)\(\text{https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/sustainability/documents/Allianz_ESG_Integration_Framework.pdf}\)
\(\text{(11) “Indirectly” means that the ESG analyses are done by asset managers accredited by Allianz Group as having the screening credentials. Allianz France checks these analyses on a regular basis.}\)
\(\text{(12) For details, see }\)\(\text{https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/sustainability/documents/Allianz_ESG_Integration_Framework.pdf}\)
3.3. Impact Investing

The third form of responsible investment is impact investing, where the consideration of ESG criteria leads to measurable positive environmental and/or social impacts along with market-rate returns.

At Allianz France, we have structured our impact investing strategy to allocate part of our portfolio into investment opportunities that constitute a positive contribution to the real economy as well as the environment. Our strategy is supported by internal assessment tools that allow us to ensure that the impact funds in which we invest are managed properly and in line with our goals. Prior to each investment, we verify this alignment and, in some cases, build strategies along with asset managers.

Our guidelines are inspired by the definition of the Global Impact Investment Network (GIIN) and Operating Principles for Impact Management (OPIM), to consider impact investing as an investment strategy with a clear intention to improve social, environmental, and societal issues, while ensuring a positive financial return. As a rule, these impacts must be measurable (KPIs) and transparent (through periodic reporting).

Our impact investing strategy is based on three required steps: Intentionality, Measurability and Follow up.

![Impact Investing Standards](image)

**Figure 13 | Impact Investing Standards**

**Intentionality:** Considering the intention to improve societal issues consists of evaluating the targets to be achieved through our investment practices. These can be linked to environmental objectives, including climate change mitigation, biodiversity protection, improving air quality, among others. On the social side, we seek objectives linked to access to education, health, food, clean energy and housing. In this area, we focus our efforts on beneficiaries most in need of these impacts (populations in remote areas, low-income families, minorities, people with disabilities and/or with lower education, etc.). These priority objectives form the basis of our screening of impact investment opportunities, ensuring that given impact objectives are consistent with our impact investing strategy.

While we are attentive regarding the question of additionality, we consistently base our investment decisions on the intentionality and prospects of adding positive value in terms of social and environmental impact. We also consider that the greater the need, the higher the impact. For instance, promoting renewables in countries with an already high adoption rate and a low-carbon energy mix will have a smaller impact than substituting the most polluting energies with renewables. In both cases, there is a positive impact, but we can quantify the difference by estimating CO₂ emissions avoided. This leads us to the next pillar of our strategy: measurability.

**Measurability:** We seek key performance indicators that are measurable, clear and comparable over time. The KPIs allow us to track the real impact of our investments and can range from environmental (e.g. CO₂ emissions avoided, hectares of land restored, air quality improvement, among others) to social (e.g. number of schools or hospitals built, number of new beneficiaries with access to clean energy, social housing projects delivered, etc).

Measurability is also about the precision of the KPIs used to track impact. These indicators need to reflect an overall improvement resulting from the activities of investee companies. By experience, environmental KPIs, even when estimated, have a more precise nature. We can either know precisely how much an ecosystem was improved, or how many tons of CO₂ emissions are avoided (when compared to the benchmark). When it comes to social indicators, we face less precise types of impact measurements, focused more on outputs (e.g. a building) and outcomes (e.g. increase in number of beneficiaries of a given service). As the impact relies on what this building and interactions do for beneficiaries, there are limits to quantitatively capturing the final impact of the investment made. However, despite these challenges, we can consider the Theory of Change as a "theory of how an initiative leads to desired results", specifying the underlying logic, assumptions, influences, causal linkages and expected outputs and outcomes of a given program or project (Morra Imas, L. and R. Rist. The Road to Results: Designing and Conducting Effective Development Evaluations, World Bank, 2009: https://openknowledge.worldbank.org/bitstream/handle/10986/2699/526780PUB0Road101Official0Use0Only1.pdf?sequence=1)
Change of a given project to estimate impact expectations through reasonable assumptions regarding a given problem.

**Follow up & Reporting:** After investments are made, we monitor the performance of each project category, considering both positive and negative impacts, to assess whether the achieved impacts met our expectations and where our funding became more (or less) impactful. This is an important step to ensure that we learn from our investment practices and to provide lessons for screening future impact investment projects and funds. Therefore, the presence of continuous KPI monitoring and end-of-investment impact reporting is something we pay close attention to when screening potential impact investments.

When investing in impact funds, we furthermore favor when processes are put in place that measure and monitor both the impact performance of individual issuers in the fund as well as the impact performance of the portfolio as a whole, acknowledging that impact may vary across individual investments in the portfolio.

With the purpose of screening funds in a holistic and consistent manner, a dedicated **Impact Assessment Tool** has been developed by Allianz France and implemented to review and classify impact funds.

Using our three-form ESG approach, we mainstream ESG within Allianz France investment management: doing more ESG, doing better ESG. In other words, we deepen our understanding of ESG topics and, challenges and enhance our ESG practices over time.
Our Sustainability Ambitions

In accordance with the indications of the International Panel on Climate Change, and as a founding member of the Net Zero Asset Owner Alliance, Allianz Group and Allianz France aim at achieving net-zero by 2050. Our way to get there is underpinned by the desire to support real economy decarbonisation, by engaging with companies on a regular basis to drive effective results. We take investment decisions accounting for GHG emissions-related and biodiversity concerns, to drive positive change supporting local economies. Beyond our ambitious goals, we engage with companies through sustainability stewardship practices and support the deployment of detailed climate-related financial disclosure for all companies.

1. Climate Neutrality & Net-Zero targets

What is Science telling us?

The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C above pre-industrial level, by 2100.

The International Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. It was created in 1988 by the World Meteorological Organisation (WMO) and the United Nations Environment Program (UNEP) to provide regular scientific assessments on climate change, in particular to policy makers. The IPCC aims to facilitate the understanding of future implications and risks of climate change, as well as to put forward adaptation and mitigation options.

During the COP 21, in parallel of the adoption of the Paris Agreement, the Parties invited the IPCC to provide a special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways.

Climate Neutrality by 2050

3 years later, the IPCC published this 1.5°C special report, and put concrete figures on the already material impact of climate change associated with a 1.5°C temperature rise. In addition, the report reviews extensively the differences in terms of socio-economic impacts and the variation of their magnitude between a 1.5°C and 2°C warming.

This report also outlines the necessity to reduce GHG emissions to zero by 2050 - what is commonly called “carbon neutrality” - to optimize our chances of mitigating global warming level to 1.5°C by 2100.

This report, and the 1.5°C IPCC scenarios, urging on our economies to achieve climate neutrality by 2050 have become the point of reference in terms of scientific guidance for climate change mitigation integration. They have been adopted by investors initiatives such as Net Zero Asset Owner Alliance, to set their climate ambitions.

The Net Zero Asset Owner Alliance

If the urgency of the climate crisis is no longer questioned, the action of financial institutions is crucial to mitigate the climate crisis. Allianz, by committing to carbon neutrality of their activities in 2050, follows the recommendations of the scientific community, illustrated in the 1.5°C special report published by IPCC in 2018. Defining such climate ambition is a first step towards the collective efforts required to limit global warming to 1.5°C by 2100.
Launched in 2019, the Net Zero Asset Owner Alliance, of which Allianz is a founding member, shows the commitment of some of the world financial leaders to take responsibility and join forces to steer investments portfolios toward the transition(s) necessary for a 1.5°C compatible world. The Alliance is convened by the UNEP and the Principles for Responsible Investment. The Alliance’s purpose is to mobilize the world’s largest asset owners – such as pension funds, insurers and sovereign wealth funds – to bring investment portfolios to net-zero by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial temperatures. Since its launch, the Alliance has been joined by over 33 AOs, representing +5 trillion AUM(14).

Transforming climate ambition into climate targets
AOA members are committed to set intermediary decarbonization targets every five years for their portfolios. These intermediary targets help to structure the long-term strategic ambition toward carbon neutrality.

In 2020, together with AOA members, Allianz road-tested carbon assessments methodologies and KPIs to define portfolio baselines that would inform quantified intermediate climate targets. As a result, Allianz published its intermediary targets in January 2021, for the 2020-2025 period range, committing to(15):

• 25% reduction in CO2 emissions in equities and corporate bonds.
• Set real estate investments on a 1.5°C path by 2025.
• New sustainability strategy sets ambitious targets for climate protection and social progress.

In alignment with the recommendations of the Paris Agreement and the Allianz Target Setting Protocol(16), intermediate targets will be set and reviewed every 5 years until 2050. The next targets will be set in 2025, 2030, 2035, 2040, 2045 and 2050.

United Nations-Convened Net-Zero Asset Owner Alliance
Commitment Statement
«Commit to transitioning its investment portfolios to net-zero GHG emissions by 2050 consistent with a maximum temperature rise of 1.5°C above pre-industrial levels, taking into account the best available scientific knowledge including the findings of the IPCC, and regularly reporting on progress, including establishing intermediate targets every five years in line with the Paris Agreement Article 4.9.

In order to meet our fiduciary duty to manage risk and achieve target investment returns, this Commitment must be embedded in a holistic ESG approach to managing sustainability considerations, incorporating but not limited to climate change, and must emphasise GHG emissions reduction outcomes in the real economy.

Seek to reach this Commitment, especially through advocating for, and engaging on, corporate and industry action, as well as public policies, for a low-carbon transition of economic sectors in line with science and under consideration of associated social impacts.

This Commitment is made in the expectation that governments will follow through on their own commitments to ensure the objectives of the Paris Agreement are met.»

Design of Climate Neutral Investment framework
The creation of a GHG emission reduction targets tracking program is complex. Along with the recommendations of the Net Zero Asset Owner Alliance, Allianz approach will be guided by 2 key principles:

• **Contribution to the carbon neutrality of the economy** through the monitoring and steering tools put in place, Allianz seeks to maximize its impact to foster the low-carbon transition of the real economy to achieve its emission reduction targets; hence preventing “virtual” decarbonization of investment portfolios.

• **Engagement with companies**. Allianz engages with companies to move their business models towards more sustainable practices and supports the implementation of low-carbon strategies aligned with the objectives of the Paris agreements. Engagement is a powerful mechanism to anchor financial institutions’ support for the low-carbon transition in the real economy.

The strategy toward climate neutrality, and on a shorter term, toward our 25% emissions reduction objectives, rests on 4 pillars structured around 4 key themes:

**Portfolio steering for emission reduction**: the above mentioned emissions reduction targets are applicable to a part of Allianz’s scope 3 emissions (as a company - emissions generated by our assets portfolios), called the “financed emissions”, and within these, scopes 1 & 2 of our underlying holdings are integrated. Allianz France uses a slightly different scope (direct and first tier indirect emissions) that accounts for a part of companies’ upstream scope 3.

(14) As of Dec, 2020
To track its portfolio level carbon footprint reduction target, Allianz France uses 3 types of emissions metrics:

**Absolute emissions**: This metric measures the Total Owned Carbon Emissions associated with the underlying investments of a portfolio. The carbon emissions can be attributed based on the equity or debt ownership relative to the Enterprise Value or Market Capitalization.

\[
\sum_{i=1}^{n} \left( \frac{l_i}{EVi} \times C_i \right)
\]

(\(C_i\)=carbon emissions of the issuer, \(l_i\)=current value of investment, \(EV\)=Enterprise Value of issue).

**Financed emission**, this indicator answers the question “how much carbon emissions emitted by companies, for every million euro we invest in?” and can support real world emissions reduction as long as changes that are linked to financial indicator is visible and used to inform capital allocation decisions.

\[
\frac{\sum_{i=1}^{n} \left( \frac{C_i}{EV_i} \times l_i \right)}{\sum_{i=1}^{n} l_i}
\]

**Weighted Average carbon intensity**, which corresponds to portfolio weighted average carbon intensity per revenue.

(\(w_i\)=weight in Allianz portfolio, \(y_i\)=sales/revenues of company)

\[
\sum_{i=1}^{n} w_i \times \frac{C_i}{Y_i}
\]

*Figure 15 | Carbon footprint - 3 types of emissions metrics*
Supporting the transition in hard-to-abate sectors: Sectoral targets, for carbon intensive industries, anchor investors’ portfolio emissions reduction requirements within the real economy. At Allianz we have structured several working groups on sectors: Oil & Gas, Utilities, and Steel in order to steer the decarbonization efforts through the monitoring of climate transition risk, stranded assets exposure limitation, as well as identifying and allocating capital towards climate change leaders at sector level.

Engagement with companies: Engagement is at the heart of Allianz theory of change. We are willing to leverage on the AOA and other initiatives such as the Climate Action 100+ to foster real world emissions reductions of industry actors to accelerate the transition within priority sectors and climate laggards.

Financing the solutions: Financing the transition includes investments in the supply side of “net-zero solutions”. Allianz is looking into providing capital for the transition through the numerous available options, which include technologies in renewables, green hydrogen, energy storage systems, carbon capture solutions as well as near zero emission buildings.

What scenarios for Carbon Neutrality?

Academic research, forming part of the contributions to the roadmaps to achieve carbon neutrality in 2050, distinguishes between two main types of scenarios: 1.5°C scenarios called «no or low overshoot», as well as other scenarios compatible with 1.5°C called «high overshoot». In both cases, these scenarios would limit global warming to 1.5°C by 2100, with the difference of one element: the use of Carbon Capture and Storage (CCS) solutions.

In the case of the «no or low overshoot» scenarios, which correspond to the models (P1, P2, P3), the development of CCS solutions is not or hardly integrated, due to economic and sustainability constraints limiting their deployment in the medium to long term, and are based on a strong decarbonization of energy mixes towards low carbon energy solutions.

For the «high overshoot» scenarios, the development of CCS solutions is integrated on a large scale, allowing societies to have a slightly more distant peak in emissions, as well as to continue to use carbon- based energies in the second half of the century, while achieving the objective of carbon neutrality in 2050 as well as limiting global warming to 1.5°C.

AOA members are free to choose one of the 1.5°C compatible scenarios to reach their decarbonisation targets. Transparency is expected however, on the nature of their emission reduction targets (between intensity or absolute targets), as well as on the links between these targets and the types of scenarios mentioned (and in particular integrating the development assumptions of CCS solutions).

Figure 17 | Breakdown of contributions to global net CO2 emissions in four illustrative model pathways (IPCC)

P1: A scenario in which social, business and technological innovations result in lower energy demand up to 2050 while living standards rise, especially in the global South. A downsized energy system enables rapid decarbonization of energy supply. Afforestation is the only CDR option considered; neither fossil fuels with CCS nor BECCS are used.

P2: A scenario with a broad focus on sustainability including energy intensity, human development, economic convergence and international cooperation, as well as shifts towards sustainable and healthy consumption patterns, low-carbon technology innovation, and well-managed land systems with limited societal acceptability for BECCS.

P3: A middle-of-the-road scenario in which societal as well as technological development follows historical patterns. Emissions reductions are mainly achieved by changing the way in which energy and products are produced, and to a lesser degree by reductions in demand.

P4: A resource- and energy-intensive scenario in which economic growth and globalization lead to widespread adoption of greenhouse-gas-intensive lifestyles, including high demand for transportation fuels and livestock products. Emissions reductions are mainly achieved through technological means, making strong use of CDR through the deployment of BECCS.
2. Biodiversity & Natural Capital preservation

Allianz France is in the process of expanding its frontier as a responsible investor to complement our ambitious climate efforts. This will require addressing new sources of risk and investment opportunities, notably concerning natural capital and biodiversity. According to a recent report from IPBES\(^\text{17}\), declines in nature are occurring at alarming rates due to indirect drivers such as demographic change, technological advances, institutions and governance frameworks, as well as conflicts and epidemics. In addition, direct drivers such as land use, pollution, direct exploitation, invasive species, and climate change have further accelerated this trend, causing a decline in nature of 47% in the past 50 years.

As a responsible investor, our goal is to ensure that our investments do not pose significant risks to land, water, fauna, flora, or air. With this in mind, we must ensure that companies within our portfolio integrate biodiversity as a topic of attention and make efforts to reverse this alarming trend.

We welcome the initiative taken by the French Government to promote further transparency in the investment arena through Article 29 of the Loi Energie Climat, which requires investors to report information related to biodiversity risks within investment portfolios. We consider this law a key step towards the protection of natural capital, which provides humanity with invaluable services that include, and are not limited to, clean water, food, energy, medicine and recreation.

Biodiversity integration in ESG approach

As part of our ESG approach, we have defined various vigilance criteria linked to natural capital and biodiversity. On the one hand, using the ESG rating process applied to our entire portfolio, which includes related indicators such as the protection of aquatic and land resources, air quality and prevention of toxic emissions and climate change mitigation. In addition, we analyze the controversies faced by companies linked to these topics as a safeguard mechanism. This process may lead us to include the company in our watch list - updated systematically once a month.

For our investments not covered by an ESG rating (mainly unlisted equities or other types of financial instruments), we perform detailed ESG due diligence according to our “Sensitive Business Areas” approach. The areas raising at least one biodiversity-related concern are agriculture, fisheries, oil and gas, hydropower, animal welfare, animal testing, infrastructure and mining. As part of the pre-investment due diligence process, investments may thus be screened for the following biodiversity impacts (non-exhaustive list):

- Impacted endangered species (as defined in IUCN’s Red List)
- Impacted protected or sensitive sites (e.g. national parks, native protected areas, marine protection areas, deforestation)
- Water stress risks
- Impacts of transport on natural resources
- Illegal fishing (vessels listed here: http://iuu-vessels.org/iuu) or damaging techniques (e.g. bottom trawling, beach seining, large-scale pelagic driftnets, poisons, explosives, muroami and poor by-catch management)
- Aquaculture use of wild caught juveniles (tuna/eel), fish oil/meal feed or effluent discharge
- Illegal logging or unsustainable harvesting or use of rare timber species
- Clearance by fire or located on sensitive soils or peatlands for palm oil
- Loss of food crops for local population (e.g. bio energy conversion)
- Inappropriate use of pesticides, fertilizers, insecticides or other chemicals (e.g. neonicotinoids)

\(^{17}\text{https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf} \)
Biodiversity Commitments & Research

Moving forward, Allianz is looking into joining partnerships and initiatives to integrate and tackle biodiversity integration issues in investment frameworks. To do this, Allianz joined two initiatives and is a member of the observer group to the up-coming Task force on Natural Financial Disclosure (TNFD).

In September 2020, Allianz France signed the Finance for Biodiversity Pledge (18) along with 37 financial institutions representing over 4.8 trillion euros in assets to call upon global leaders of the Conference of the Parties (COP15) to the Convention on Biological Diversity (CBD) to agree on effective measures to reverse nature loss in this decade to ensure ecosystems resilience. The Pledge sets an important deadline for 2024, which engages us to five core components:

1. **Collaboration and knowledge sharing**
   - We will collaborate and share knowledge on assessment methodologies, biodiversity-related metrics, targets and financing approaches for positive impact.

2. **Engaging with companies**
   - We will incorporate criteria for biodiversity in our ESG policies, while engaging with companies to reduce their negative and increase positive impacts on biodiversity.

3. **Assessing impact**
   - We will assess our financing activities and investments for significant positive and negative impacts on biodiversity and identify drivers of its loss.

4. **Setting targets**
   - We will set disclose targets based on the best available science to increase significant positive and reduce significant negative impacts on biodiversity.

5. **Reporting publicly**
   - We will report annually and be transparent about the significant positive and negative contribution to global biodiversity goals linked to our financing activities and investments in our portfolios.

**Figure 18 | Finance for Biodiversity commitment by 2024** (source: Finance for Biodiversity Pledge)

**Finance for Tomorrow & Finance for Biodiversity**

In 2020, we participated in the Working Group on Natural Capital and Biodiversity of the Federation Francaise d’Assureurs (FFA) and joined the informal working group of the Task Force on Nature-related Financial Disclosures (TNFD) as an Observer organization. In 2019, Allianz France joined Finance for Tomorrow, an initiative by Paris Europlace regrouping private, public and institutional players committed to the promotion of sustainable finance. As part of our scope this year, we have joined, among others, the Working Group on Biodiversity and Natural Capital. We look forward to seeing these initiatives as the inception of a call for awareness and action to tackle the environmental crisis through a multi-stakeholder cooperation capable of bringing tangible solutions.

**Moving forward on Biodiversity in 2021**

In 2020, we continued our search for tools and partners capable of providing us with in-depth analyses, on a company level, on the impacts of our portfolios on ecosystems, vulnerable species and land degradation. From our analysis, to date, none of the data providers consulted have both a defined biodiversity methodology and the capacity to evaluate companies on a large scale. We expect that the interest on the topic will lead to the development of more sophisticated tools enabling us to enhance the way we address biodiversity within our portfolio. Given the importance of the topic, we expect specialized data providers to continue developing tools in this area, to hopefully bring a comprehensive and credible methodological framework that could serve as a screening tool in 2021.

In the meantime, we have developed internal screening tools to obtain a general view of the risks posed by our investments in this field (see biodiversity section in chapter 4).

(18) https://www.financeforbiodiversity.org/about-the-pledge/
3. Societal & Real Economy Anchor

As an insurer, we have a societal role to play by nature. This is reflected in our contribution to economic growth, stability and social cohesion. As an investor, we are convinced that we must help building a more sustainable and resilient economy and act to promote territorial cohesion. Therefore, at Allianz France, we make sure that our investment portfolio is deeply rooted in the whole country – urban and rural areas alike, in order to have an impact on the real economy.

This ambition is not new, for more than 20 years we have been offering comprehensive solutions to support companies throughout their development, even more during the covid-19 context. In France, Allianz’s commitment to financing the real economy is structured around three pillars: long-term support to the local economy, innovative businesses & energy transition infrastructure financing.

Anchoring investments in the local economy

In 2021, priority will be given to support the sustainable recovery of all economic actors. In this vein, at the beginning of the crisis, French insurers contributed to 400 million euros to the national solidarity fund that was set up to support SMEs and self-employed workers. Following this effort, about 20 French insurers, coordinated by the FFA, launched an historically ambitious program with the Caisse des Dépôts called “Insurers – Caisse des dépôts Sustainable Recovery France”. The program will dedicate 2.3 billion euros to support French companies (SMEs and industrial actors), all selected on ESG criteria, that have experienced difficulties during the covid-19 crisis, prioritizing the health, tourism and industrial sectors.

As another illustration of our commitment toward local economy, in 2020 Allianz France invested in public health infrastructure through the fund HOPE, with Rivage Investment. This initiative aims to support one of the sector most heavily affected by the covid-19 crisis, with the objective to reinforce territorial cohesion and local engagement.

Financing Innovative businesses

5 years ago, Allianz France has launched a start-up incubator in the Allianz Riviera (Nice), to help the development and the financing of French and international startups in themes such as mobility, circular economy, fintech, social integration, environmental preservation, data, and cybersecurity. As per today, the accelerator helped over 50 startups with more than 250 million euros raised.

Allianz France has furthermore developed the InnovAllianz France fund, with Idinvest, to finance innovative startups, through minority share participations. The fund is currently invested in 20 startups, with the objective to support innovative actors and ideas that will contribute to the development of a more sustainable economy.

Lastly, as part of the initiative TIBI, Allianz France contributes to the financing of French tech startups. The program, whose objective is to unlock financial capacity for the sector by end 2022, has gathered more than 6 billion euros from French institutional investors. In 2020, the investor committee has approved more than 20 additional eligible funds on private and listed assets to index the financing of late stage tech start-ups.

Willing to support the development of startups with positive impact in parallel, Allianz has been the first very investor in the Citizen Capital Impact Initiative fund, whose objective is to provide new solutions to major social or environmental issues.
• **Education & Human Resources:**
  - Lalilo: platform supporting the development of reading skills for children, based on artificial intelligence optimization.
  - Supermood: employees engagement monitoring platform to reinforce social dialog.

• **Circular Economy:**
  - Extracthive: development of innovative processes to revalorize industrial wastes.

• **Health and Wellness:**
  - R-PUR: design and sale of anti-pollution masks.

**Financing Infrastructures for the Energy Transition**

As part of its engagement to foster the development of low carbon energy infrastructure at a local level, Allianz supports regional renewable energy projects in France, such as the wind farms located in Foreterre (Yonne), and in the Baume (Averyon) in partnership with ENERTRAG (renewables energy projects developer).

Allianz also contributes to the building of much larger scale renewable energy projects in France, such as the financing of the biggest European offshore solar farm, O’MEGA1 located in Piolenc (Provence), with Eiffel Investment and the crowdfunding platform AkuoCoop.

**Support a Just Transition**

Allianz’s commitment to anchor its investments in the real economy goes hand in hand with the concept of a «Just Transition».

The notion of a «Just Transition» stems from the belief that a transition to a low-carbon and sustainable economy must be conducted in a way that is socially just for all stakeholders: workers, consumers, local communities and society as a whole.

At Allianz France, we do not conceive the transition toward a low-carbon economy as being carried out at the expense of the most socially vulnerable ones. A Just Transition means making the ecological transition a tool for social justice and reciprocally, social justice a driving force for the ecological transition.

Hence, Allianz France supports a just & inclusive transition, notably through the participation to the Finance for Tomorrow taskforce, led by Amundi. This initiative will explore the development of financing mechanisms and monitoring frameworks to track the deployment of a socially responsible low-carbon transition, through the creation of indicators, identification of opportunities and company engagement.

**Figure 19 | O’MEGA1, the biggest european offshore solar farm implanted in Provence**
Our commitment to the real economy was rewarded with the Prix des Couronnes 2020. This award recognizes the insurer most active in developing the real economy. It also recognizes Allianz France’s approach to making local investments in SMEs, real estate and infrastructure more respectful of environmental, social and governance issues.

This award was presented for the first time in 2020; Allianz France is therefore the first winner of the award for the most active insurer in the development of the real economy given by Les Couronnes.
4. Governance & Sustainability stewardship

We are fully associated and committed to the engagement activities toward investee companies lead by the Allianz Group; we are actively involved in the assessment process. Our ambition is to reinforce our pro-active attitude and further develop our position as a reliable partner in these activities. We continuously strengthen our current activities as well as developing new areas of expertise - sector or geography - in order to constitute a key partner and reference point by conducting and delivering reliable insight concerning engagements opportunities at Global level.

As a sustainable local investor, we also strive to identify and develop local engagement activities. As mentioned in Section 1, since 2020, AIM ESG, Innovation and Governance is part of the local investment management committee. This is a step forward in our ambition to bring ESG assessment to the same level as any strong discriminating financial KPIs to either strongly encourage or veto an investment decision.

Shareholder voting

AZ France shareholder’s voting rights are exercised either directly or indirectly by Asset Managers. Within this framework, we review particularly carefully proposals encouraging company board and management to increase transparency and integration of sustainability topics deemed material to the long-term performance of the company. Our ambition is also to develop our capacity to make more pro-active decision in this direction. We aim to be active stewards on climate-related matters.

We strive to systematically inscribe sustainability in our investment guidelines and strengthen the non-financial dimension reality through the systematic inclusion of dedicated statements in our mandates, supported by introduction of relevant KPIs as well as financial indicators. As we aim to promote the culture of non-financial monitoring in the exchanges with our asset managers, we will ask them to comply and report on these KPIs. As part of our decarbonization ambition, we aim to agree on dedicated KPIs to monitor the pathway toward carbon neutrality.

For non-listed assets and deals, our ambition will be to increase the scope of our referral process beyond sensitive business area; in the long run, we want any non-listed deal to be submitted to a dedicated ESG expertise analysis covering every sector-relevant matter.

Supporting Company & Investors climate-related disclosure

We are thoroughly aligned with the growing momentum pushing for Companies and Investors mandatory climate-related financial disclosure. These indications, pointing to a detailed and complete disclosure, consistent over time will be key to unlock the visibility of financial institutions on company trajectories and, as a consequence, of their own trajectories. We see climate-related financial disclosure as a vital tool for informed and forward-looking financial decision-making.

That is why, at Allianz France, we strongly support investee companies in engaging with disclosure in the most granular and comprehensive way.

Coherently with our ambition to drive concrete changes in the real economy supporting its path toward decarbonization, we systematically encourage the widest climate-related financial disclosure over our portfolio. That is in fact the first way to identify, and limit, climate-based material and transition risks.

Governments and institutions are increasingly concerned by the decisive role of climate-related disclosure, consequently adopting more stringent measures. In France, that has taken the form of article 29 of the newly released Law on Energy and Climate, and at the European level, the SFDR.

While we are historical supporters of mandatory regulations on climate-related disclosure for financial institutions, that will require a greater level of detail on company-level data. On top of that, higher detail of information is necessary in light of the reinforcement of our coal and hydrocarbon exclusion policy. We will continue to engage with investee companies in order to improve the granularity of data, to enhance greater transparency on sustainability-related matters.
Mapping of Climate Risks & Opportunities

The commitment taken by Allianz in 2019 to be Carbon Neutral by 2050 has been a strong catalyst for the integration of climate related considerations during 2020. Efforts were heavily focused, on one hand, on the integration of quantified decarbonization objectives (effective from January 2021), and on the other hand, on facing the increasing number of regulatory requirements coming from the French financial markets on sustainability, in particular with the launch of the Sustainable Finance Observatory in France.

Allianz continues to enhance its ESG analysis framework on several fronts. First, the horizon and nature of ESG risks (and more specifically environmental and climate change risks) have been clarified. Second, as part of the Carbon Smart approach, our analyses have been enriched, with the objective of anticipating some aspects of the Article 29 framework. However, certain analyses are still preliminary and will need to be further refined over the next two years, allowing us to be better prepared to face future regulatory requirements.

Finally, we discuss the impact of physical risk at portfolio level, on which the increased asset level coverage provided us with a more comprehensive understanding.
1. Mapping of ESG Risks & Opportunities

The process of mapping climate risks and opportunities is essential for an investor to develop an holistic view of the multiple climate related themes and assessing their materiality. A materiality matrix also facilitates their prioritization, not only internally, but also with regards to our stakeholders. This tool will allow us to improve our climate approach as well as to improve communication on our positioning towards these matters.

The article 29 will strengthen regulatory reporting requirements by 2023, and will notably call for a materiality matrix to inform the following topics:

- the identification, assessment, prioritization, and management of these risks & the manner in which they are integrated into the entity’s risk management framework
- their characterization, including whether they are current or emerging, exogenous or endogenous to the entity, their occurrence, their intensity and time horizon
- specifically, on climate risks, a segmentation of physical, transition and litigation risks including associated risks factors.

At Allianz, to face the increased regulatory disclosure, we have started to work on a climate materiality matrix throughout 2020. As the work progressed, we exchanged with the economic research, strategy and risk teams, who helped us to enrich our understanding of such matrix.

Following these discussions, we decided to expand the scope of this matrix to include ESG issues more broadly, as the climate theme would not allow us to capture and report on our positioning as comprehensively as initially envisaged. We foresee the publication of an ESG materiality matrix in 2022 and will, in this period, work in collaboration with the teams mentioned above to define, develop and align on the elements of this matrix.
2. Carbon Smart: Allianz France’s approach on Climate Neutrality

Early 2020, the Bank for International Settlements (BIS) published a paper (19), pointing out that climate change is a “green swan” risk, a notion based on Nassim Nicholas Taleb’s original concept of the black swan - an unexpected event with extreme impacts that can only be explained in retrospect. The BIS argues that climate change will likely lead to complex, hard-to-anticipate shocks fitting the above description: as climate impacts become increasingly severe, so-called earth system tipping points are breached. This may ultimately lead governments and societies to scramble to respond, potentially in chaotic and economically destructive ways. The green swan of climate change may as such cause extreme events, large financial losses and possibly the next systemic crisis.

As an investor, we need to create an effective process (via our investment, corporate engagement, investor disclosure and policy advocacy) that gradually steers the larger economy towards carbon neutrality and, at the same time, achieves an orderly transition, which is one of the four possible scenarios as illustrated by the Network for Greening the Financial System (NGFS) (20).

We have developed a climate change strategy that we call carbon smart. It is a triple-loop around three pillars: Identification, Assessment and Management, with each pillar providing input for the next. Overall, this serves as both a road map and a checklist for us to manage portfolios toward our decarbonization objectives at several levels:

- report on the high-level carbon performance and trajectory of our portfolios
- monitor how carbon-intensive sectors are transitioning, and engage, with the most contributing issuers on their decarbonization strategies
- identify and finance the low carbon solutions to build an economic model less dependent on carbon

Climate scenarios from the Network for Greening the Financial System (NGFS)

The Network of Central Banks and Supervisors for Greening the Financial System (NGFS) was launched in December 2017, with the objective to develop and share best practice around climate risk management and support the investments flows to shift toward the financing of the energy transition. In 2020, the NGFS published a first set of scenarios to provide a common starting point for analyzing climate risks to the economy and long term financial stability. The NGFS offers a set of eight scenarios. Each of them taking a different set of assumptions on the evolution of climate policy, emissions and temperatures for the end of the century. These stress tests have been increasingly referenced as the new standard in terms of climate scenario analysis, for the transparency and possibilities they offer to identify potential climate risks at different time horizons. The scenarios have been revised since June 2020 and the second iteration taking into account physical risks was published early June 2021.

3 representative scenarios and 5 alternative scenarios:

- **Orderly scenario**: Early, ambitious action to reach a net zero CO₂ emissions economy. The representative scenario concerns immediate 2°C with Carbon Dioxide Removal (CDR). The two alternative pathways are: a 2°C scenario with limited CDR and an immediate 1.5°C scenario with CDR.
- **Disorderly scenario**: Action that is late, disruptive, sudden and/or unanticipated. The first alternative scenario follows an immediate 1.5°C pathway with limited CDR, and the second one, a delayed 2°C pathway with CDR.
- **Hot house world scenario**: Limited action leads to a hot house world with significant global warming and, as a result, strongly increased exposure to physical risks. The representative scenario corresponds to current policies and the alternative scenario corresponds to nationally determined contributions.

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2.1. Identification: Climate Risks segmentation
The first step of our Carbon smart strategy is identification of climate related risks and opportunities across our activities. This year, we have refined our analysis in terms of risk characterization and solution mapping.

Risk segmentation
Risks related to climate change are becoming increasingly visible in our economy and can be distinguished according to 3 main categories: **Transition Risks, Physical Risks and Litigation Risks**. While the first two risks are now starting to be better measured and monitored, the latter one has recently been put forward and is seen as being of increasing importance for financial institutions’ radars:

- regulatory changes recognizing serious environment harm as a crime (eg. France), or
- courts of law creating precedents in terms of climate justice toward companies (eg. the Court of the Netherlands), or
- civil society suing their government for their lack of climate ambition

Climate risks can also be analyzed through their materialization in time. Transition risks relates to short to medium term changes that impact business due to a synchronized action of governments, financial institutions, industrial & economic actors moving toward the low-carbon transition, aligned with the Paris objectives. On the other hand, physical risks will likely materialize on a medium to long term range, as a result of limited, ineffective actions toward climate change.

In parallel, litigation risks and reputational risks more broadly, are the consequence of a public audience and other stakeholders taking legal action against a company or government due to their negative contribution to or inaction on climate change. They start materializing in a short to medium term and are likely to intensify along with physical risks.

We have characterized the different types of climate-related risks in the table below. It outlines the methodology used to measure exposure to those risks, as well as, when possible, to evaluate their associated financial impacts.

The table also features the integration status into investment decision processes and into the Allianz action plan. As of today, for some risks, the evaluation of financial impact is still exploratory. As a result, and also given the early stage development of the methodologies available, the integration of some of these metrics into investment decision making processes is under development, to add on those already integrated (such as coal and unconventional fossil fuels restrictions).
Solutions

Climate change has two sides: it brings significant risks as well as opportunities. It is our conviction that while it will cost a lot of money for society to successfully respond to climate change, it would be much more expensive not to respond. Responding to climate change involves two possible approaches for an organization: adaptation or mitigation. According to the definition of the Intergovernmental Panel on Climate Change (IPCC), adaptation refers to “the process of adjustment to actual or expected climate and its effects” and mitigation is “human intervention to reduce the sources or enhance the sinks of greenhouse gases” (22).

Adaptation and mitigation are not opposing terms, they rather complement, each other. Potential climate adaptations span a variety of sectors, some of the strategies for the world to adapt could be to build sea walls, to elevate infrastructure, to use prescribed fires in order to prevent uncontrollable wildfires or to favor drought-tolerant crops. In practice, mitigation could be replacing traditional combustion car by electric vehicles, replacing GHG emitters energy by renewable energy like solar or wind.

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Figure 23 | Allianz France’s ESG risk approach table

<table>
<thead>
<tr>
<th>Risk Segment</th>
<th>Physical risks</th>
<th>Transition risks</th>
<th>Litigation risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk type</td>
<td>Physical risks can be defined as the chronic or acute climate impacts that induce significant risks to companies as they can affect their infrastructure, their production processes, markets, and supply chains. Physical risks also affect land/soil degradation as well as biodiversity preservation. Physical risks are regarded as mid to long term climate risks.</td>
<td>Transition risks can be defined as the costs/impacts arising from an orderly or disorderly shift toward a low-carbon economy. Depending on the transition speed, financial stability, resilience and anticipation of stakeholders, some sectors and companies are exposed to heavy transition costs. For instance, significant shifts are expected on asset valuation, in case of a rise in carbon prices, and/or a materialization of stranded assets. Regulatory changes are a major part of transition risks, alongside with Market and Technological risks. Transition risks are regarded as short to midterm climate risks.</td>
<td>Litigation risks result from the exposure to legal responsibility due to failure of enforcing or supporting climate change adaptation and mitigation solutions. These risks are intensifying along with the increase in climate-related regulatory constraints. Litigation risks are regarded as short to midterm climate risks.</td>
</tr>
<tr>
<td>Definition &amp; prioritization</td>
<td>Acute risk: Changes in the frequency and/or severity of existing perils or events, e.g. cyclones, hurricanes, floods, wildfires, etc.</td>
<td>Policy risk: Includes policy efforts to curb existing drivers of climate change or promote climate friendly adaptation</td>
<td>Policy risk: Includes the impact climate change and risks may have on the supply and demand of goods and services.</td>
</tr>
<tr>
<td>Chronic risk: Longer term shifts in climate patterns, which may cause sea level rise, droughts, etc.</td>
<td>Market risk: Includes the impact climate change and risks may have on the supply and demand of goods and services.</td>
<td>Market risk: Includes the potential for new technology to disrupt or displace existing systems.</td>
<td></td>
</tr>
<tr>
<td>Quantitative estimate of the financial impact of risks and proportion of exposed assets</td>
<td>Portfolio exposure: • Map of physical risks of portfolio assets • Financial impact quantification: BoE integrated stress test.</td>
<td>Portfolio exposure: • Scenario Analysis • Fossil fuel &amp; coal exposure monitoring</td>
<td>Financial impact quantification: • BoE integrated stress test • Carbon Pricing</td>
</tr>
<tr>
<td>Methodological criteria (data sources and coverage)</td>
<td>Data source: Trucost Data coverage: [40%-70%] (21)</td>
<td>Data source: Trucost Data coverage: [40%-77%] (21)</td>
<td>Under development</td>
</tr>
<tr>
<td>Review Frequency/ Improvement plan</td>
<td>We annually review the assessment. Allianz France is working to improve the measurement of the financial impact of these risks and their integration into investment decisions. We are working both with the investment teams for considerations in investment decisions and with our data providers.</td>
<td>Under development</td>
<td>Under development</td>
</tr>
</tbody>
</table>

(21) Data varies by asset class; we work with Trucost to improve coverage.
2.2 Assessment & Management

A useful assessment is both a science and an art: it is quantitative as well as qualitative. Leveraging on our in-house expertise and partnering with external data providers and research organizations, we seek to develop climate analysis at 3 levels: portfolio steering, asset class assessment & sectoral analysis. The overview of the assessment & management is broken down per type of risk and feature results from portfolio level to asset class and sectors when the granularity is available.

In our approach to apprehend climate risks and opportunities, we seek to align our portfolios with a 1.5°C scenario, with no or low overshoot, as well as to anchor our efforts toward a real-world decarbonization. This means to use our investor impact to support sustainable businesses, signal our position to our peers and engage with issuers to shift their business models.

The assessment of climate related risks and opportunities is structured in two main types of analysis:

- **backward looking**: snapshot analysis on past and/or current situation, e.g. carbon footprinting, green/brown share e.g. exposure to fossil fuels.
- **forward-looking**: scenario-alignment analysis, climate stress test such as the Bank of England Stress Test, Carbon Value-At-Risk, exposure to stranded assets

**Figure 24 | Carbon Smart Step 2: Assessment**

![Diagram of assessment types](image)

### 2.2.1. Transition risks

We track our portfolio exposure to transition risks through several types of analysis:

- carbon footprint
- exposure to fossil fuels and coal related activities
- 1.5°C scenario analysis at portfolio and sector level
- stress-testing: carbon pricing stress test (Carbon Value-At-Risk, internal Carbon pricing tool), the Inevitable Policy Response tool, and the Bank of England (BoE) model

Some of the analyses reported below also feature, to some extent, physical risks, such as scenario alignment and stress tests, in which it can be difficult to disentangle the two types of risks. In the next section, we evaluate the impact of physical risks directly on our assets.

**Carbon footprint**

A first way to measure our portfolio exposure to transition risks, is to monitor the carbon footprint of our portfolio. As explained in Chapter 2, we follow our decarbonization efforts in terms of carbon footprint according to both an absolute emissions and carbon intensity metrics. The absolute emissions indicator informs on the evolution of the emissions reduction efforts of the companies, while the intensity indicator translates the portfolio exposure to carbon intensive businesses.

The total portfolio value covered in our 2020 carbon footprint study is about EUR 67 bn, which includes the following asset classes: public equity, corporate fixed income, sovereign bond, infrastructure & renewables, and real estate. Information on the coverage per asset class is disclosed below. Allianz France features Trucost data and methodology to run the carbon footprint assessment on listed equity, corporate bonds, sovereign and infrastructure & renewables. On real estate, the methodology and data from Ecoact are used.
The GHG protocol (Greenhouse Gas Protocol) supplies the world’s most widely used greenhouse gas accounting standards. According to its definition, there are three emissions scopes:

- **Scope 1**, which refers to direct emissions from sources that are owned or controlled by the reporting entity
- **Scope 2**, covering indirect emissions from consumption of purchased electricity, heat and steam
- **Scope 3** which refers to Other indirect emissions, that are a consequence of the activities of the reporting company, but occur at sources owned or controlled by another organization, including both upstream and downstream of companies along the value chain (suppliers, distributors, product use, etc).

In theory, as an investor, knowing portfolio/issuer level emissions of the full scope would be the best choice. However, considering current insufficient data disclosure from companies as well as varied estimation techniques used on the market (hence inconsistency), we have chosen for our reporting the emissions under scope 1 + first tier indirect (Direct + FTI), where first tier indirect, including scope 2 and parts of scope 3, refers to emissions from direct suppliers (electricity, airlines, equipment, food, etc). This approach has been chosen as it corresponds to the scope for which companies’ data is reliable, while considering the scope 3 emissions companies have influence on. We don’t correct double counting as a result of the value chain (e.g. the portfolio is invested in both the buyer and supplier company) because:

- In practice, it is very hard to identify specific supplier-customer relationships for each company in a portfolio.
- We do double our risk if we invest in a company and its supplier at the same time, even if we double count and overestimate emissions at portfolio level.

With regards to the **sovereign carbon footprint**, the approach is to consider the entire economy of the country as the unit of analysis. This corresponds to the scope for which the government of a country is responsible for, and whose actors are subject to the same legal framework as defined by the government. It allows the integration of both production and consumption behaviour for each country. So to mirror the Direct + FTI approach, the figures below cover Territorial + Direct Imports + Direct Export.

On **Real Estate**, the methodology outlined by the GHG Protocol (GHGP) is used to calculate the GHG emissions from AIM France’s real estate investments. Scope 1 and 2 GHG emissions are measured based on a “whole building” approach, covering both private and common areas. Energy-related GHG emissions are accounted following a “location-based” approach, hence relying on country emissions factors reflecting the average national or regional energy mix. Allianz France tracks the carbon intensity on scope 1&2 of buildings.

**Figure 25 | Allianz France Carbon footprint – monetary intensity indicators**  
Source: Trucost

<table>
<thead>
<tr>
<th>Carbon Emissions per EUR mm Invested (tCO2e/EURm)</th>
<th>Portfolio 2018</th>
<th>Portfolio 2019</th>
<th>Portfolio 2020</th>
<th>3 Year Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>157</td>
<td>138</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Corporate fixed income</td>
<td>159</td>
<td>148</td>
<td>152</td>
<td></td>
</tr>
<tr>
<td>Sovereign bond</td>
<td>241</td>
<td>381</td>
<td>460</td>
<td></td>
</tr>
<tr>
<td>Infra &amp; renewables</td>
<td>140</td>
<td>149</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td>Aggregate</td>
<td>200</td>
<td>287</td>
<td>338</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weighted Average Carbon Intensity (tCO2e/EURm)</th>
<th>Portfolio 2018</th>
<th>Portfolio 2019</th>
<th>Portfolio 2020</th>
<th>3 Year Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>194</td>
<td>222</td>
<td>202</td>
<td></td>
</tr>
<tr>
<td>Corporate fixed income</td>
<td>229</td>
<td>248</td>
<td>232</td>
<td></td>
</tr>
<tr>
<td>Sovereign bond</td>
<td>275</td>
<td>285</td>
<td>318</td>
<td></td>
</tr>
<tr>
<td>Infra &amp; renewables</td>
<td>85</td>
<td>85</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>Aggregate</td>
<td>254</td>
<td>265</td>
<td>282</td>
<td></td>
</tr>
</tbody>
</table>
The higher 2020 carbon intensity in some results shown above is a result of a combination of factors:

- on the **Equity** portfolio, we observe a drop in our intensity and absolute carbon footprints, mainly due to the Covid-19 crisis. With the economy recovering in 2021, special attention will be given in 2022 to monitor the evolution of the equity carbon footprint.

- on the **Corporate Fixed Income** portfolio, the financed emissions stayed overall flat while the carbon intensity decreased, which indicates that at company-level, the most polluting companies haven’t decreased their carbon footprint values and we haven’t reduced our investment in these. We, however, have diversified our portfolio toward less intensive sectors/companies, resulting in a lower weighted intensity.

- on the **Renewables and Infrastructure** portfolio, the carbon intensity has significantly increased, however the absolute metric slightly decreased, which sets a positive trend.

- on the **Sovereign** portfolio, both absolute and intensity footprints increased due to a higher coverage rate.

- on the **Real Estate** portfolio, the carbon intensity slightly increased.

In this regard, we observe the complementarity of the two absolute and intensity carbon emissions metrics. On the one hand, the absolute carbon footprint is an indicator of real-world decarbonization efforts, while on the other hand, the carbon intensity footprint can be seen as a compass to mitigate our portfolio exposure to transition risks. Carbon intensity metrics are also recommended to drive sectoral emissions reduction efforts, and in the future, Allianz France will track its exposure to carbon-intensive sector as part of the efforts toward real world decarbonization.

### Data coverage

A critical element of the climate analyses that are conducted is the coverage rate of the assets. This coverage rate is what allows us to assess the representativeness of the indicators selected. Allianz aims to reduce its emissions by 25% by 2025 and to become carbon neutral by 2050. We are, therefore, continuously working to improve our coverage rate and support the transparency efforts of companies which we engage on this purpose. We keep a close eye on the progress we make each year to enlarge the share of our assets covered and seek to improve it with the investment teams and our data provider.

**Next steps:** In 2021, we intend to run a gap analysis on data coverage, to identify and prioritise the assets that have fallen out of scope. Moving forward, we will target to improve the data coverage of our carbon footprint and other climate indicators, especially to identify the assets for which data is currently unavailable. Additionally in 2021, following the integration of carbon data into our in-house database, we plan to work within the full investment value chain to build automatized carbon dashboards.

### Exposure to fossil fuels and coal related activities

To reach the 1.5°C target pathway, it is necessary to steer the financing of the most polluting sectors such as fossil fuels and coal related activities. In its 1.5°C report scenario published in 2021, the International Energy Agency (IEA) clearly states: there is no need for investment in new fossil fuel supply in net zero pathways. Beyond already started projects as of 2021, no new gas fields, new coal mines nor mine extensions will be required as of the IEA 1.5°C pathway. We expect that reinforced policy constraints targeting climate neutrality will result in a sharp decline in fossil fuel demand.

At Allianz France, we have started preliminary analysis to screen our investment portfolio with regards to fossil fuels exposure (beyond coal related activities). Given the regulatory evolutions as well as exchanges, discussions through various internal and market place working groups, we see this topic as being increasingly critical to drive our decarbonization objectives. We have strengthened our approach to fossil fuels as described below. This should be regarded as an exploratory exercise, as we are working with our peers, NGOs and the local regulator toward a standardized approach.
Three different ways of defining unconventional fossil fuels

In order to define what falls under non-conventional fossil fuels, Allianz France relies on scientific recommendations & scopes. However, we observed disparity in definitions, which leads us to consider 3 different levels to measure our exposure to unconventional fossil fuels:

1. the «theoretical» definition derived from scientific recommendations
2. the definition of our data providers, Trucost and MSCI
3. the exclusions currently in place as part of our ESG approach

These definitions are subject to evolve as knowledge on the topic improves and as discussions with various stakeholders take place.

Scientific approach: According to the Australian Government Geosciences Organization’s theoretical definition, “unconventional resources are natural resources that require higher levels of technology or investment than industry standards to develop”(23).

1. Unconventional resources are those types of oil or natural gas that have not yet completed their geological formation process, i.e. the full cycle of formation and migration in a reservoir. The types of unconventional oil are extra-heavy oil, oil sands, shale and light-tight oil & oil shale.

2. Another perspective is to regard as “unconventional resources” the type of oils that lie in a location where the exploitation and extraction processes are difficult and costly. The types of unconventional are ultra-Deepwater oil and Arctic oil.

According to the International Energy Agency, “unconventional natural gas is a part of the gas resource base that has traditionally been considered difficult or expensive to produce(24).” Unconventional natural gas includes shale gas, coalbed methane, tight gas, aquifer gas and gas hydrates.

Available Data: After the analysis of unconventional fossil fuels data received from our data providers, we observe that:

• Trucost data on unconventional fossil fuels allows the identification of oil sands. However, it does not distinguish other types of unconventional oils and gas.

• MSCI provides two approaches to analyse unconventional fossil fuels. One based on the Febelfin label(25), which puts oil sands, shale oil, shale gas, coalbed methane and Arctic drilling in this category. It doesn’t include, however, some of the unconventional hydrocarbons such as aquifer gas and gas hydrates as well as extra-heavy oil. The other one, based on MSCI’s proprietary assessment is almost similar as the Febelfin with the exception of Arctic oil.

Allianz ESG Framework: We reviewed our ESG exclusion policy on unconventional fossil fuels in 2020(26). Given the difficulty of tracking all unconventional oil and gas data, the ESG exclusion policy focuses on Canadian oil sands and U.S. hydraulic fracking (shale oil & gas). We have defined thresholds for these activities to exclude:

• for asset classes, companies that derive 20% or more of their revenues from Canadian oil sands.

• for private equity, companies and/or funds that obtain more than 20% of their revenues from shale gas and oil from hydraulic fracturing.

• for listed companies exposed to shale gas and oil from hydraulic fracturing, Allianz considers it as a first priority in the engagement process.

(23) Australian Government Geosciences Organization, definition of unconventional fossil fuels
https://www.ga.gov.au/scientific-topics/energy/resources/petroleum-resources/unconventional-resources


Industry experts refer to assets that may suffer from unanticipated or premature write-downs, devaluations or conversion to liabilities as **stranded assets**. Allianz France is exploring how to address this risk through the assessment of its exposure to such assets by highlighting holdings with fossil fuel activities, as well as holdings in companies that have disclosed proven and probable fossil fuel reserves in the portfolio. This helps to identify potential stranded assets that would become more apparent as economies move towards a low carbon transition. This diagnosis is essential for Allianz France’s decarbonization strategy, as this stands to be the first step in reducing its portfolio’s exposure to stranded assets and transition risks.

We disclose our exposure to coal and fossil fuels for 2020 relative to our listed equity and corporate bonds portfolios. The data reported below refers to any level of exposure, not just those that exceed the exclusion thresholds. As a result of the coal policy application from 2015, Equity stakes of affected companies have been divested, fixed income investments were put into run-off and no new investments are allowed on those.

**Figure 28 | Allianz listed equity and corporate bonds portfolios exposure to coal and fossil fuels for 2020**

The scope of coal exposure is computed following our coal exclusion policy, hence it aggregates, at portfolio level, the exposure to companies involved in both extraction and coal power generation. To compute our exposure to conventional fossil fuels and tar sands, we have limited the scope to companies involved in production operations. Moving forward, following the recommendations of the article 29, we will further include exposure to not only production but also exploration, transportation, refining and other related fossil fuels activities. As per today, our analyses are still exploratory given the data granularity limitation we faced.

The oil, gas and coal exposures in our portfolios are considered individually. As a result, some companies with operations in those three sectors can be double counted. In fact, we count 10 companies that fall into 2 categories. In total, without duplication, we count about 55 different companies involved in coal and fossil fuels activities in 2020, according to Trucost data. It further encourages us to communicate, disclose engage with these companies, with the objective to reduce our exposure to carbon investments.
Update of Allianz Coal Policy for 2023

Allianz thermal coal policy excludes companies deriving more than 30% revenues from coal mining or coal-based power generation activities. Accordingly, Allianz has not funded any coal-based business models exceeding our thresholds since 2015. No new investments have been made nor in Equity or Corporate Bonds portfolios, holdings have been divested on the equity portfolio, corporate bonds investments made prior to 2015 are in run-off.

Early 2021, Allianz coal policy has been revised in order to better align with our Net-Zero ambition target. We, notably, harmonized and strengthened our coal-based restrictions on investment and insurance. New exclusion criteria will apply as of January 1st 2023:

- **infrastructure & project level**: Allianz no longer insure coal mines and coal-fired power plants. This restriction is being extended for coal-related infrastructure projects serving the coal value chain: rails, roads, ports, movable equipment, 3rd party equipment.
- **company level**: exclusion of coal-related companies that are energy producers, coal mining companies or coal industry service providers that:
  - derive 25% of their revenues derived from coal activities
  - or produce 5GW+ of coal-based power generation (utilities), or 10MT of coal (mining companies)
  - or plan new coal-related activities (mines and utilities)
  - exemptions will be applied for companies that are not planning new coal activities and have a 1.5°C decarbonization target verified by SBTi TPI, CTI, CA100+.

In 2018, Allianz announced its coal exit for 2040, i.e. reaching a 0% threshold on coal revenues by 2040. This threshold will be tightened over time: 25% in January 2023, 15% in January 2026, and 5% in 2030 (pathway after 2030 will be defined later).

We also tightened our oil sands exclusion. The investment restrictions introduced in 2020, excluding companies deriving more than 20% of their revenues from oil sands operations, will be extended to insurance activities from July 2021.

**Figure 29** | Allianz 2023 coal policy decision framework for exclusions and exemptions

Next steps: Allianz France will continue to strengthen its exclusion policy regarding fossil fuels and coal exposure. Moving forward, we are working on the gradual integration of the 2023 coal policy in our investment portfolios.

(27) with the exception of Asia where 10% will apply
Forward looking assessment - 1.5°C Scenario analysis

Running scenario analysis allows us to have a forward-looking perspective on the alignment of Allianz’s investments with our 1.5°C & Carbon Neutrality objectives. Scenario analysis can be used at 3 levels: to assess the portfolio trajectory, steer carbon-intensive sectors or evaluate whether a company’s strategy is in line with a 1.5°C path. Hence, the 1.5°C ambition for reference scenarios is critical, as well as methodologies used to aggregate results at portfolio, asset class, sector or company level. Finally, data coverage is key to ensure the comprehensiveness of the analysis, and more specifically, the availability and quality of forward-looking indicators at asset & company level.

Methodologies:
We run scenario analysis on our equity and corporate fixed income investments, at portfolio and sector level. The SDA and GEVA methodologies are used, both recommended by the Science Based Targets Initiative (SBTi):

The SDA (Sectoral Decarbonisation Approach) is applied to companies in homogenous sectors, usually high emitting ones, where a physical indicator (e.g. metric tons of product) can capture the sectoral activity.

The analytical steps can be summarized as:
1. **Company trajectory:** Calculate CO₂ emissions and CO₂ emissions intensity using company target and asset-level data.
2. **IEA scenario pathway:** Consider IEA sector trajectory as well as company specifics (initial performance, market share) to determine the proportionate target for this company (that is also the company-specific carbon budget).
3. **Deviation analysis:** Compare the two sets of data to find whether the company is above/below the carbon budget and assess the underlying temperature range trajectory.

The GEVA (Greenhouse gas Emissions per unit of Value Added) is applied to companies in heterogeneous sectors, usually lower emitting ones, where outputs could be so diverse that no single physical indicator can cover the entire sector. The process is very similar to that of the SDA, with the only differences that GEVA compares an individual company’s transition pathway (emissions per unit of inflation-adjusted gross profit, also called “value added”) with an economy-wide (non-sector specific) 2°C scenario, which is expressed as emissions per unit of GDP.

**Example:** If an economy needs to reduce its GHG emissions per unit of GDP by 5% per year, this translates into a corporate duty to reduce GHG emissions per unit of value added by 5% per year.
**Reference scenarios**

The scenarios taken into account in the SDA assessments are the ones from the International Energy Agency (IEA) and from the Energy Technology Perspectives (ETP) 2017. The SDA is therefore based on parameters consistent with 1.75°C, 2°C, and 2.7°C of global warming.

The scenarios used in the GEVA assessments are coming from the Representative Concentration Pathway (RCP) also used in the AR5 report from the IPCC. The GEVA assessment parameters are therefore consistent with 1.5°C, 2°C, 3°C, 4°C, and 5°C of global warming.

While, at sector level, using two different methodologies to capture industry specific trajectories is appropriate, at portfolio level, the aggregation constrains the analysis in terms of scenario granularity and ambition. Indeed the aggregation of the SDA & GEVA methodologies requires to use the lowest common denominator with regards to scenarios. In our case, we see that the most ambitious scenario featured in both methodologies is a 2°C scenario, rather than a 1.5°C or 1.75°C. Hence, the most granular temperature pathways at portfolio level, through these two methodologies, will be below 2°C (<2°C), between 2°C and 3°C (2-3°C) or above 3°C (>3°C).

**Time horizon and data**

The scenario analysis is run on a 5-year time horizon, and features both historical and forward-looking data to smooth the fluctuations from forward-looking data variability. Historical data are integrated since 2012, while forward-looking models are based on latest year of disclosure toward 2025. Forward-looking data is incorporated based on the following hierarchical order:

1. disclosed emissions reduction targets
2. asset-level data sources
3. company-specific historical emissions trends for companies assessed with the SDA methodology
4. subindustry-specific average historical emissions trends for companies assessed with the GEVA methodology
5. no change in emissions intensity beyond the latest year

**Portfolio alignment results**

We disclose portfolio alignment results for our listed equity and corporate bonds portfolios. On the corporate debt portfolio, the current trajectory is similar to last year results, aligned with a trend above 3°C (>3°C) trend, while on the equity portfolio, the trajectory trend has positively evolved from above 3°C toward to 2 to 3°C. On both asset classes, if a 2°C aligned portfolio does not seem mission impossible, the deviation gap with a 1.5°C aligned portfolio is more significant.

Moving forward, while we expect our efforts toward carbon neutrality to be reflected in these results, we consider scenario analysis as a snapshot of the overall forward-looking trajectory of our investments. This is a useful proxy to inform on the direction, while, in parallel, we refer to sectoral & company level analysis (to steer real-world decarbonization).

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**Figure 30 | Scenario analysis of Allianz France portfolio** Source: Trucost

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Scenario Analysis at sector level

We run scenario analysis at sector level for our listed equity and corporate bonds portfolios, in order to prioritize our decarbonization efforts and observe changes in carbon intensive sectors over years. The results are adapted for illustration: where an asterisk (*) appears next to the sector name, it means that the figure corresponds to the lowest possible temperature trajectory. On the contrary, when there is no asterisk, the figure indicates the highest possible temperature trajectory for the sector. The color of the bar indicates whether its aligned or not with a 2°C pathway trajectory (green: 2°C aligned, orange: between 2-3°C, red: above 4°C). The size of the bars indicates whether the trajectory has positively or negatively evolved over the last two years.

On corporate bonds investments, some sector-level temperature trajectories have decreased, notably in Materials, Health Care, IT and Real Estate, which means that within each sector, the exposure tends toward less carbon intensive business models. On the contrary, we observe a negative allocation effect in the Industrial sector, where the temperature trajectory has increase. In the Utilities, Energy, Steel and Airlines, sector trajectories are still between 2.7°C and >5°C, indicating that we need to focus our efforts on these specific hard-to-abate sectors.

Figure 31 | Corporate bonds portfolio - emission-based sectoral alignment assessment Source: Trucost

<table>
<thead>
<tr>
<th>Method</th>
<th>Sector Pathway (°C)</th>
<th>Corporate FI 2019</th>
<th>Corporate FI 2020</th>
<th>Delta</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power generation</td>
<td>1.75</td>
<td>1.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement</td>
<td>1.75</td>
<td>1.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel*</td>
<td>2.7</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airlines</td>
<td>2.7</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEVA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Services*</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
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<tr>
<td>Consumer Discretionary*</td>
<td>5</td>
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</tr>
<tr>
<td>Consumer Staples (2020*)</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Energy*</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financials</td>
<td>3</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Care</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrials (2020*)</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Information Technology (2019*)</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials (2019*)</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Estate (2019*)</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities*</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the same vein, on the equity portfolio, the sector-level temperature trajectories have positively evolved, notably on Materials, Industrials & Information Technology. However, in the Utilities, Energy, Steel and Airlines, sector trajectories are still between 2.7°C and >5°C, showing that, similarly to the corporate bonds results, we need to focus our efforts on these specific hard-to-abate sectors.

Figure 32 | Equity portfolio - emission-based sectoral alignment assessment Source: Trucost

![Table showing sectoral temperature trajectories](image)

The emission-based alignment assessment shows that our investment portfolio is not in line with a 2°C scenario, due to misalignment in several high emitting sectors. Beyond emission reduction targets at portfolio level, it highlights the importance, of tracking the evolution at sector level, to support real-world decarbonization rather than emissions reductions resulting from capital reallocation. Currently, Allianz France is working on its portfolio decarbonisation at sector level with the Net Zero Asset Owner Alliance (AOA) and SBTI.

**Next steps:** In 2021, Allianz will be launching sector specific working groups. In addition, we are analyzing climate benchmarks, both climate transition indices and Paris aligned indices to steer portfolio level efforts. We seek to integrate these analyses into our investment tools, asset managers’ reporting and our asset allocation strategy.

**Assessing financial impacts of Climate Risks: Climate Stress Tests**

Allianz France conducts different stress tests on its assets both at portfolio and asset class levels. Differently from climate scenario alignment analysis, climate-based stress tests allow for identifying the potential financial impacts of transition and physical risks on portfolios, depending on the granularity of the analysis. In the opening remarks of this chapter, we presented the notion of climate change as a green swan, a source of structural risk. By its very nature, the anatomy of a green swan cannot be known fully in advance. It may be possible to anticipate the kinds of events that can trigger a catastrophic risk cascade and the ways in which impacts may propagate through markets, along supply chains and across borders. Knowing how events will play out in a precise manner is, however, essentially unforeseeable. Hence, climate scenarios and models, rather than forecasts, can be seen as one possible pathways among others. That is why Allianz France combines several stress tests, both internally and externally developed, to evaluate different models and identify common trends.
Earnings at Risk from a 2°C aligned carbon budget

Carbon pricing mechanisms can take different forms, including emissions trading schemes and carbon taxes. There is a growing consensus that carbon pricing is an effective mitigation instrument because it provides across-the-board incentives to reduce energy consumption and use cleaner energies. Allianz welcomes market-based instruments, in line with scientific evidence and economic policy, that support transparency and internalization of carbon emission costs. It is all-important that such instruments lead to real impact on the economy to limit global warming to 1.5°C. The transition toward a low-carbon economy at the same time needs to be shaped in a fair manner. Therefore, social implications must be considered when implementing carbon pricing instruments. According to the World Bank, as of today, 45 national and 35 subnational jurisdictions have implemented carbon pricing schemes. In 2020, these jurisdictions would cover 12 Gt CO2e, representing 21.5% of global GHG emissions.

The stressor: carbon pricing in a 2°C scenario

Increasing carbon pricing ambition from policy makers puts the resilience of companies in the spotlight: how will companies’ business models change against a “new normal” backdrop, where emitting carbon generates increasing financial burdens? Do companies have sufficient profitability today to absorb future costs?

There is a gap between current and potential future carbon prices, which is defined as the carbon price risk premium (also called “unpriced” carbon cost) in this analysis. This risk premium varies by geography due to differences in government policy. Likewise, it varies by sector due to their differential treatment in many climate change policies. These disparities reflect the additional financial cost per ton of emissions from potentially stricter carbon pricing regulations under a 2°C transition.

Climate VaR (value-at-risk) at company level is calculated by comparing carbon price risk premium with company’s profitability indicators, such as EBITDA.

Climate Value-At-Risk: methodology & results

With time coverage stretching from 2020 to 2050 and intermediate assessments every 10 years, Trucost’s carbon pricing stress test focuses on the Unpriced Carbon Cost (UCC) which represents the difference between what a company pays for emitting carbon today and what it may pay in the future. This Indicator depends on both sectoral and geographical variables; indeed, current and expected carbon prices will differ among countries and industries. This analysis is conducted vis-à-vis three different carbon pricing scenarios. A high carbon price scenario includes policies which are necessary to reduce GHG emissions to limit global warming below a 2°C increase. A moderate carbon price scenario aims at the same goal but through delayed actions in the short-term. Lastly, a low carbon price scenario represents the implementation of Nationally Determined Contribution (NDC), which would lead to an increase in global temperatures above 2°C.

Figure 33 | Allianz France climate VaR from 2°C carbon pricing under the high carbon price scenario (source: trucost)

<table>
<thead>
<tr>
<th></th>
<th>2025</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unpriced carbon cost (mn EUR)</strong></td>
<td>% of the portfolio with EBITDA at risk &gt; 10%</td>
<td>% of the portfolio with EBITDA at risk &gt; 10%</td>
<td>% of the portfolio with EBITDA at risk &gt; 10%</td>
</tr>
<tr>
<td><strong>Equity portfolio</strong></td>
<td>5.94</td>
<td>11.29%</td>
<td>11.21</td>
</tr>
<tr>
<td><strong>Equity benchmark</strong></td>
<td>8.74</td>
<td>12.74%</td>
<td>16.71</td>
</tr>
<tr>
<td><strong>Corporate fixed income portfolio</strong></td>
<td>100.07</td>
<td>11.19%</td>
<td>191.59</td>
</tr>
<tr>
<td><strong>Corporate fixed income benchmark</strong></td>
<td>97.28</td>
<td>8.63%</td>
<td>185.89</td>
</tr>
</tbody>
</table>

The figures show that, as expected in a 2°C scenario, both the unpriced carbon cost and its impact on EBITDA increase as time goes by.

Allianz France’s equity portfolio outperforms the equity benchmark both on unpriced carbon cost and on the percentage of the portfolio with EBITDA at risk higher than 10%. The corporate fixed income portfolio, appears more exposed to transition risk and consequently further analyses should be conducted.
Allianz Carbon Pricing Stress Test
Allianz performs its own in-house carbon stress test. Following a bottom-up approach, the stress test models carbon risk of Allianz France’s equity portfolio. The model is based on an individual risk factor as well as on effective carbon prices, which represent a broader policy direction. We see merit in a model which gives us full transparency on methods and parameters which is easy to implement and gives us a first understanding of the evolution of potential climate impact on portfolios. Besides that, the integration of different methodologies, both internally and externally developed, is at the basis of our strategy to acquire an all-rounded understanding of transition and physical risks.

Core assumptions and methodology
The approach uses effective carbon prices as a proxy for policy ambition e.g. actual carbon pricing, energy-related subsidies and incentives, standards for energy efficiency and emissions. The fundamental idea is that an increase in emission prices entails a decrease in earnings at company level. The decline in earnings can be translated into a stock market value loss based on price-to-earnings multiples. The model requires assumptions on cost pass-through, price elasticities, or regulatory easing (either explicitly or implicitly, via effective carbon prices) which are kept simple for this version and will need to be further refined moving forward. The starting point is the carbon footprint of the listed equity portfolio considering scopes 1 and 2 emission figures. On this, we apply carbon price shocks derived from the climate scenarios developed by the Network for Greening the Financial System (NGFS).

In these scenarios, carbon prices materialize over the coming ten years and depend significantly on the strength of policy action and the underlying scenario assumptions. Carbon prices projected for 2030 range from € 45 to € 115 per tCO₂e in 2°C aligned scenarios, and increase from € 95 to € 374 per tCO₂e in 1.5°C aligned scenarios. The model assumes instantaneous changes of the effective carbon prices applied to the portfolio, with low mitigation actions. Due to its simplicity, the model has intrinsic limitations. In particular, the analysis is limited to the equity portfolio, while more elaborate assumptions on costs pass-through, price elasticities and regulatory relief are not considered. Lastly, there is no distinction among scope 1 and 2 emissions and it does not consider companies response to policy changes. These elements are all part of our ambition to develop a more sophisticated model covering other asset classes, such as corporate debt.
Results reported above model the 1.5°C and 2°C scenarios. There is a distinction between scenarios with extensive implementation of Carbon Dioxide Removal (CDR) technologies, and models in which those solutions are deployed on a limited scale.

The overall sensitivity stays contained in the Immediate 2°C scenario with CDR, with market value losses from 4% to 9% depending on the climate-economic model. A limited deployment of CDR technologies reduces the uncertainty of impact but increases market value losses from 7% to 8%. In a scenario where more emission reductions are required and carbon removal is limited (e.g. the Immediate 1.5°C scenario with limited CDR) the impact increases significantly, as market value losses rise from 13% to more than 21%. Greater emissions reductions implied by a 1.5°C ambition lead to higher exposure to transition risk, resulting in broader market value losses. However, the availability of CDR solutions at a larger scale greatly limit value losses compared to a limited CDR scenario.

Next Steps:
We are determined to broaden our data-driven approach, as well as improving and widening the scope of our stress test and modelling exercises. Consistently with that ambition, an internal working group on carbon pricing stress tests is currently developing a more comprehensive model. Our goal is to include the corporate debt portfolio in that analysis, while refining the methodology to improve its precision. In particular, we are improving the analysis granularity to have a clearer view at sectoral level. Lastly, a close monitoring of EU regulations will keep the model up-to-date.

The Inevitable Policy Response (IPR) stress test
The Inevitable Policy Response (IPR) is a stress test for equity portfolios. The IPR is a collaboration project between Principles of Responsible Investment (PRI), Vivid Economics and Energy Transition Advisors, which aims to help investors to tackle their associated portfolio risks.

Figure 35 | Forecast Policy Scenario
IPR provides one central scenario called the Forecast Policy Scenario (FPS), which assumes a policy announcement period from 2023 to 2025 and a policy implementation phase from 2025 to 2050. IPR focuses on climate transition risks. The baseline scenario is the Stated Policies Scenario (STEPS) by IEA WEO 2019 (temperature trajectory of 2.7 - 3.5°C). Current valuation is calculated as the Net Present Value (NPV) of projected profits until 2050 under the baseline scenario. The portfolio impacts are defined as the implied changes in valuation in terms of market capitalization if investors immediately repriced (here estimated for 2020 and 2021) on the basis of the expected cash flows due to demand destruction, creation and cost & competition on company level (cash flows materially change from 2025 or 2026, assuming business as usual cash flows until that moment under the FPS). The impact of a delayed adjustment of expectations and repricing, whether it occurs in 2025 or 2026, leads to a 1.5 times higher impact on valuations vis-à-vis an immediate repricing.

Under the FPS, if repricing happens in 2021, the implied changes for the same year in terms of market capitalisation of Allianz France equity portfolio will be -2.5%; if repricing takes place in 2026, the implied changes for the same year in terms of market capitalisation of the same portfolio will be -3.75%.

**Figure 36 | Equity portfolio valuation changes under FPS**

![Equity portfolio valuation changes under FPS](image)

This implies that the earlier credible policy announcements can be made before implementation, the better, as this gives investors and companies more time to adjust and reduces the risk of a sudden and larger impact on valuations. At the same time, the exposure of Allianz France equity portfolio to transition risk, has slightly decreased since last year.

IPR will publish an updated version of the scenario in 2021, that will include considerably higher policy ambitions than in the 2019 version. Among other developments, the new scenario features the adoption of a national carbon pricing system in the US, and carbon prices forecast up to $75/tCO2 in Europe by 2030. No additional coal power generation is predicted to occur in India and China respectively from 2021 and 2025. Besides, many emerging & developed economies including China, France and Germany are expected to stop sales of Internal Combustion Engine light-duty vehicles by 2035. Overall, 50% of the policies forecasted for the 2021 scenario update mark higher ambitions compared to the 2019 version, while only 10% represent lower ambitions (28). This stress test will be conducted on Allianz France equity portfolio next year.

**The Bank of England stress test**

Physical and transition risks affect financial firms in distinct ways. In any single scenario, there is a trade-off across both types of risks due to their interrelated nature. For example, higher emission levels will lead to rising temperatures that increase physical risks, while climate change mitigation requires substantial emissions reductions that increase transition risks.

The Carbon Earning at Risk and the IPR Stress test featured above focus solely on transition risks, while the Bank of England (BoE) one examines the implications for investment portfolios, under both types of risks.

(28) All data are taken from the Principles for Responsible Investment (PRI) website, available at:
Three scenarios are considered:

- **Scenario A**: a sudden transition, ensuing from rapid global action and policies and occurring over a medium-term horizon, results in achieving a temperature increase of less than 2°C but through a disorderly transition. In this scenario, transition risk is maximised.

- **Scenario B**: a long-term orderly transition scenario that is broadly in line with the Paris Agreement targets. This involves a maximum temperature increase well below 2°C with the economy transitioning in the next three decades to achieve carbon neutrality by 2050.

- **Scenario C**: a scenario with no future improvement in climate policy, reaching a temperature increase in excess of 4°C by 2100, assuming no transition but rather the continuation of current policy trends. Physical risks are high under this scenario, with significant climate impacts.

Changes in terms of portfolio values are based on two elements: (a) scenario-defined variations in terms of company/holding valuation per sector, also called shock parameters and (b) the portfolio’s exposure to holdings in sectors. For each sector, the change in portfolio value is equal to the product of the sectoral shock parameter times the portfolio’s exposure to that sector.

In June 2021, the BoE released the Climate Biennial Exploratory Scenarios (CBES). This new formulation includes two 2050 net zero scenarios and a business-as-usual one, all covering a 30 years time span to 2050. Between the two firsts, one is an early action scenario modelling an orderly transition starting in 2021. In this case, transition risks are of medium intensity, due to moderate carbon prices and policies. A late action scenario, on the other hand, models disorderly transition (starting in 2031). The delay in implementing decarbonization measures leads to high transition risk. Both scenarios eventually lead to a 1.8°C increase. Lastly, the scenario in which there is no additional action taken, highlighting the lack of climate policies, ends up at about a 3°C increase with the maximum of physical risks.

**BoE stress test results**

The publicly available tool by 2° Investing Initiative (2°ii), which supports investors in running the BoE stress test on their listed equity and fixed income portfolio, was used last year with results featured below.

As an end-user without full visibility of underlying scenario assumptions feeding this tool, the analysis should only be viewed as an exploratory exercise and understood with caution. Additionally, the integration of only listed equity and corporate fixed income assets clearly does not allow the measuring of impacts on our full portfolio in a holistic way, as a large part of the shocks affecting other asset classes such as real estate.

We see that climate inaction (scenario C) leads to the highest negative impacts. In scenario A, the transition takes place early, resulting in almost no increase in physical risks compared to 2020. In scenario B, however, the decrease in emissions is slower, and physical risks decline. The initial increase in exposure to physical risks is larger (due to lower discount rate) compared to a later decline resulting from the transition.

**Figure 37 | Equity portfolio valuation changes under BoE**

![Figure 37](image_url)

**Next steps:** During 2020, Allianz has been working on the development of an in-house tool to run the BoE stress test on additional asset classes. This tool is being refined notably to integrate the CBES scenarios which will be used next year to update the results. It will be available for the investment, risk monitoring and ALM teams as we will explore gradual integration into investment strategy and portfolio strategic asset allocation.
2.2.2. Physical Risks

Physical climate impacts are already present today, and include phenomena such as intensifying water stress, wildfire and heatwave. These constitute important risks for companies, not only regarding their physical facilities, but also their production processes, markets and supply chains. As an investor, we need to understand to which extent the underlying physical risks stemming from climate change impact our portfolios. We run physical risks analysis on our listed equity and corporate fixed income portfolios.

Two scenarios are considered:

• low temperature rise scenario (RCP 2.6): representing aggressive greenhouse gas emissions mitigation action to halve emissions by 2050. This scenario is likely to result in warming of less than 2 °C by 2100.

• high temperature rise scenario (PCP 8.5): representing a continuation of business as usual with emissions at current rates. This scenario is expected to result in warming in excess of 4 °C by 2100.

Two types of scores are derived:

• the Raw Physical Risk score measures the exposure of a company to each climate hazard relative to global conditions, which is calculated assuming that all companies are equally sensitive to each physical risk indicator.

• the Sensitivity Weighted Physical Risk score adjusts the raw score by using sensitivity factors, which link each underlying climate hazard with a set of tangible business impacts, and are represented by a metric that can be measured at the company level to reflect the relative sensitivity of each company to each climate hazard and its impacts. For example, businesses with high labour intensity are more likely to be impacted by two climate hazards: heatwave and coldwave, due to productivity losses in sub-optimal working conditions.

Below an excerpt of the analysis results:

Figure 38 | Portfolio raw physical risk intensity scores - year 2050 (source: truscost)

![Portfolio raw physical risk intensity scores - year 2050](image)

The higher the intensity score, the higher the physical climate risk of the portfolio. We consider 2050 as year of reference since physical risk will materialize more consistently in the long-term.
As shown in the graph, both corporate bond and equity portfolios are within the lower range of climate physical risk (risk scale: 1-100) for most of the risk factors considered. However, the exposure of both portfolios to the risks of coldwave and waterstress has increased significantly from last year. That is mainly due to the broadening of Trucost data coverage. Indeed, the number of assets considered to estimate our portfolios’ exposure to physical risk has grown ten times for both the corporate fixed income and equity portfolios. Nonetheless, Allianz France’s concentration of holdings in sectors with low exposure (service-oriented sectors), led to an overall limited exposure to physical risk. Furthermore, the two portfolios exhibit no considerable differences between low and high temperature rise scenarios, meaning that the damages from climate physical risks are already locked in. The only differences can be seen in heatwave and coldwave. The high temperature scenarios will intuitively leave portfolios more exposed to heatwave. On the other hand, a more intense global warming would make average winter temperatures milder resulting in a lower exposure to coldwave.

**Figure 39 | Portfolio physical risk profile under raw and sensitivity weighted approach - year 2050**

![Graph showing portfolio physical risk profile](source: Trucost)

The higher the score, the higher the risk that the portfolio is exposed to in terms of climate hazards. Across portfolios, the overall risk is considerably reduced when a sensitivity weighted approach is applied, suggesting limited business impact of climate hazards on underlying investee companies.

**Climate Risk Index – Sovereign physical risks**

For sovereign issuers, we have developed the resilience thermometer based on the Global Climate Risk Index 2021 (29) from Germanwatch. The Global Climate Risk Index (CRI) 2021 analyzes to what extent countries (30) and regions have been affected by impacts of weather-related loss events (storms, floods, heatwaves etc.). The most recent data available, i.e. for 2019, were used for the analysis.

We map the CRI country score to each of our sovereign bonds portfolio’s countries, and then aggregate by the corresponding portfolio weights to obtain the overall portfolio CRI score, which is a proxy of the sovereign portfolio resilience. Lastly, we compare with the highest CRI score in the database of Germanwatch, assuming the latter represents the lowest physical risk impacts, hence the best possible scenario / the highest resilience level.

**Aggregation process**

I. CRI score = \( \sum \text{country indicator ranking}(i) \times \text{weighting}(i) \)

II. Portfolio resilience score = \( \sum \text{country CRI score}(j) \times \text{portfolio weighting}(j) \)

\((i)=\text{CRI country indicator} \cdot \ (j)=\text{Sovereign bond portfolio country}\)

As illustrated in figure 40, the resilience thermometer depicts the gap between our sovereign bonds portfolio’s resilience level and the highest considered by Germanwatch (indicated as 100%).

**Figure 40 | Allianz France sovereign bonds’ resilience thermometer**

![Graph showing resilience thermometer](source: Germanwatch, Allianz France)

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(30) Risk country, or country of risk, refers to the geographical area where the activities underlying the financial instruments actually happen. The country of risk is often times not the same as the country of issuer. The scope of the analysis is sovereign bonds in direct mandates (no look-through data of funds are added).
**Next steps:** Only by ensuring that our investments are resilient to the physical impacts of climate change, can we, as an investor, protect our portfolios and contribute to a more resilient and sustainable society. Moving forward, we will be refining our approach on sovereign investment throughout the upcoming developments from the AOA working group in 2021/2022.

**Notre Dame-Global Adaptation Index – Sovereign physical & transition risks**

We also study the exposure of our sovereign portfolio to climate change physical and transition risks through the Notre Dame-Global Adaptation Index (ND-GAIN). The ND-GAIN focuses on adaptation risks and opportunities by assessing countries’ vulnerability to climate change and readiness to react to it.

**Methodology**

The ND-GAIN differentiates between vulnerability and readiness. The former refers to the likeliness of a country to be affected by climate hazards while the latter expresses countries’ preparedness to invest in climate adaptation actions. Vulnerability is based on six “life-supporting sectors”\(^{(31)}\) stretching from food and water to infrastructure, which are represented by six sub-parameters such as exposure, sensitivity and adaptive capacity. Readiness, on the other hand, is underpinned by three components: economic readiness, governance and social factors. Each country receives individual scores for vulnerability and readiness, and an overall ND-GAIN result. The most recent data available (2018) are used for the analysis.

**Results**

The graph depicts the scores of the main contributors to Allianz France’s Sovereign Bond Portfolio top 10 countries.

**Figure 41 | ND GAIN – Allianz France sovereign portfolio (top 10 countries)**

The individual countries’ scores are depicted in the ND-GAIN matrix, which represents four major categories of countries facing climate adaptation (greatest challenges and urgency to act, few present challenges, have time to get ready, have great challenges but are adopting solutions, well positioned with few challenges). The average score of Allianz France’s Sovereign Bond Portfolio is reported in figure 42.

For the most part, Allianz France’s Sovereign Bond Portfolio is well structured to face climate adaptation risks and opportunities according to the ND GAIN index. It comes as no surprise considering the portfolio’s breakdown, being mostly exposed to European countries which, for geographical reasons, are only partially affected by climate change-related risks. The only country partially exposed and not already in the process of tackling climate adaptation risks is the Netherlands.

The final step of the Carbon smart strategy is management. As an asset owner, investment and engagement are the options we prioritize for climate action:

• with regards to investments, we support our portfolio managers in identifying opportunities in climate solutions, whether it relates to adaptation or mitigation.
• we take engagement seriously (see chapter 5) to foster real-world decarbonization. We promote constructive dialogue with companies and evaluate progress toward our targets. In case the engagement results do not meet our expectations after several attempts, we launch an escalation process. As a measure of last resort, we can take the decision to divest, to publicly signal our disapproval of the company business strategy.
• we engage with several types of stakeholders, not only companies, as we are willing to influence the debate toward more sustainable practices within regulation, civil society behavior & asset management.
Biodiversity & Natural Capital Strategy

In 2020, we have started to closely monitor and assess companies in our equity and fixed income portfolio with the goal of understanding the relations between their activities and the surrounding ecosystems and natural capital. In this regard, we recognize the double materiality of nature: the negative and positive impacts of our operations on the natural environment and the risks for our operations as a result of biodiversity loss.

Figure 44 | The double materiality of nature

Human economic activities affect the physical environment through different impact pressures. Examples include emissions of greenhouse gases that contribute to climate change (which may in turn affect the natural habitats), emissions of toxic gases and hazardous waste (which could have harmful effects on nearby living animals and plants), withdrawal of freshwater and natural resources (which disturb land-based and water-based ecosystems) (Figure 45). Thus, we look to assess and estimate the extent to which the activities carried out by our portfolio companies are interfering with the surrounding ecosystems and might be contributing to biodiversity loss and/or natural capital degradation.

More specifically, we conduct 3 types of assessment:

- whether our portfolio companies have assets and business facilities located within close proximity to important biodiversity zones and threatened species
- whether companies are engaging in economic activities with high impact on the natural environment
- which policies and action plans are being implemented by companies to manage their impacts

Figure 45 | Drivers and impact pressures on nature (Source: Science-based Target for Nature Initial Guidance for Business (September 2020))
1. Portfolio impact on biodiversity: Location-based risk ratings

We have started by matching the locations of corporate assets of companies within our portfolio with geospatial data of endangered species and biodiversity areas available through the Integrated Biodiversity Assessment Tool (IBAT). The IBAT database hosts three key global biodiversity datasets – the IUCN Red List of Threatened Species (IUCN Red List) (32), the World Database on Protected Areas (WDPA) (33), and the World Database of Key Biodiversity Areas (KBA) (34) – and provides a scientific heatmap of where endangered species and biodiversity zones are located worldwide. By matching the IBAT database with the Geographic Information Systems (GIS) data of our portfolio companies and their asset and/or business locations, we are able to obtain an initial assessment of location-based biodiversity risks, i.e. whether our investee companies are operating close (35) to sites with endangered species or threatened biodiversity.

Based on this, we have developed an internal location-based risk matrix that goes from 1 to 3, with 1 being the highest risk rating, indicating that an asset or business site is located close to certain biodiversity zones or habitat of threatened species, and 3 being the lowest risk rating (36). Assets and business sites that are not located within proximity of the IBAT biodiversity zones are assigned a “Limited” risk rating, indicating that their activities will not likely conflict with nearby ecosystems. Below, we present the results of our assessment with respect to the locations of our portfolio companies vis-à-vis IUCN threatened species, as well as Key Biodiversity Areas (specifically, Important Birds and Biodiversity Areas (IBA)).

(32) Link to the IUCN Red List database: https://www.iucnredlist.org/
(33) The World Database on Protected Areas (WDPA) is a joint project between UN Environment and the International Union for Conservation of Nature (IUCN), managed by UN Environment World Conservation Monitoring Centre. Data for the WDPA is collected from international convention secretariats, governments, and collaborating NGOs. The WDPA uses the IUCN definition of a protected area as the main criteria for entries included in the database: https://www.protectedplanet.net/en
(34) Key Biodiversity Areas (KBA) are ‘sites contributing significantly to the global persistence of biodiversity’, in terrestrial, freshwater and marine ecosystems. Sites qualify as global KBAs if they meet one or more of 11 criteria, clustered into five categories: threatened biodiversity; geographically restricted biodiversity; ecological integrity; biological processes; and, irreplaceability. The World Database of Key Biodiversity Areas is managed by BirdLife International on behalf of the KBA Partnership: http://www.keybiodiversityareas.org/
(35) For this assessment, buffer zones to determine proximity are defined by using radius of one, three and five kilometers. The assessment is conducted on an asset-by-asset basis.
(36) Here we took a conservative approach: As long as one endangered species or biodiversity zone is found in close proximity to a facility or business site, it is considered that there is a risk of disturbance to this species or zone.
IUCN threatened species:

Figure 46a and 47a present the screening results of our equity and fixed income portfolios with respect to Critically Endangered species in the IUCN database.

We initially observed that a significant number of business sites and facilities of our portfolio companies (85% for equity portfolio and 82% for fixed income portfolio) are in the level 1 risk rating category, meaning that they are located very close to the habitats of critically threatened species. However, a more granular screening (figure 46b and 47b) show that the majority of Level 1 risk-rating facilities are bank branches, headquarters, offices, and real estate holdings. These types of facilities do not conduct activities that have high physical impacts on or disturbance to the surrounding environment. In parallel exposure power plants and regulated facilities should be monitored closely, as they, account for about, respectively, 1/4 and 1/3 of all the facilities of our equity and fixed income portfolio companies, as these types of activities could disturb nearby ecosystems. A more detailed analysis of these types of facilities owned by our portfolio companies will be important in shedding light on the specific operations and potential biodiversity impacts of these facilities.

Figure 46a | Equity portfolio
Location-based risk ratings of portfolio companies’ facilities vis-à-vis IUCN Critically Endangered species

Figure 47a | Fixed income portfolio
Location-based risk ratings of portfolio companies’ facilities vis-à-vis Critically Endangered species

Figure 46b | Equity portfolio
Types of facilities with Level 1 location-based risk rating vis-à-vis IUCN Critically Endangered species

Figure 47b | Fixed income portfolio
Types of facilities with Level 1 location-based risk rating vis-à-vis IUCN Critically Endangered species
Key Biodiversity Areas:

Figure 48a and 49a present the results of our analysis conducted on equity and fixed income portfolios with regards to the locations of our portfolio companies vis-à-vis Important Bird and Biodiversity Areas (IBA) of the Key Biodiversity Areas database.

This analysis shows much more positive results: approximately 90% of the facilities and business sites owned by our equity and fixed income portfolio companies are not located close to IBA sites. Therefore, the risk of their activities interfering with nearby biodiversity zones is quite low.

High-risk sites (Level 1 risk rating) only represent 4.7% the total facilities owned by our equity portfolio companies and 4% for fixed income portfolio. Figure 48b and 49b illustrate the types of the facilities that have Level 1 risk rating in our equity and fixed income portfolio companies. For equity companies, the majority of Level 1 risk facilities (57%) are those that do not operate heavy activities with high physical impacts (bank branches, offices, headquarters, real estate holdings). On the other hand, for fixed income companies, about 2/3 of facilities with a Level 1 risk rating are power plants and regulated sites, whose operations could pose potential threats of disturbance to the surrounding ecosystems.

Similarly to our IUCN screening, going forward, we aim to conduct more granular analysis into the specific operations and potential biodiversity impacts of these facilities in order to ensure that appropriate and timely actions are implemented to minimize negative impacts.
We understand that this pilot assessment resolves one part of the necessary pieces of the complex biodiversity challenge. We consider this a suitable baseline to study the potential impact of proximity over an area of concern for natural capital.

Nevertheless, we have identified three main limitations within this assessment:

- economic activities have different harm potentials even within the same sector (i.e. different technology can change the rate at which land is used or transformed).
- not all harm take place on site. For instance, several sectors, and notably the agri-food industry, have a high dependency on raw materials extracted by suppliers. Hence, capturing the overall impact of these investee companies on the environment is hard as operations take place beyond their facilities.
- the exhaustiveness of the available assets of each company, as well as the precision of asset locations are limited. This might be in relation to the level of disclosure by companies in their public reporting.

2. Portfolio impact on biodiversity: Operational impact scoring

In addition to location, the potential biodiversity impacts of an asset/business site must also be assessed based on the nature of its operations. For example, an office located near a key biodiversity area would not have the same level of impact on the surrounding physical environment as a mining site.

Therefore, in order to obtain a comprehensive assessment of the biodiversity impacts of our portfolio companies, we need to complement the location-based biodiversity risk assessment with an evaluation of the asset-level biodiversity impacts from companies operations. At the moment, the lack of asset-level quantitative data prevents us from conducting this type of assessment.

To our current knowledge, none of the existing biodiversity measurement methodologies is able to collect and apply bottom-up operational data to estimate asset-level biodiversity impacts. Thus, as a temporary solution, we rely on MSCI ESG data, which provide a top-down estimate of companies’ operational biodiversity impacts in terms of percentage revenues deriving from activities that have High – Medium – Low impacts on 4 key biodiversity pressures: Climate Change, Land Use, Waste & Toxic Emissions, and Water Use. Based on this revenue segmentation, for each biodiversity pressure, we assign each company an operational impact score between 0 and 10: a score of 10 indicates that the company has 100% revenues in low-impact activities and a score of 0 indicates 100% revenues in high-impact activities.

Figures 50 and 51 show the distribution of companies in Allianz France’s equity and fixed income portfolios in terms of their operation impact scores on the 4 biodiversity impact pressures, outlined above. The results show that Allianz France’s investments are in companies with the majority of activities in business segments with low and/or medium biodiversity impacts.

**Equity portfolio:**

![Figure 50 | Companies’ operational impact score in 4 biodiversity pressures - Equity](source: MSCI ESG, Allianz FR - MSCI data coverage (% total EQ portfolio): 64%)

**How to interpret boxplots?**

- **Score:**
  - Highest value
  - 25% of holdings
  - 25% of holdings
  - Median
  - 25% of holdings
  - Lowest value

1. 100% revenues in low-impact sectors
2. 0% revenues in high-impact sectors
3. Mean scores
4. Median scores
5. Outliers (extreme values plotted individually, not accounted for in quartiles)
6. Highest value
7. Lowest value

For our equity and fixed income portfolios, Allianz France’s investments are in companies with the majority of activities in business segments with low and/or medium biodiversity impacts.
Land Use:
- almost all of our equity portfolio companies and about ¾ of our fixed income portfolio have an operational impact score higher than 8.0 out of 10. In other words, our investments are mostly in business segments with low impacts on land use and land use change.
- we do observe several outliers – companies that have higher revenues in high-impact sectors compared to the average. From our database, these are companies with significant activities in oil & gas exploration and production, oil and gas transportation and storage, mining, paper and forest products, chemicals and utilities. Special attention will be given to these companies to monitor their impacts and, if necessary, adequate actions will be implemented vis-à-vis these companies.

Climate Change:
- both of our equity and fixed income investments concentrate on companies in low and medium impact business segments.
- companies with score in the bottom quartile, ie. having more revenues in high-impact segments, are active in sectors such as air transport, chemicals, oil & gas, mining and, construction materials.

Toxic Emissions:
- our equity portfolio has a mean score of 6.0/10 and a median score of 6.13/10. Therefore, our equity portfolio is mostly (>50%) made of companies in low and medium impact business segments.
- our fixed income portfolio has slightly better results, with a mean score of 6.7/10, a median score of 7.0/10, and ¾ of companies having above average score (5.1/10). In other words, the majority have revenues in sectors with low and medium waste discharge and toxic emissions.
- companies with high operational impact score are mostly operating in integrated oil & gas, manufacturing, chemicals and utilities. Overall, Toxic Emissions is an area where our portfolio companies have more revenues in business segments with higher impacts. Therefore, this is a biodiversity impact driver where more robust monitoring and additional actions might be needed to minimize potential negative impacts.

Water Use:
- for this impact driver, our equity and fixed income portfolio companies are mostly operating in low and medium impact business segments, ie. having low and medium water consumption and water discharge.
- companies in the bottom quartile are mostly in integrated oil & gas, chemicals and food & beverage.

We recognize that there are limitations to this approach: as the impacts of an activity on the ecosystems is highly location-dependent, an estimation of operational biodiversity impacts through revenue segmentation at the company-level is missing out on this location dependency of biodiversity impacts. Ideally, we would like to be able to collect bottom-up operational data, ie. operational data at the level of companies’ assets / business facilities, and combine these data with the geospatial data of threatened species and biodiversity zones that we can identify through the IBAT database above. That would allow to get location-specific assessment of each assets’ / business facilities’ operational impacts on the surrounding ecosystems.
As mentioned above, asset-level operational data are not available, and collecting such data with sufficient coverage and accuracy might require contributions from companies themselves (for example, by making available operational data of their business sites and facilities to investors).

Going forward, we are continuing to explore relevant datasets which can be developed into a science-based methodology to assess operational biodiversity impacts, with sufficient coverage and granularity, in line with our overall approach to assess portfolio biodiversity impacts.

3. Portfolio impact on biodiversity: Biodiversity impact management scoring

Besides assessing potential biodiversity impacts inherent to the locations and operations of our portfolio companies, these ones can implement relevant policies, strategies, and action plans to manage their impacts on the ecosystems. For this, we use MSCI ESG data as an initial indicator of corporate policies and strategies in regards of biodiversity and ecosystem preservation. Specifically, we employ the following indicators made available by MSCI ESG on 4 key biodiversity pressures (Climate Change, Land Use, Waste & Toxic Emissions, and Water Use):

**Management Score:** indicates how well a company manages biodiversity risks and opportunities (for example, risks and opportunities related to the company’s activities that involve land use changes). The Management Score is a qualitative assessment of each company on several broad categories, namely Strategies & Policies, Targets & Implementation, and Demonstrated Performance. Higher the Management Score, greater the capacity to manage related risk and opportunities.

**Controversy:** certain companies may be involved in severe and very severe controversies related to GHG emissions, Land Use, Waste & Toxic Emissions, or Water Use in the past 3 years. To reflect this, we introduce a penalty on the Management Scores of these companies.

**Other relevant performance indicators:** such as the existence of an Environmental Management System, level of carbon emissions, level of toxic waste release, etc. These indicators are integrated as a penalty or a bonus to the Management Score.

The results of this corporate biodiversity-related policy assessment are presented in graphs F and H below. Companies whose performance is lacking compared to their peers could be potential targets for our engagement efforts to understand and eventually help these companies improving their biodiversity impact management.

**Equity portfolio:**

*Figure 52 | Companies’ impact management scores in 4 biodiversity pressures - Equity portfolio*

Source: MSCI ESG, Allianz FR - MSCI data coverage (% total EQ portfolio): 69%
Land Use:
- significant variation can be observed among our equity portfolio companies in terms of Land Use management policy and action plans. The fixed income portfolio shows less variation in performance, but we still find companies with low scores. In general, these are companies in the oil & gas, mining, and utility sectors, which are sectors whose activities inherently involve significant disturbance to land and land-based ecosystems. Therefore, these companies will have to focus on mitigating, and potentially offsetting, the impacts of their operations on the surrounding ecosystems.

Climate Change:
- our equity portfolio displays significantly more consistent performance in terms of Climate Change management capacity than our fixed income portfolio. Overall, both portfolios invest mostly in companies with medium or high climate change management scores. This could be in part thanks to increasing awareness among policymakers, investors and companies regarding climate change risks and opportunities. Accordingly, companies are incentivized to be more transparent about their policy and action plans to mitigate and adapt to climate change.

Toxic Emissions:
- similar to Climate Change, our equity and fixed income portfolio companies have, for the most part, medium to high scores, showing evidences of policy and action plans to manage their toxic emissions.
- bottom quartile companies are mostly in integrated oil & gas, chemicals, utilities, mining and pharmaceuticals.

Water Use:
- the results show that attention is needed for both our equity and fixed income portfolios, as we find half of the companies having a score below 5.30/10 on the equity side, and below 5.0/10 on the fixed income side.
- this could be due to several reasons, such as difficulties to manage dependency of operations on water resources, lack of overall corporate awareness on the materiality of water-related risks, lack of transparency on water management policy and action plans. Therefore, this area could be a potential topic for engagement with portfolio companies.
4. Dependencies: Biodiversity-related financial risks

In addition to assessing the impacts of our portfolio companies on biodiversity and the ecosystems, we recognize that our portfolio companies are dependent on natural capital and ecosystem services for their operations. Hence, depending on the materiality of these dependencies, biodiversity loss and ecosystem degradation could have different extents of financial impacts on corporate operations. For example, the textile industry is highly dependent on water for its fiber production. Disruption to water availability and water quality could have material consequences of the sector’s activities, resulting in potential financial losses.

With this in mind, we would also like to evaluate the potential financial impacts on our portfolio that stem from the risks of biodiversity loss and ecosystem degradation. This assessment can be broken down into two steps:

**Biodiversity dependency assessment:** Assessing the extent to which the operations of our portfolio companies depend on natural capitals and ecosystem services. In this aspect, we see that databases such as ENCORE has started developing a materiality assessment of natural capital dependency by GICS sectors and sub-sectors (Figure 54).

**Biodiversity dependency valuation:** Following from the dependency assessment, estimating the potential financial loss gain according to different scenarios of biodiversity loss and ecosystem degradation.

**Figure 54 | Biodiversity dependency flows for the Department Stores sub-sector (GICS classification).**

As an investor and asset owner, how can we use the results of our portfolio biodiversity screening?

In general, we acknowledge that biodiversity-related data gaps, especially facility-level operational and supply-chain data, continue to be a challenge that prevents us from properly capturing biodiversity impacts and risks of portfolio companies. In 2021, we will continue our search for tools and partners capable of providing us with in-depth and scientific analyses of corporate nature-related impacts and risks/opportunities. We expect that the increased awareness and interest in the topic would lead to the development of comprehensive frameworks and tools that could allow us to enhance the way we address biodiversity risks and opportunities within our portfolio.

For example, with the burgeoning work of the Taskforce for Nature-related Financial Disclosure (TNFD) initiative and the Science-based Target for Nature, we look forward to standardized corporate biodiversity-related disclosure. These could potentially provide us with materials to establish a more robust framework to assess the policy, strategy and action plans of our portfolio companies in managing their biodiversity impacts and risks.
It could take a few years for a globally recognized and standardized biodiversity-related disclosure to be developed and widely implemented (for example, the finalized TNFD Framework is anticipated to be finalized in 2023). In the meantime, we will continue to work with third-party data providers to look for/develop relevant and scientific data points to enhance our biodiversity portfolio screening. At the same time, we will keep relying on corporate engagement efforts to understand corporate management of biodiversity risks and impacts and encourage increasing transparency around these topics.

**Figure 55** | Science-based Targets Network’s Initial Guidance for Business in terms of nature-related risks and impacts

**Figure 56** | Timeline of the upcoming work of the TNFD

**July 2020**

**September 2020**
Launch Informal Working Group TNFD at the Nature for Life Hub, Business and Finance Day on 25 September. The UN Secretary General will convene leaders in a global summit on nature risk.

**September 2020 - Q3 2021**
Informal Working Group works on creating a scope for the TNFD (Research and Development).

**Second half of 2021**
Taskforce fully established.

**Q3 2021 - Q3 2023**
Build, Testing and Consultation of TNFD Framework focusing on private sector engagement and testing of the framework.

**Q3/Q4 2023**
Global Dissemination of finalised TNFD Framework.
Corporate engagement and Stewardship

At Allianz France, we believe that engaging with our stakeholders is one of the most effective ways to drive decarbonization efforts in the real economy. Through our involvement in international initiatives such as Climate Action 100+, we are combining forces with our peers in the dialogue with companies and other stakeholders to achieve in-depth changes in business strategies.

We conduct our engagement activities not only with companies, but also with our asset managers. We are asking our asset managers to integrate extra-financial aspects into their investments, in particular with regard to our carbon neutrality ambitions. We seek to influence regulatory evolutions through our discussions with regulators, by providing our perspective as a long-term investor.

1. Voting Policy & Results: shareholders resolutions, proxy voting and voting

At Allianz France, we closely review the resolutions proposed at AGMs and consider qualified recommendations from external research providers, such as ISS. Our decision-making process is ultimately based on our voting policy, which takes into consideration the recommendations made by the Association Française de la Gestion Financière (AFG) and the Corporate Governance Code jointly prepared by the Association Française des Entreprises Privées (AFEP) and the Mouvement des Entreprises de France (MEDEF) regarding good governance and best practices in the matter. This policy will evolve this year to include further social and environmental considerations and will apply to all our voting decisions from 2022.

In 2020, we exercised, directly or indirectly, our voting rights across 464 AGMs for a total of 10,901 resolutions. The resolutions presented the Boards and shareholders are assessed on a case-by-case basis in order to determine if these are in the best interest of shareholders and in favor of relevant stakeholders (employees, suppliers, and/or the environment). During the year, we voted in misalignment with the voting recommendations of the Board of Directors in 2,183 resolutions (20% of total voted).

The most common topics where we were in misalignment with management recommendations continued to be the Board composition. In particular, this concerned cases where the level of independence and audit/industry expertise at Board-level or Board Committee-level were insufficient, the share of women in the Board was below 30%, the size of the Board was considered to be too large to act effectively, or where directors were overboarded (and hence not having sufficient time to dedicate to their role as Board member).

The second most common topic was remuneration. Allianz France favors transparency on KPIs selected for variable remuneration as well as ambitious targets for the remuneration of executives. Other topics were linked to shareholders’ rights, capitalization and anti-takeover devices. In addition, misalignment with management was sometimes driven by shareholder resolutions aimed at requesting companies to enhance their disclosures of climate change-related strategies (indicators linked to CO2 emissions and mitigation efforts).

We continue to identify a low percentage of resolutions brought to AGMs addressing environmental and social topics. However, in cases where these resolutions are presented in a coherent manner, we conduct a thorough assessment to support change. In 2020, our voting favored resolutions requesting companies to set and publish targets on GHG emissions, reporting on health impacts of products and transparent labelling of products or substitution of ingredients. For instance, reporting on risks of sugar products. As a responsible shareholder, our voting practices go hand-in-hand with our engagement practices. At the end of the day, both efforts point in the same direction: positively influencing companies to improve their ESG-related practices and transparently disclosing their efforts and mechanisms to ensure good governance, as well as encouraging sound environmental and social performance.
Engagement

In 2017, Allianz Group introduced a more systematic approach to engage with investee companies based on detailed analyses and the identification of companies falling below our ESG scoring threshold. Through this process, a number of companies where there are material ESG risks and concerns - ranging from toxic emissions and waste to child labor and negative impacts on communities - are identified. Allianz Group has entered into collaborative dialogues with these companies to communicate concerns, understand their position and, ultimately, drive positive change. As part of the engagement efforts, Allianz France has provided support through the assessment of companies below ESG scoring threshold with the aim of highlighting the areas where investee companies are expected to improve.

Figure 57 | Engagement process (simplified)

![Allianz Group ESG Engagement Overview](image)

We see engagement as more impactful and mutually beneficial than automatically withdrawing our investments without first providing an opportunity for change. We are aware that meaningful change can take several years and, if we don’t see improvements over time, we will act accordingly. Please see below a very simplified illustration of the Allianz engagement process step by step.

For engagement with sovereign issuers, the leverage of Allianz France is different than with corporate issuers. Nevertheless, Allianz France is seeking ways to engage such issuers by identifying collaborative engagement opportunities.

Figure 58 | Allianz Group ESG Engagement Overview

![Engagement process diagram](image)
2. Asset Owner stewardship – Engagement with Asset Managers

Asset manager monitoring

For listed assets, we have adopted the MSCI WAKI (weighted average key issues) score as basis to monitor ESG tail risks. Asset managers have to document explanations for positions/purchases below thresholds and commit to quarterly delivery of explanations for positions & purchases below thresholds to Allianz.

We are engaged in discussions on the construction of ESG reporting that integrates the indicators we track to monitor our efforts on climate, biodiversity and societal aspects. We are asking that to our asset managers in order to have visibility at portfolio, sector (exposure to carbon intensive sectors) and company levels to monitor sustainability risks.

We also ask our asset managers to better understand the profile of the companies they include in their portfolios, in order to assess, within the high-carbon sectors:

- **“Climate leaders”**, i.e. companies that demonstrate resilience and anticipation in the context of the energy transition on short, medium and long-term decarbonization targets as well as on the resources committed by the company to achieve them.

- **companies that are willing to make visible efforts to integrate sustainability issues**, but where change is difficult (for example in industries that do not have a low-carbon alternative today) and does not lead to immediate results. We look to support these companies in their transition efforts.

Asset manager review

We hold bi-annual ESG Deep Dive meetings with some of our asset managers to review our stance on ESG topics. Besides following a “comply or explain” reasoning in the review of below thresholds issuers, the ESG Deep Dive meetings serve as an occasion to have a detailed reflection on the most problematic positions within the portfolios. We use those occasions to review potential discrepancies among different ESG rating/scoring methodologies.

Furthermore, for all asset managers, we integrate an ESG pillar into the steering KPIs along with financial indicators with a weighting of growing importance. The rationale of this scorecard is to convey the message to our asset managers that ESG is not seen by Allianz as an additional restriction but should be an integral part of the investment process. Moving forward we are looking to add a climate neutrality assessment into the ESG pillar of the steering KPIs scorecard.
3. Advocacy with Policy Makers on sustainable finance regulation

Sustainability-related disclosure in the financial services sector (SFDR)

In March 2018, the European Commission put forward the action plan on financing sustainable growth. Action 7 calls for clarifying institutional investors’ and asset managers’ duties. The European Commission followed through on this action in May 2018 with a proposal for a regulation on disclosures relating to sustainable investments and sustainability risks. The proposal was adopted as part of the sustainable finance package.

The disclosure regulation was adopted by co-legislators in 2019 and was launched the 10 March 2021. The objectives of the Sustainable Finance Disclosure Regulation (SFDR) are:

- providing more transparency on sustainability integration and adverse sustainability impacts in a standardized way.
- preventing greenwashing in order to ensure comparability between financial actors and to communicate to clients.

Among the twenty articles dedicated to SFDR, six articles are legally binding for Allianz France: articles 3, 4, 6, 8 and 9 whose implementation due date was on March 10th, 2021 and article 7 due for December 2022.

The SFDR requires financial enterprises to report, at entity and product levels, streamlined and standardised information regarding environmental, social and governance-related issues of the investment. Entities are required to explain how sustainability risks are taken into account in their activities and to precise the impacts of their investments, through the publication of indicators related to Environmental and Social dimensions. Products are classified according to three categories: either as having an environment or social objective, promoting environmental or social characteristics, or none.

Through its life insurance product, Allianz France is deeply involved in the implementation process of the SFDR. Allianz France plays an active role in the Sustainable Finance Implementation set-up by the Group and has built locally an agile and cross-functional working group with all necessary expertise.

At Allianz France, a dedicated working group responsible for the implementation of the regulation as of March 21, has been set up. On top of that, a global coordination has been established to ensure common understanding of requirements, to promote mutual exchange on local solutions and experiences as well as to share experiences. Each member of the group intervened according to his or her expertise throughout the implementation process. Allianz France considers this experience as a strong opportunity to deepen its future strategy and considers potential market developments. In practical terms, the dedicated group meets at least every week to exchange on the project.

On March 10th, 2021, Allianz France released its SFDR communication through different channels. General information related to the investment and remuneration policy – art. 3, 4 – were published on Allianz’s website. Information on ESG policy as well as specific information on unit linked and euros funds were disclosed on Allianz’s website (art. 6, 7, 8, 9).

The dedicated working group to SFDR continues the work to prepare for the application of the RTS on January 1st, 2022. The RTS will provide the qualification of funds on the basis of a detailed and common criteria grid and the publication of negative impacts at entity level.

Disclosure information regarding investment supports is available here:
https://www.allianz.fr/assurance-particulier/epargne-retraite/placements-financiers/finance-durable.html

Shareholder’s rights Directive (SRD2)

As an institutional investor, Allianz France closely monitors the requirements arising from the new Shareholder Rights Directive II (SRD2). Aiming to foster long-term shareholder engagement, the directive covers a large scope of European stakeholders, including institutional investors, asset managers, and proxy voting companies. The transparency required by SRD2 is an opportunity of publicly reflecting Allianz France position as a sustainable actor. We consider the directive an opportunity to support our long-term engagement in corporate governance which, together with the inclusion of ESG factors, we consider key pillars to improve financial and non-financial performance of enterprises.

As a shareholder exercising directly or indirectly its voting rights, Allianz France also commits to publishing its own shareholder engagement policy. This covers both financial and non-financial investment strategies monitoring and dialogue between investee companies and other stakeholders. It also includes social and environmental impact assessment of enterprise governance, conflict interest prevention as well as annual disclosure on its integration in our voting activity. We also ensure that any of our engagements will be reflected in the way we actively exercise our voting rights.
European Union Taxonomy

The EU Taxonomy regulation, a classification system developed to support the European Green Deal, will shape the responsible investment market in several forms. In the first place, it will clearly define economic activities with the potential to “substantially contribute” to six environmental objectives:

1. Climate change mitigation
2. Climate change adaptation
3. The sustainable use and protection of water and marine resources
4. The transition to a circular economy
5. Pollution prevention and control
6. The protection and restoration of biodiversity and ecosystems

Corporates concerned by the Non-Financial Reporting Directive (NFRD) - to be amended by the Corporate Sustainability Reporting Directive (CSRD) - will have to report on their share of activities that are aligned with the EU Taxonomy. In the same vein, financial institutions and fund managers will have to report on their share of activities that are aligned with this regulation.

The EU Taxonomy will serve as the basis for the upcoming EU Green Bond Standard, setting the rules for the booming Green Bond market that reached over one trillion of cumulated debt in 2020. This shift will set clear guidelines for market participants and provide a uniform understanding of what can be called “Green”. This will have the immediate effect of preventing “greenwashing” and will further require transparency in reporting, tracking of proceeds and technical criteria used during screening processes.

Allianz France pilots the project for the integration of the EU Taxonomy across asset classes. This includes coordination of the selection of a suitable data provider that could support Allianz Group and in-house asset managers in complying with the requirements under the EU Taxonomy. In addition, we support the activities of Allianz as a Member of the Platform on Sustainable Finance (PSF), with regards to Taxonomy implementation. The PSF is the advisory body to the European Commission on the further developments of the EU Taxonomy regulation.

As part of our efforts to make regulations more user-friendly and adapted to the realities of market participants, we provided an answer to the consultation on the Delegated Acts for Objectives 1 and 2 of the EU Taxonomy in December 2020. Our main message addressed technical criteria on Real Estate, the need for further clarification on the expected screening processes linked to the Do No Significant Harm (DNSH) and Minimum Social Safeguards (MSS) criteria, the extension of insurance activities within the classification system and considerations on KPIs to be reported.

Allianz welcomes the EU Taxonomy as an important step towards achieving the EU 2030 climate-neutral goal and to reduce CO2 emissions worldwide. As an insurer and investor, we are fully committed to supporting this transition in a low-carbon, more resource-efficient economy. We appreciate the opportunity to provide feedback to the Taxonomy Technical Advice (TAC) on Climate Change Mitigation (CDM) and Climate Change Adaptation (CDA). Along with our consultation response as a member of the EU Platform on Sustainable Finance, we would like to highlight some key points in the following.

GENERAL COMMENTS ON THE DA

Enabling activity: Whether an activity qualified as an “enabling activity” has been made clearer in the DA in comparison to the March 2020 EU report (Annex X). For instance, in the case of “infrastructure for rail transport”, the DA states that the activity can be considered as an enabling activity as referred to in Article 13(3), point 2, of Regulation (EU) 2020/1511, where it complements the technical screening criteria set out in this section (Annex I, p. 191). Allianz welcomes this as a pertinent improvement and recommends to further introduce clearer references wherever possible.

Technical Screening Criteria: Changes to the Technical Screening Criteria (TSC) presented in the current DA - in comparison to the March 2020 EU report - pose challenges for market participants (corporate, investors and data providers) in view of the reporting obligations entering into force on 31 December 2021. Such changes might have a negative impact on the coherence and timely adoption of the Regulation, notably due to the associated operational screening criteria that are required.

However, some TSC remain unclear or suboptimal in the current DA. For example, in the context of ODA activities for protection and restoration of biodiversity and ecosystems (environmental objective 5), it is still unclear what it means to be “nourish a biodiverse-sensitive area” (Annex I, p. 209). We welcome TSC which are close to operational and business activities, such as “120% per KPI”. We would recommend defining all TSC clearly, trying to limit room for interpretation by overloading calculation procedures or developing more concrete criteria for the climate adaptation objective.

NON-LIFE INSURANCE

Actions: Annex II CCA covers criteria for non-life insurance enabling activities with respect to underwriting of climate-related perils. However, the limited number of activities covered by these types of insurance products poses questions on the perception that insurers and regulators will base on the performance of insurance companies. For instance, the expected A+ rating of taxonomy alignment (5% of turnover of the insurance industry), when compared to other sectors

As part of our efforts to make regulations more user-friendly and adapted to the realities of market participants, we provided an answer to the consultation on the Delegated Acts for Objectives 1 and 2 of the EU Taxonomy in December 2020. Our main message addressed technical criteria on Real Estate, the need for further clarification on the expected screening processes linked to the Do No Significant Harm (DNSH) and Minimum Social Safeguards (MSS) criteria, the extension of insurance activities within the classification system and considerations on KPIs to be reported.
Article 29

Article 29 marks the end of Article 173 and is part of the energy-climate law of 8.11.2019 which raises the target of carbon neutrality by 2050. This French energy-climate law is a response to the revision of the European Disclosure Regulation which will come into force in Europe in 2021. The Disclosure Directive will establish a common standard for European countries on the reporting of financial products. Allianz France welcomes the disclosure requirements of the Article 29 as it strongly reinforces the transparency requirements for financial actors on their activities and objectives to align with the Paris agreements.

Allianz has closely monitored these evolving disclosure requirements. Information which we are already disclosing following the recommendations of Article 29, can be found in this report and help to identify what our priorities for the coming months in terms of reporting and transparency will be.

This year we have reinforced our disclosure to include the Art.29 requirements on:

- overall ESG structure
- exposure of our portfolio to fossil fuels
- explanation of our quantified climate targets and 1.5°C alignment strategy
- biodiversity strategy and indicators
- mapping of ESG risks

In order to fully align our sustainable investment report with the Article 29, we will strengthen our disclosure efforts on certain topics, such as the Taxonomy, risks segmentation, methodology details and limits, as well as challenges we are facing while implementing our sustainability objectives.
Financing the solutions

In addition to measuring the exposure of our investments to the risks and consequences of climate change, we are striving to mitigate its effects by supporting the development of low-carbon & socially inclusive sustainable alternatives for our economy.

Through our investments in green bonds, we seek to support companies and countries in the development of low-carbon projects to drive their energy transition at scale. We also contribute to the development of low-carbon energy projects through our investments in renewable energies, by favoring a local anchoring. As such, one of our concrete actions was for example in 2020, when we helped financing Europe’s largest solar farm in Piolenc in the Vaucluse region.

More broadly, we conduct research into alternative low-carbon energies and energy carriers such as biogas, hydrogen and carbon capture and storage as well as new technologies helping the realization of this transition.

Sustainable real estate is another key area of focus for us in supporting the energy transition, given its importance in both French and European decarbonization strategies.

Finally, through our impact investing portfolio, we seek to contribute to the development of impactful companies whose business models meet the economic and societal needs of a socially fair low-carbon transition. Similarly, our investments in broader sustainable & social bonds aim to support the transformation of companies towards governance models integrating the challenges of a low-carbon world.

These various alternatives offer us, as investors, different ways to act and monitor, in a more or less direct way, sustainable changes in the real economy.

1 Allianz France “Shades of Green“ - Green Bonds & Green Buildings

Allianz France’s internal assessment framework “shades of green“ has been developed since 2017 to estimate the likelihood of “greenness" within our green bonds and green buildings investments, based on the expected environmental impacts. Green instruments are categorized as light/medium/dark green to reflect their associated impact.

The methodology features two core indicators: on the one hand, external certifications assessing the level of greenness (from available market information(37)), on the other hand, the ESG score of the issuer.

Figure 59 | Green investment overview (end of 2020)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,3 Bn Euros of green investments</td>
<td></td>
</tr>
<tr>
<td>renewable energy</td>
<td>460 Md€</td>
</tr>
<tr>
<td>certified green buildings</td>
<td>1 800 Md€</td>
</tr>
<tr>
<td>green bonds</td>
<td>2 100 Md€</td>
</tr>
</tbody>
</table>

(37) There are different forms of external review on the green credentials of the use of proceeds: Third Party Assurance, Second Party Opinion, certification under the Climate Bonds Standard. The external reviews are based on existing principles such as the Green Bond Principles by ICMA, the Climate Bonds Standard by CBI and other national standards.
Green Bonds

Green bonds are essentially identical to standard bonds except for that, as the bonds are labeled “green” by their issuers, proceeds are earmarked for new and/or existing green projects, and the issuers track and report on the use of proceeds to ensure green compliance.

The two sets of voluntary guidelines, The Green Bonds Principles by the International Capital Market Association (ICMA) and the Climate Bonds Standards by the Climate Bonds Initiative (CBI) provide frameworks to analyse the credibility/verification and “level of greenness” of a green bond. Both frameworks recommend four core criteria for analysis “Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, Reporting”, in addition to an external review.

External review is two-fold: it includes a second party opinion, commissioned by the issuer to evaluate the green bond, as well as a third party verification, used to certify the bond against an existing standard using an approved verifier.

At Allianz, we use the certification from CBI which constrains the issuer to disclose annual reporting throughout the entire term of the green bond.

Out of the €2.1bn green bond investments of Allianz France (end of 2020), the shades of green results (percentage as of investment amount) shows that about a third are assessed as dark green.

![Figure 60](Source: Climate Bonds Initiative, MSCI ESG, Allianz France)

The European Union, through the publication of the Taxonomy, provides greater clarity to investors on green activities. However, the concern of “green-washing” is always present, and vigilance should still remain of upmost importance.

Green Buildings

To assess the “shades of green” of the Real Estate portfolio, Allianz France refers to three green buildings certifications types:

- HQE (High Quality Environmental Standard),
- BREEAM (Building Research Establishment Environmental Assessment Method)
- LEED (Leadership in Energy and Environmental Design).

The methodology compares the different certification levels of the three labels according to the equivalence matrix illustrated below, to categorize certified green buildings as light/medium/dark green. This enables us to evaluate the associated low/moderate/high positive impact of the building.

<table>
<thead>
<tr>
<th>Certification levels</th>
<th>HQE</th>
<th>BREEAM</th>
<th>LEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
<td>Certified</td>
</tr>
<tr>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Sliver</td>
</tr>
<tr>
<td>Very Good</td>
<td>Very Good</td>
<td>Gold</td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>Excellent</td>
<td>Platinum</td>
<td></td>
</tr>
<tr>
<td>Exceptional</td>
<td>Outstanding</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Figure 57](Source: Allianz France - Green Buildings certification levels equivalence matrix)
Out of the €1.8bn certified green building investments of Allianz France, the shades of green results (percentage as of investment amount) are shown as below, for equity (18 green buildings, 1.7 billion €):

**Figure 61 | Allianz France shades of green building 2020 : equity**
(Source: Allianz France)

![Shades of green building](https://example.com/shades-of-green.png)

To complement the shades of green analysis on the Real Estate portfolio, we also conduct, with the support of EcoAct and based on their carbon footprint analysis, an assessment of the overall share of green assets. This analysis relates to the carbon intensity of each asset's energy consumption (scopes 1 and 2). If the carbon emissions intensity is lower than the “green” threshold value, then the asset is classified as green.

A “green” threshold is defined for each sector (e.g. office, or residential etc.) which is equivalent. It is equivalent to the maximum of level “B” of the French “carbon label” included in the Energy Performance Diagnosis (38).

For example, a “Residential” asset is considered green if its carbon performance is less than or equal to 10 kg CO2eq/m²-year.

The following values are used to qualify the different thresholds:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Carbon intensity, (kg CO2e/m²/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitality</td>
<td>30</td>
</tr>
<tr>
<td>Industry</td>
<td>10</td>
</tr>
<tr>
<td>Office</td>
<td>15</td>
</tr>
<tr>
<td>Residential</td>
<td>10</td>
</tr>
<tr>
<td>Retail</td>
<td>10</td>
</tr>
</tbody>
</table>

**Figure 62 | Green threshold for the different sub-sectors in real estate** (Source: EcoAct)

The green share of Allianz France’s direct real estate investments (40) is:

- € 2.4 billion out of € 5.8 billion, representing 42% of total asset value;
- 65 buildings out of 149, representing a 44% share of the portfolio
- 303,759m² out of 712,888 m², representing 43% of asset floor area (held by AIM France)

Among the next steps, efforts should be pursued within the Real Estate portfolio to reach the 1.5°C alignment goals defined in the Paris Agreement. Moving forward the implementation of a low-carbon strategy underpinned by quantified targets will help steering this trajectory. In this respect, the alignment study initiated this year using the European consortium’s CRREM (Carbon Risk Real Estate Monitor) tool on the direct investments portfolio constitutes a first step toward a forward-looking assessment of the real estate portfolio.

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(38) For details, see https://www.ecologique-solidaire.gouv.fr/diagnostic-performance-energetique-dpe
(39) It is important to note that in 2014, more than one third of French housing was awarded either a C or D carbon label (source: Figures and Statistics, Ministry, 2014), and therefore considered not “green”
(40) Source: EcoAct
The objective of measuring avoided emissions stemming from our renewable energy investments is to compute the CO$_2$ emissions amount saved or "avoided" by producing electricity from renewable energies versus the amount of CO2e generated by the non-renewable electricity mix of a country.

To do so, the methodology is two-fold. First, the country emissions are calculated under a reference scenario, which is the non-renewable electricity mix. As the emission factor of a non-renewable electricity mix on country level is not straight-forward to calculate, AZ France uses the country level standard emission factor in the reference scenario. The emissions factors comes from the European Commission initiative called, the Covenant of Mayors, and are usually lower than the actual emission factors (i.e., the latter is close to the country’s real energy mix). Therefore, the avoided emissions computation is rather conservative and the results slightly underestimated.
In a second stage, the emissions from the renewable electricity are computed and two possible approaches are possible. A standard emission factor approach or a life cycle emissions approach, which is more complex. For consistency purposes, AZ France uses the standard approach, hence considering the renewable electricity emission factor equal to 0. As a result, AZ France’s avoided emissions from low carbon electricity are equal to the amount of emissions from the non-electricity energy mix computed in stage 1. Lastly, we assume an apportioning logic (corresponding to Allianz France investment ownership share) as recommended by PCAF (platform for carbon accounting financials). As a result, the underlying renewable electricity projects in which Allianz France has invested contributed to **188,971 tCO2e emissions avoided** in the year of 2020.

On a cumulative basis, the avoided emissions have reached **512,091 tCO2e**.

![Figure 64 | Annual avoided emissions from renewable energy investment (Source: Allianz France, Covenant of Mayors).](image)

**Hydrogen, what type for what uses?**

In 2020, a familiar low carbon alternative resurfaced on the energy transition scene. A mix of forces cumulatively favored the carbon free gas’ long awaited return. Key outstanding questions include: what drives this trend, what are the real opportunities offered by the hydrogen industry and how can investors contribute to the development of its uses, both in industrial processes and as an energy carrier?

The hydrogen industry, through the EU Green Deal, has received **strong political support** over the past years, as it has been integrated into the EU’s stimulus packages, associated with the EU’s decarbonization objectives. The EU, its members and other countries such as South Korea, Japan and Australia have sent a strong political signal to the market through massive investment plans over the next decade. At the same time, the 4th phase of the European emission trading system, which targets will support a 40% reduction in emissions in sectors covered by 2030, has seen carbon prices soar, redistributing the cards around the large-scale use of hydrogen-based decarbonized energy solutions.

Today, 95% of hydrogen production is produced from carbon-based fuel, whose combustion is highly energy-intensive, called grey hydrogen. Alternatively, this process can integrate capture and storage of carbon emissions resulting from the combustion of fossil fuel to obtain “blue hydrogen” (less carbon-intensive). A second alternative consists of producing decarbonized green hydrogen through electrolysis of water with green electricity.

The main uses and demand for hydrogen development can be classified into three types:

- as a feedstock, where green or blue hydrogen can replace grey hydrogen in industrial processes for carbon intensive sectors such as steel, fertilizers & ammonia production and oil refining.
- as an energy vector, in the transport industry, where green electricity can be used to produce hydrogen to power fuel cell electric vehicles or trains.
- as a gas for heating & industrial processes.

Mid-to long term demand, supported by large-scale industrial projects and international collaboration will come to support the decarbonization efforts for these three types of usage. As an investor, our role is to support these initiatives, with a two-fold objective in mind: support decarbonization in hard to abate sectors, where currently no alternative to transition toward less carbon intensive processes exists, as well as widespread the use of clean energy and clean transports.

Lastly, the development of these low-carbon alternatives for the industry, for transport and heating are heavily dependent on, among other drivers (notably several political ones), competitive carbon prices and forecasts.
Next steps: Moving forward, we are in discussions with our asset manager to explore the use of a life-cycle analysis as well as to harmonise the country emission factors for the countries where these are divergent. Additionally, we lead research on alternative low carbon energies sources (see box below).

Funds “Objectif Climat”

In 2020, the Caisse des Dépots convened a coalition of 12 asset owners, including Allianz, all convinced of the importance of stepping up environmental action to address the climate challenges ahead. Starting with a simple concern about the alignment of investment portfolios with the Paris agreement, the initiative has made two observations:

- the risks, opportunities and impacts of climate change are still not sufficiently integrated into investment strategies
- the diverse and recent methodologies currently featured in investment strategies, each offering its own pros and cons, are not standardized

Following these discussions, the initiative decided to launch three funds under the label “Objectif Climat” over the next three years, with the intention to contribute to the improvement and further integration of climate change issues in investments, and to encourage new asset owners to join them.

At the end of 2020, among the 35 management companies that responded to the call for tender, the 12 institutional investors opted for 3 strategies for a total amount of €600m:

- a passive equity fund managed by Amundi. The fund replicates the customised “Euro Istoxx Ambition Climat PAB” index created for the occasion by Qontigo and integrates the specificities of the European climate labels PAB (Paris Aligned Benchmark).
- an equity fund managed by Sycomore. The fund is based on the optimization of the NEC (Net Environmental Contribution), and uses forward-looking alignment analyses to ensure a warming trajectory compatible with the 1.5°C objectives of the Paris agreement.
- a fixed income fund managed by HSBC. The fund’s approach built around a proprietary score using avoided carbon indicators and green share of companies’ turnover, aligned with the ambitions of the Paris Agreement.

Green practices

With regards to Allianz’s buildings, we have integrated the following low carbon practices:

- mandatory environmental certification of any major renovation projects.
- connection of all directly managed buildings to a unique Energy Management Portal to facilitate energy consumption monitoring.
- electricity bought directly by Allianz France is 100% renewable (e.g. wind, solar) since the end of 2015. Focusing on corporate real estate, this means that electricity used is 100% renewable; and for the real estate invested portfolio, electricity of common parts (managed directly by Allianz France) is 100% renewable.

3 Social and sustainability bonds

As per end of 2020, social bonds within our portfolio amounted to €326mn. Moreover, the selected social bonds are in line with the Social Bond Principles (SBP) as established by the International Capital Markets Association (ICMA). These bonds have strong commitment and allocation rules that ensure that our investments are directed towards financing of projects within the following categories:

- access to housing (social, cooperative and municipal),
- social inclusion (refugee homes, workshops for disabled populations),
- public transport and ancillary services (trains, buses and associated stations),
- healthcare (hospitals and clinics),
- access to nutrition and responsible agriculture, and
- social development and education (kindergarten, schools, universities).
As part of the the Social Bond Principles (SBP) recommendations, these bonds are financing projects that aim for “defined vulnerable target populations”, including, but not limited to, populations living below the poverty line, excluded and/or marginalized communities, people with disabilities, migrants, undereducated, underserved (owing to the lack of quality access to essential goods and services) and unemployed. At the end of the day, social projects are always more impactful when addressing the challenges of those that are most in need.

We also invest in sustainability bonds up to €323mn, which serve almost the same purpose as social bonds regarding target populations, as mentioned above with, but also allocate funds to projects with positive environmental benefits such as green projects (water treatment, access to renewable energy, etc).

Within our portfolio, other types of investments could be considered of social and societal nature, as we participate in the financing of hospitals and public infrastructure through our alternative investments. The quantification of these benefits is easier to track in the case of social and sustainability bonds, as impact reports are available. For clarity, we excluded these figures from our reporting as benefits have not been quantified or reported yet. Finally, we invest in innovation through funds that solely finance start-ups and SMEs, which have a rapid capacity to create decent employment and benefit society in general.

4 Impact investing

Entering 2021, Allianz France continues to expand its impact investing strategy by participating in impact funds with positive social and environmental objectives, KPI monitoring and reporting commitments. Our impact due diligence is conducted through an internal assessment tool that leads us to favor funds that not only quantify the expected or actual positive impacts, but those that are also capable of ensuring that negative impacts are mitigated or negligible. We assess both the strategy of the fund and the capabilities of asset managers to address impact. This goes hand in hand with an in-depth analysis on financial criteria.

Our impact investing focus is limited to private Equity, Fixed Income and Real Estate funds with clear and measurable objectives. Some examples of impact investing within our portfolio include:

Citizen Capital Impact Initiative

An example of our impact investing strategy is reflected in Allianz France’s collaboration with Citizen Capital to structure the Citizen Capital Impact Initiative (CKI2) - a dedicated fund started in 2017, to finance start-up, and SMEs with clear environmental and/or social quantifiable targets.

CKI2 has, inter alia, invested in R-PUR, a company focused on creating awareness about air quality(41) and manufacturing protective masks with the capacity of filtering over 99% of the particles linked to health problems and the elevated mortality rates in cities. Through R-PUR’s app, users can obtain information about real time air quality nearby and monitor their exposure to nano particles (PM10, PM2.5, PM0.05) linked to health problems. In 2020, R-PUR sold over 33,963 masks and promoted awareness amongst its users through its mobile app, which recorded a monthly traffic of 8200 users at the end of 2020. As a response to the COVID-19 pandemic, R-PUR has adapted its production capacity with the objective of manufacturing between 1 and 2 million CE-certified masks for medical and general use.

The fund has also invested in Supermood, an online platform used by companies for the promotion of employee engagement and dialogue. The tool allows employees to participate in the process of corporate transformation through continuous periodic feedback in the form of user-friendly questionnaires. In times when employees have resorted to working from home due to the sanitary crisis, on-site interactions are rare and the need for dialogue becomes even more pertinent to promote cohesion and democratic decision-making. This was reflected in the considerable adoption rate of the tool within companies (by both employees and managers). In 2020, Supermood was used by more than 210,000 employees, for a total of 4.1 million opinions submitted.

RAISE Impact

Allianz France continues to increase its financing of unlisted SMEs and start-ups through the impact perspective in partnership with Raise. The fund RAISE Impact follows the impact philosophy within the GIIN and conducts pre-investment assessments to determine if participation in companies will lead to positive impacts. Depending on the activity of the financed company, KPIs monitored can include CO2 emissions avoided, tons of waste avoided, KWh of clean energy generated, number of jobs created, avoided costs for communities (in EUR), among others.

Ginkgo – Soil depollution fund

Another recent addition to our impact investment portfolio is Ginkgo, a Real Estate fund aiming at financing the remediation of brownfield sites toward their repurposing. The fund recognizes that urban sprawl is a severe problem, with negative impacts on biodiversity and health, and ensures the recovery of sites through depollution measures and reconditioning.

The fund also ensures that carbon emissions are controlled in-situ and on-site through remediation treatment, the reuse
of waste material during the construction process and the delivery of energy-efficient buildings. Social components are also addressed by the fund through the offering of affordable and market rate housing, reducing exposure to harmful chemicals and poor air quality, and restoring social and economic dynamism from previously idle sites.

**Land Degradation Neutrality Fund (LDNF)**

We furthermore promote impact investment through the participation in funds such as Mirova’s LDNF. Created in 2018, the Mirova LDN fund offers long-term financing for sustainable land management projects around the world (in particular ACP, Asia and Latin America). The Fund targets sustainable agriculture and forestry projects in order to significantly contribute to achieving neutrality in terms of degraded land, as defined by the United Nations Convention to Combat Desertification. Objectives set cover environmental and social targets, including the storing of 35 million tons of CO₂ equivalent and creating or supporting 100,000 jobs, mainly in rural areas of developing countries, to help people lift themselves out of poverty.

**Impact Green Bonds Fund**

With the intention of expanding our investments aimed at mitigating climate change, we worked along with Allianz Global Investors (AGI) in 2019 to launch a dedicated Impact Green Bond Fund. The strategy of this fund is to invest in fixed income instruments that have a positive environmental impact while respecting internationally recognized standards and certification schemes (Green Bond Principles and/or the Climate Bonds Initiative).

An impact report is provided annually by AGI to track the impact performance of this fund in terms of environmental benefits. Given the high concentration of the fund on bonds that are linked to Renewable Energy (36.2%), Clean Transportation (21%), Green Buildings (20.9%), Waste management (8.1%) and Energy Efficiency/storage (7.8%), a common KPI was CO₂ emissions avoided. Based on the aggregation of the publicly available information contained in each of the issuer’s impact reports, our investment in the Allianz Impact Green Bond fund contributed to the avoidance of at least 23,589 tons of CO₂ emissions during the year.

![Impact metrics of Allianz France dedicated green bond fund](source: Allianz Global Investors)

(42) Impact figures are calculated for the whole fund. Data is calculated for green bonds included in the portfolio from inception date to end of 2020 with available reporting or impact expectations disclosed by the issuer (49% of the fund). Bonds without any available reporting or impact expectation disclosure from the issuer are not included. Impact figures are approximated and do not necessarily reflect the exact impact of the fund.
Overall, our impact fund investments in France amount to nearly €150mn. Notice that this figure only takes into account private equity, real estate and fixed income investments that are in line with our impact investing philosophy. As of today, we do not consider public equity to be an instrument that could be classified as impact investing, notably due to the complexities behind quantifying the negative impact accounting or insufficient tracking of proceeds. In line with our allocation method in carbon footprinting, we apportion the aggregated investees’ impact to us based on our share of investment (for example, if our total investment in a certain project is 5%, we only report to have facilitated 5% of the project’s impact).
For more information, our teams are at your disposal.