June 2023

AXA Assurances Vie Luxembourg
Sustainable Finance Disclosure

Introduction

The European Union has launched an ambitious Sustainable Action Plan in order to support the delivery of the objectives of the European Green Deal by channelling private investment into the transition to a climate-neutral, climate-resilient, resource-efficient and just economy.

As part of this action plan, Regulation (EU) 2019/2088 on sustainability-related disclosures in the financial services sector (as amended, the "SFDR") was enacted in November 2019. It introduces new rules on disclosures related to sustainable investments and sustainability risks, which are applicable from March 10, 2021.

This document provides the entity level information related to **sustainability risk policies** and **adverse sustainability impacts** required under Articles 3 and 4 of the SFDR, as supplemented by Commission Delegated Regulation (EU) 2022/1288 of 6 April 2022 which applies from January 1, 2023.

For purposes of the SFDR:

- "**sustainability risks**" means an environmental, social or governance event or condition that, if it occurs, could cause an actual or a potential material negative impact on the value of an investment, and "**sustainability factors**" means environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters.
- "**principal adverse impacts**" or "**PAI**" refers to the impacts of investment decisions that result in such material negative effects on any of the aforementioned sustainability factors.

Disclaimer: In a context of recent implementation of sustainable finance regulatory requirements in the EU, which is expected to improve over the next years, the presented approach is subject to change.

Scope of this document

AXA Assurances Vie Luxembourg has implemented a global set of policies and investment processes, which aims at ensuring a consistent approach on the integration of Environmental, Social and Governance ("ESG") factors.

The information provided in this document relates to AXA Assurances Vie Luxembourg ("AXA Luxembourg"), which, as a financial market participant, is subject to the SFDR disclosure requirements.

AXA Assurances Vie Luxembourg approach to Responsible Investment

"AXA Luxembourg's investment portfolio follows the Group responsible investment strategy as of this date, which is described below in this document.

In its contractual relationship with *asset manager* AXA Luxembourg requires that *asset manager* follows the principles of the Group Responsible Investment policy, notably aimed at progressively incorporating ESG factors into the management of General account and UC funds.

AXA Luxembourg has been involved in Responsible Investment (RI) since 2019 and believes that being a responsible insurance company is crucial to our long-term success. We believe that ESG factors can influence not only the management of investment portfolios across asset classes, sectors, companies and regions, but also a range of interests affecting clients and other stakeholders.

Our investment philosophy is based on the belief that combining fundamental 'non-financial factors' with traditional financial criteria will help us build more stable portfolios that perform better in the long term. The non-financial approach has become a necessity in more ways than one:

1. it is instrumental in **monitoring** companies or underlying assets from portfolios that are causing **exposure to high levels of ESG risk**, which would ultimately affect financial performance;
2. it focuses on whether companies have implemented **best practices regarding** the management of their **environmental impacts, governance and social practices**, and whether their responsible practices leave them better prepared, in our view, to meet the major challenges of the future, or on improving asset's performance regarding ESG factors; and
3. it enables improved performance by means of **active dialogue with companies on managing ESG concerns** around investments and limiting our clients' exposure to reputational risk and/or with key stakeholders related to our investment activities to embed them in our ESG strategy.

Double materiality of ESG Factors

As highlighted by the Non-Financial Reporting Directive (2014/95/EU) a large number of ESG factors may be analyzed from two complementary perspectives:

- impact on the development, performance or position of a company, as well as the financial value of an investment, in a broad sense (*i.e.*, **“financial” materiality**);
- external impacts of the company’s or investment’s activities on ESG factors (*i.e.*, **“environmental, social and governance” materiality**) – see ‘Sustainable Risk’ section below.

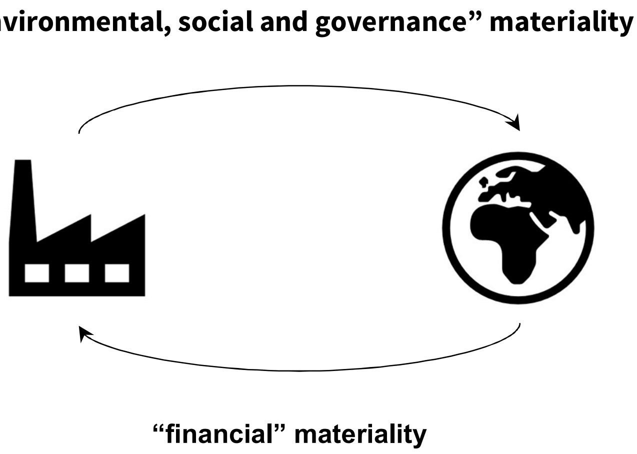

Figure 1: The concept of double materiality

AXA Luxembourg’s responsible investment policies and processes address both of these impacts, and our RI framework is organised around **three pillars** that are described below:

1. ESG Quantitative and Qualitative Research;
2. Exclusion policies;
3. Stewardship policies.

AXA Assurances Vie Luxembourg approach to sustainability risk [Article 3]

Exclusion Policies and ESG Scoring

With respect to each of the funds it manages or the financial products it makes available, AXA Luxembourg uses an approach to sustainability risks that is derived from the integration of ESG criteria in its research and investment processes and relies notably on:

- **sectorial and normative exclusion** policies; and
- proprietary **ESG scoring** methodologies.

These policies and methodologies are each further described below. We believe that they **contribute to the management of sustainability risks in two complementary ways**:

- exclusion policies aim to **exclude any asset exposed to the most severe sustainability risks** identified in the course of our investment decision-making process;
- the use of ESG scores in the investment decision process enables AXA Luxembourg to **focus on assets with an overall better ESG performance** and lower sustainability risks, or to ascertain on a current level of ESG performance of our assets and improve it over time.

Complementing these global approaches, AXA Luxembourg has integrated specific sustainability risk assessments within its investment processes for some portfolios for which market-based data or specific ESG scoring methodologies may not exist, such as within specific non-listed asset classes.

Sectorial and Normative Exclusion Policies

Sectorial and normative exclusion policies are one of the pillars of AXA Luxembourg's approach to sustainability risks and PAI. Exclusion lists are based on data provided by third party providers and aim to enable AXA Luxembourg to exclude from its contemplated investments the assets exposed to significant sustainability risks or that may have a significant adverse impact on sustainability factors.

Our sectorial exclusion policies are focused on the following ESG factors:

- **Environmental (E)**: climate (coal mining and coal-based energy production; oil sands production and oil sands-related pipelines), biodiversity (palm oil production) or soft commodities (food commodities derivatives);
- **Social (S)**: health (tobacco producers), labor, society and human rights (violations of international norms and standards[1]; controversial weapons manufacturing; white phosphorus weapons producers; exclusion of investments in securities issued by countries where serious violations of Human rights are observed);
- **Governance (G)**: business ethics (severe controversies, violations of international norms and standards), corruption (severe controversies, violations of international norms and standards).

Overall, the vast majority of AXA Luxembourg's assets have implemented the sectorial exclusions related to the following AXA RI policies, further detailed in the table below:

- AXA Group Coal policy and Oil and Gas policy
- AXA Group Ecosystems conversion & Deforestation policy
- AXA Group Human Rights policy
- AXA Group Controversial weapons policy
- Soft commodities
- Tobacco

The AXA Group Coal policy, Oil and Gas policy and Ecosystems conversion & Deforestation policy are currently under review and are expected to be updated in the course of 2023.

More details on these exclusion policies and their scope of application are available on the dedicated section of AXA Group's website: https://www.axa.com/.

★★☆ ESG Scoring methodologies

One of the challenges faced by financial market participants when integrating sustainability risks or PAI in their investment process is the limited availability of relevant data for that purpose: such data is not yet systematically disclosed by issuers or, when disclosed by issuers, may be incomplete or may follow various methodologies. Most of the information used to establish the

[1] UN's Global Compact Principles, International Labor Organization's (ILO) Conventions, OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights (UNGPs).

exclusion lists or determine ESG factors is based on historical data, which may not be complete or accurate or may not fully reflect the future ESG performance or risks of the investments.

The methodologies for exclusions policies and ESG scoring applied by AXA Luxembourg are updated as needed to take into account changes in the availability of data or methodologies used by issuers or from various industry-specific or sectorial frameworks to disclose ESG-related information, but there is no assurance that such ESG methodologies will be successful at capturing all ESG factors.

For **traditional asset classes (*i.e.*, corporate & sovereign issuers)**:

AXA Luxembourg relies on AXA IM which uses proprietary and third-party scoring methodologies to rate issuers on ESG criteria for most of its assets.

- **AXA IM's Q2 ESG scoring model:** AXA IM has recently adopted a single-provider ESG scoring model which is coupled with an overlay of its own analysis. Entitled Q² (Qual and Quant), this new and enhanced qualitative and quantitative approach offers increased coverage as well as fine-tuned fundamental analysis and provides a structured score. Using MSCI ESG scoring model for corporate as the starting point, Q² methodology allows to increase the coverage provided by MSCI as when MSCI doesn't provide a rating for an issuer, AXA IM ESG analysts can provide a documented, fundamental ESG analysis, which in turn will be transformed into a quantitative ESG score following MSCI pillars aggregation methodology and scores normalisation, such coverage-enhancing ESG scores are referred to as "qual-to-quant". when MSCI does cover an issuer but AXA IM's ESG analysts disagree with MSCI's ESG assessment (for example because the assessment is based on scarce and/or outdated data), a documented, fundamental ESG analysis can be submitted to the peer review of the ESG Assessment and Review Committee (ESARC), chaired by the Head of AXA IM Research; if the ESARC validates the analysis, it will be transformed into a quantitative ESG score and will override the existing, previously prevailing MSCI score;

- **MSCI scoring model for corporate:**
  - In the methodology for scoring corporate issuers, the severity of controversies is assessed and monitored by MSCI in its model on an ongoing basis to make sure that the most material risks are reflected in the final ESG score. The controversies with high severity will trigger large penalties on the sub-factor scores and ultimately on the ESG scores;
  - The data used in these methodologies include greenhouse gas (GHG) emissions, water stress, health and safety at work, supply chain labour standards, business ethics, energy security risk, wellness. AXA IM rates issuers on ESG criteria (corporates and sovereigns) based on quantitative data and/or qualitative assessment from internal and external research;
  - These ESG scores provide a standardised view on the performance of issuers on ESG factors and enable to both promote Environmental and Social factors and further incorporate ESG risks and opportunities in the investment decision.

For **alternative asset classes**, a specific set of methodologies has been developed using both quantitative and qualitative assessments for the various asset classes where we often face a significant lack of reliable, accessible and relevant data in many of our markets. This includes (i) the assessment of sustainability risks across all asset classes through ESG due diligence, and/or (ii) the use of proprietary ESG methodologies (including ESG scoring or ESG factors monitoring).

Description of principal adverse impacts on sustainability factors and action plans

As previously mentioned, AXA Luxembourg has developed several frameworks aiming to capture the relevant PAI for each main type of issuers, which are detailed in Appendix 1.

Action plans related to the consideration of PAI

At entity-level

In 2019, the AXA Group joined the "Net Zero Asset Owner Alliance", a coalition of institutional investors committed to transitioning their investments to "net-zero" greenhouse gas emissions by 2050 to align their portfolios with a 1.5°C trajectory.

At product-level

AXA Luxembourg monitors on an annual basis the overall ESG score and CO2 emissions of its holdings, as well as a selection of ESG-related (including climate-related) indicators depending on the asset class.

Identification and prioritization of PAI

Since the start of 2023, for the purpose of our aggregated entity-level PAI statement and for product-level reporting for our General Account (SFDR Article 8), AXA Luxembourg relies on:

- For **traditional asset classes** (listed corporates and sovereigns): data provided by S&P Global Trucost;
- For **direct real estate property**: data directly collected from surveys;
- **Funds and unlit-linked assets** (which represent less than 10 % of the total assets) are not covered in the 2023 report: we are in the process of identifying a data provider for next year's report.

In addition, AXA Luxembourg applies the Group's sectorial exclusions and ESG scoring methodologies (described above in "AXA Luxembourg approach to sustainability risk") to address the PAI of its investments.

The sectorial exclusions are linked to specific industry sectors which have been identified as having some of the most severe PAI, such as the impact of palm oil on biodiversity, or of coal and oil sands on carbon emissions. These **sectorial exclusions represent the highest priority for PAI avoidance** for the Group.

Our **ESG scoring methodologies** are also applied in order to **enable a monitoring of PAI** in each industry sector, and for each asset class of our investments. PAI are also generally **identified and assessed through ESG KPIs** such as GHG emissions, or respect of human and labour rights.

For **traditional asset classes**, as described above, AXA Luxembourg uses AXA IM Q^2 methodology which is applied to all corporate and sovereign issuers. We also take into account severe controversies, reflecting events in which the issuer has had a material negative impact on sustainability, social or governance factors, following Sustainalytics' Controversies Research methodology. The most material controversies automatically result in a lower ESG score, leading the concerned issuers to be excluded from our portfolios[2].

For some **alternative asset classes**, as described above, AXA IM has developed ESG scoring methodologies, which includes the identification of relevant PAI for different types of asset classes. While AXA IM current ability to meaningfully assess these impacts is limited by an absence or a limited availability and quality of information, data and indicators for certain asset classes, AXA IM will continue to further develop these processes to gather, when available, information and data on PAI of our investments.

The list of ESG factors and data sources are periodically reviewed to best reflect AXA Luxembourg analysis of PAI priorities and ESG quality of issuers. However, the ESG modelling process is complex and involves research and modelling, embedding uncertainty in the consideration of PAI in investment decision-making. Although a rigorous selection process of such third-party [data?] providers is applied with a goal of providing appropriate levels of oversight, its processes and proprietary ESG methodologies may not necessarily capture all sustainability risks and, as a result, the AXA Luxembourg assessment of the PAI on the product's return may not be entirely accurate or unforeseen sustainability events could adversely affect the portfolio's performance.

Engagement policies

As a shareholder and bondholder, AXA Group can engage with the management of the companies in which it invests, to improve the practices of companies with a specific objective in mind. Such engagement is either done directly by the Group or by AXA Investment Managers (AXA IM) on behalf of the Group.

AXA Group's Credit Research Team conducts regular one-on-one interviews with the top management of the issuers in which AXA Group has its largest investment exposure. These interviews give AXA Group's Credit Research Team the opportunity to review and discuss issuers' strategy, including in ESG, on a non-public basis.

Separately, AXA IM, as AXA's manager of Group funds on behalf of the Group, engages directly with investee companies with companies in key sectors.

AXA IM has a thematic approach to engagement. An overview of AXA IM's shareholder engagement strategy, when carried out on behalf of the Group, is set out below:

AXA IM applies two different strategies to engagement: "**engagement with objectives**", and "**sustainability dialogue**".

- **Definition of engagement objectives**: AXA IM distinguishes regular dialogue conducted with investee companies around their sustainability practices (referred to as "**sustainability dialogue**") from active engagement with specific, identified objectives (referred to as "**engagement with objectives**"):
  - **Sustainability dialogue** is key in establishing and developing a constructive relationship with the company, as well as gaining insights its policies and practices. However, while it may feed into future potential targeted engagement, this type of dialogue is less intensive and mainly aims at gathering information;
  - **Engagement with objectives** seeks to influence change at the level of the investee companies. AXA IM defines targeted objectives related to the key ESG and the timeframe it considers appropriate to monitor progress of each of the defined objectives;

[2] All issuers below 1.43 (out of 10) in the Q^2 methodology.

  - The AXA IM engagement policy, combined with its Corporate Governance and Voting policy, allows AXA Luxembourg to reduce its PAI

- **Governance of the engagement process**:
  For engagement with objectives, AXA IM shares these objectives with investee companies at the outset and systematically tracks and records the progress in meeting these objectives in the manner described below. Where weaknesses are identified in the "sustainability dialogue", AXA IM may use escalation techniques in certain cases or prompt a more formal "engagement with objectives" approach.

- **Tracking, escalation and conclusion of the engagement**: AXA IM has established a system for tracking dialogue and engagement progress with investee companies in traditional asset classes:
  - Each time an interaction with a company is logged, an engagement report is uploaded and made visible to all AXA IM investment platforms.
  - Escalation of the discussion through other means and/or at other levels of the hierarchy are optional. An escalation strategy is therefore determined on a case-by-case basis and may include one or more of the following actions:
    - Targeting higher level of the corporate hierarchy;
    - Collaborating with other investors (including through joint public statements in certain cases);
    - Voting against resolutions at the AGM, and informing investee companies in advance of the AGM of such votes and of the rationale behind them when possible;
    - Co-filing resolutions at the AGM; or
    - Divestment.

The AXA IM engagement programme is set up with achievable milestones, deliverables and reporting with the goal of effecting change. AXA IM acknowledges that changing cultural behaviour rarely happens overnight. Some companies might be more willing to listen than others. In most cases, it will require several interactions with the company before any concrete progress can be seen.

AXA IM also engages with regulatory authorities and policymakers to ensure that public policy supports an investment environment which takes sustainability and responsible investment issues seriously. In particular, AXA IM's public engagement approach aims to contribute towards ensuring that the developing regulatory framework promotes effective comparability, transparency and robustness in the ESG approaches applicable to the financial sector.

The deployment and success of the engagement efforts across AXA IM traditional asset classes is overseen by the AXA Group ESG Monitoring and Engagement Committee.

References to international standards

As part of the AXA Group, AXA Luxembourg seeks to comply and adhere to various principles, standards, and codes, considered best practices in the market, which govern our policies and practices.:

- AXA Group is a member of the **United Nations Global Compact (UN GCP)** since 2003 and follows these principles as part of its RI policy;
- AXA Group is a member of the **United Nations Principles for Responsible Investment (UN PRI)**[3], since May 2007;
- AXA Group is a member of the **Task Force on Climate-Related Financial Disclosure (TCFD)**, since 2017.

Historical comparison

Historical comparison will be first published in June 2024.

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This document was published in June 2023.

[3] PRI | Home (unpri.org)

ANNEX I

Principal adverse sustainability impacts statement

For the purposes of this Annex, the following definitions shall apply:

(1) ‘scope 1, 2 and 3 GHG emissions’ means the scope of greenhouse gas emissions referred to in points (1)(e)(i) to (iii) of Annex III to Regulation (EU) 2016/1011 of the European Parliament and of the Council[1];

(2) ‘greenhouse gas (GHG) emissions’ means greenhouse gas emissions as defined in Article 3, point (1), of Regulation (EU) 2018/842 of the European Parliament and of the Council[2];

(3) ‘weighted average’ means a ratio of the weight of the investment by the financial market participant in an investee company in relation to the enterprise value of the investee company;

(4) ‘enterprise value’ means the sum, at fiscal year-end, of the market capitalisation of ordinary shares, the market capitalisation of preferred shares, and the book value of total debt and non-controlling interests, without the deduction of cash or cash equivalents;

(5) ‘companies active in the fossil fuel sector’ means companies that derive any revenues from exploration, mining, extraction, production, processing, storage, refining or distribution, including transportation, storage and trade, of fossil fuels as defined in Article 2, point (62), of Regulation (EU) 2018/1999 of the European Parliament and of the Council[3];

(6) ‘renewable energy sources’ means renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas;

(7) ‘non-renewable energy sources’ means energy sources other than those referred to in point (6);

(8) ‘energy consumption intensity’ means the ratio of energy consumption per unit of activity, output or any other metric of the investee company to the total energy consumption of that investee company;

(9) ‘high impact climate sectors’ means the sectors listed in Sections A to H and Section L of Annex I to Regulation (EC) No 1893/2006 of the European Parliament and of the Council[4];

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[1] Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 (OJ L 171, 29.6.2016, p. 1).

[2] Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (OJ L 156, 19.6.2018, p. 26).

[3] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 328, 21.12.2018, p. 1).

[4] Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains Text with EEA relevance (OJ L 393, 30.12.2006, p. 1–39).

(10) ‘protected area’ means designated areas in the European Environment Agency’s Common Database on Designated Areas (CDDA);

(11) ‘area of high biodiversity value outside protected areas’ means land with high biodiversity value as referred to in Article 7b(3) of Directive 98/70/EC of the European Parliament and of the Council[5];

(12) ‘emissions to water’ means direct emissions of priority substances as defined in Article 2(30) of Directive 2000/60/EC of the European Parliament and of the Council[6] and direct emissions of nitrates, phosphates and pesticides ;

(13) ‘areas of high water stress’ means regions where the percentage of total water withdrawn is high (40-80%) or extremely high (greater than 80%) in the World Resources Institute’s (WRI) Water Risk Atlas tool “Aqueduct”;

(14) ‘hazardous waste and radioactive waste’ means hazardous waste and radioactive waste;

(15) ‘hazardous waste’ means hazardous waste as defined in Article 3(2) of Directive 2008/98/EC of the European Parliament and of the Council[7] ;

(16) ‘radioactive waste’ means radioactive waste as defined in Article 3(7) of Council Directive 2011/70/Euratom[8];

(17) ‘non-recycled waste’ means any waste not recycled within the meaning of ‘recycling’ in Article 3(17) of Directive 2008/98/EC;

(18) ‘activities negatively affecting biodiversity-sensitive areas’ means activities that are characterised by all of the following:

(a) those activities lead to the deterioration of natural habitats and the habitats of species and disturb the species for which a protected area has been designated;

(b) for those activities, none of the conclusions, mitigation measures or impact assessments adopted pursuant to any of the following Directives or national provisions or international standards that are equivalent to those Directives have been implemented:

(i) Directive 2009/147/EC of the European Parliament and of the Council[9];

(ii) Council Directive 92/43/EEC[10];

(iii) an Environmental Impact Assessment (EIA) as defined in Article 1(2), point (g), of Directive 2011/92/EU of the European Parliament and of the Council[11];

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5 Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC (OJ L 350, 28.12.1998, p. 58).

6 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

7 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

8 Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ L 199, 2.8.2011, p. 48).

9 Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7).

10 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

11 Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (OJ L 026, 28.1.2012, p. 1).

(iv) for activities located in third countries, conclusions, mitigation measures or impact assessments adopted in accordance with national provisions or international standards that are equivalent to the Directives and impact assessments listed in points (i), (ii) and (iii);

(19) ‘biodiversity-sensitive areas’ means Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas (‘KBAs’), as well as other protected areas, as referred to in Appendix D of Annex II to Commission Delegated Regulation (EU) 2021/2139[12];

(20) ‘threatened species’ means endangered species, including flora and fauna, listed in the European Red List or the IUCN Red List, as referred to in Section 7 of Annex II to Delegated Regulation (EU) 2021/2139;

(21) ‘deforestation’ means the temporary or permanent human-induced conversion of forested land to non-forested land;

(22) ‘UN Global Compact principles’ means the ten Principles of the United Nations Global Compact;

(23) ‘unadjusted gender pay gap’ means the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees;

(24) ‘board’ means the administrative, management or supervisory body of a company;

(25) ‘human rights policy’ means a policy commitment approved at board level on human rights that the economic activities of the investee company shall be in line with the UN Guiding Principles on Business and Human Rights;

(26) ‘whistleblower’ means ‘reporting person’ as defined in Article 5(7) of Directive (EU) 2019/1937 of the European Parliament and of the Council[13];

(27) ‘inorganic pollutants’ means emissions within or lower than the emission levels associated with the best available techniques (BAT-AEL) as defined in Article 3, point (13) of Directive 2010/75/EU of the European Parliament and of the Council[14], for the Large Volume Inorganic Chemicals- Solids and Others industry;

(28) ‘air pollutants’ means direct emissions of sulphur dioxides (SO_2), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC), and fine particulate matter ($PM_{2,5}$) as defined in Article 3, points (5) to (8), of Directive (EU) 2016/2284 of the European Parliament and of the Council[15], ammonia (NH_3) as referred to in that Directive and heavy metals (HM) as referred to in Annex I to that Directive;

(29) ‘ozone depletion substances’ mean substances listed in the Montreal Protocol on Substances that Deplete the Ozone Layer.

For the purposes of this Annex, the following formulas shall apply:

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12 Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives (OJ L 442, 9.12.2021, p. 1).

13 Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law (OJ L305, 26.11.2019, p. 17).

14 Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

15 Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (Text with EEA relevance), *OJ L 344, 17.12.2016, p. 1–31*

(1) ‘GHG emissions’ shall be calculated in accordance with the following formula:

$$\sum_{n}^{i}\left(\frac{current\ value\ of\ investment_i}{investee\ company's\ enterprise\ value_i} \times investee\ company's\ Scope(x)\ GHG\ emissions_i\right)$$

(2) ‘carbon footprint’ shall be calculated in accordance with the following formula:

$$\frac{\sum_{n}^{i}\left(\frac{current\ value\ of\ investment_i}{investee\ company's\ enterprise\ value_i} \times investee\ company's\ Scope\ 1,2\ and\ 3\ GHG\ emissions_i\right)}{current\ value\ of\ all\ investments\ (€M)}$$

(3) ‘GHG intensity of investee companies’ shall be calculated in accordance with the following formula:

$$\sum_{n}^{i}\left(\frac{current\ value\ of\ investment_i}{current\ value\ of\ all\ investments\ (€M)} \times \frac{investee\ company's\ Scope\ 1,2\ and\ 3\ GHG\ emissions_i}{investee\ company's\ €M\ revenue_i}\right)$$

(4) ‘GHG intensity of sovereigns’ shall be calculated in accordance with the following formula:

$$\sum_{n}^{i}\left(\frac{current\ value\ of\ investment_i}{current\ value\ of\ all\ investments\ (€M)} \times \frac{The\ country's\ Scope\ 1,2\ and\ 3\ GHG\ emissions_i}{Gross\ Domestic\ Product_i(€M)}\right)$$

(5) ‘inefficient real estate assets’ shall be calculated in accordance with the following formula:

$$\frac{((Value\ of\ real\ estate\ assets\ built\ before\ 31/12/2020\ with\ EPC\ of\ C\ or\ below) + (Value\ of\ real\ estate\ assets\ built\ after\ 31/12/2020\ with\ PED\ below\ NZEB\ in\ Directive\ 2010/31/EU))}{Value\ of\ real\ estate\ assets\ required\ to\ abide\ by\ EPC\ and\ NZEB\ rules}$$

For the purposes of the formulas, the following definitions shall apply:

(1) ‘current value of investment’ means the value in EUR of the investment by the financial market participant in the investee company;

(2) ‘enterprise value’ means the sum, at fiscal year-end, of the market capitalisation of ordinary shares, the market capitalisation of preferred shares, and the book value of total debt and non-controlling interests, without the deduction of cash or cash equivalents;

(3) ‘current value of all investments’ means the value in EUR of all investments by the financial market participant;

(4) ‘nearly zero-energy building (NZEB)’, ‘primary energy demand (PED)’ and ‘energy performance certificate (EPC)’ shall have the meanings given to them in paragraphs 2, 5 and 12 of Article 2 of Directive 2010/31/EU of the European Parliament and of the Council[16].

Statement on principal adverse impacts of investment decisions on sustainability factors

AXA Assurances Vie Luxembourg [LEI : 2221007TDHL8NJ2B3448]

Summary

AXA Assurances Vie Luxembourg considers principal adverse impacts of its investment decisions on sustainability factors. The present statement is the consolidated statement on principal adverse impacts on sustainability factors of AXA Assurances Vie Luxembourg.

This PAI statement covers our **General Account assets**. **Funds and unlit-linked assets** are not covered in this 2023 report: we are in the process of identifying a data provider for next year’s report.

This statement on principal adverse impacts on sustainability factors covers the reference period from 1 January to 31 December 2022.

Description of the principal adverse impacts on sustainability factors

See section ‘AXA Assurances Vie Luxembourg approach to adverse sustainability impacts (PAI)’ in the main body of the document, paragraph ‘**Description of principal adverse impacts on sustainability factors and action plans**’.

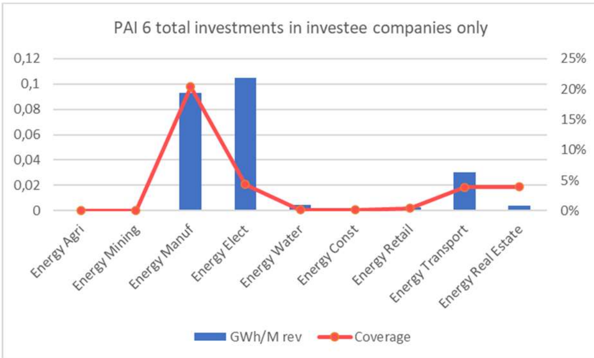
> Indicators applicable to investments in investee companies (corporate debts and equities)

Adverse sustainability indicator		Metric	Impact 2022	Impact 2021	Explanation	Actions taken, and actions planned and targets set for the next reference period
>> CLIMATE AND OTHER ENVIRONMENT-RELATED INDICATORS						
	1. GHG emissions	Scope 1 GHG emissions	**6.878** t.eq.CO_2 *Coverage: 90%*	N/A		See section ‘AXA Assurances Vie

16 Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast) (OJ L 153, 18.6.2010, p. 13)

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
Greenhouse gas emissions		Scope 2 GHG emissions	**2.553** t.eq.CO_2 *Coverage: 90%*	N/A	**Tonnes of carbon dioxide** equivalent released into the atmosphere - t.eq.CO_2	Luxembourg approach to adverse sustainability impacts (PAI)' in the main body of the document.
		Scope 3 GHG emissions	**56.973** t.eq.CO *Coverage: 90%*	N/A		
		Total GHG emissions	**66.404** t.eq.CO_2 *Coverage: 90%*	N/A		
	2. Carbon footprint	Carbon footprint	i. **194** t.eq.CO_2/€m (average over total investments) *Coverage: 90%*	N/A	**Weighted average** of **each investee companies' carbon intensity** (per <u>Entreprise Value</u>): - each **investee companies carbon footprint** is computed as the carbon dioxide equivalent released into the atmosphere (in tonnes - t.eq.CO_2) per Entreprise Value (in Euro million - €m) - the weighted **average** is based on the **amount invested in each investee companies** (in Euro million)	
	3. GHG intensity of investee companies	GHG intensity of investee companies	i. **868** t.eq.CO_2/€m *Coverage: 90%*	N/A	**Weighted average** of **each investee companies' carbon intensity** (per <u>revenues</u>):	

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
					- each **investee companies carbon footprint** is computed as the carbon dioxide equivalent released into the atmosphere (in tonnes - t.eq.CO_2) per revenues (in Euro million - €m) i. the weighted **average** is based on the **amount invested in each investee companies** (in Euro million)	
	4. Exposure to companies active in the fossil fuel sector	Share of investments in companies active in the fossil fuel sector	i. **7%** *Coverage: 90%*	N/A	Share based on the **amount invested in companies** deriving any revenues from the fossil fuel sector (in Euro million)	
	5. Share of non-renewable energy consumption and production	Share of non-renewable energy consumption and non-renewable energy production of investee companies	**Share of consumption**: i. **53%** *Coverage: 90%* **Share of production**: i. **1%** *Coverage: 2%*	N/A		

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
		from non-renewable energy sources compared to renewable energy sources, expressed as a percentage of total energy sources				
	6. Energy consumption intensity per high impact climate sector	Energy consumption in GWh per million EUR of revenue of investee companies, per high impact climate sector		N/A		
Biodiversity	7. Activities negatively affecting biodiversity-sensitive areas	Share of investments in investee companies with sites/operations located in or near to biodiversity-sensitive areas where activities of those	i. **4%** *Coverage: 4%*	N/A	Share based on the **amount invested in companies** which activities negatively affect biodiversity-sensitive areas (in Euro million)	

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
		investee companies negatively affect those areas				
Water	8. Emissions to water	Tonnes of emissions to water generated by investee companies per million EUR invested, expressed as a weighted average	i. **0.00** t/€m *Coverage: 18%*	N/A	**Weighted average** of **each investee companies' emissions to water**, based on the **amount invested in each investee companies** (in Euro million)	
Waste	9. Hazardous waste and radioactive waste ratio	Tonnes of hazardous waste and radioactive waste generated by investee companies per million EUR invested, expressed as a weighted average	i. **0** t/€m *Coverage: 43%*	N/A	**Weighted average** of **each investee companies' hazardous waste and radioactive waste**, based on the **amount invested in each investee companies** (in Euro million)	
>> INDICATORS FOR SOCIAL AND EMPLOYEE, RESPECT FOR HUMAN RIGHTS, ANTI-CORRUPTION AND ANTI-BRIBERY MATTERS						
Social and employee matters	10. Violations of UN Global Compact principles	Share of investments in investee companies that	i. **2**% *Coverage: 77%*	N/A	Share based on the **amount invested in companies involved in any UNGC-principle**	See section AXA Assurances Vie Luxembourg approach to adverse

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
	and Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises	have been involved in violations of the UNGC principles or OECD Guidelines for Multinational Enterprises			**related media controversy** (whether related to its operations or its supply chain for the past 12 months)	sustainability impacts (PAI)' in the main body of the document.
	11. Lack of processes and compliance mechanisms to monitor compliance with UN Global Compact principles and OECD Guidelines for Multinational Enterprises	Share of investments in investee companies without policies to monitor compliance with the UNGC principles or OECD Guidelines for Multinational Enterprises or grievance /complaints handling mechanisms to address violations of the UNGC principles or OECD Guidelines for	i. **22**% *Coverage: 82%*	N/A	Investee companies are scored (0, 0.5 or 1) whether they are signatory (0) or not (1) of the UNGC. In case the investee is not signatory but its parent company is, the score is 0.5. Share then based on the **amount invested in the relevent companies involved**	

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
		Multinational Enterprises				
	12. Unadjusted gender pay gap	Average unadjusted gender pay gap of investee companies	i. **16**% *Coverage: 85%*	N/A	Gender pay gap computed as the **difference in average gross hourly earnings between women and men** at the aggregated level. Average based on the **amount invested in each investee companies** (in Euro million)	
	13. Board gender diversity	Average ratio of female to male board members in investee companies, expressed as a percentage of all board members	i. **33**% *Coverage: 86%*	N/A	Average based on the **amount invested in each investee companies** (in Euro million)	
	14. Exposure to controversial weapons (anti-personnel mines, cluster munitions, chemical weapons and biological weapons)	Share of investments in investee companies involved in the manufacture or selling of controversial weapons	i. **1.28%** *Coverage: 76%*	N/A	Share based on the **amount invested in companies involved in the manufacture or selling of controversial weapons**	

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
> Indicators applicable to investments in sovereigns and supranationals						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
Environmental	15. GHG intensity	GHG intensity of investee countries	i. **464 t.eq.CO_2/€m** *Coverage 89%*	N/A	**Weighted average** of **each investee country's carbon intensity** (per GDP): - each **investee country's carbon intensity** is computed as the carbon dioxide equivalent released into the atmosphere (in tonnes - t.eq.CO_2) per GDP (in Euro million - €m) - the weighted **average** is based on the **amount invested in each investee country** (in Euro million)	See section 'AXA Assurances Vie Luxembourg approach to adverse sustainability impacts (PAI)' in the main body of the document.
Social	16. Investee countries subject to social violations	Number of investee countries subject to social violations (absolute number and	**absolute** i. **0** *Coverage 89%* **relative** i. **0%**	N/A	Investee countries are considered subject to social violations if they are sanctioned by the EU or the UN in view of the countries' social situation	

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
		relative number divided by all investee countries), as referred to in international treaties and conventions, United Nations principles and, where applicable, national law	*Coverage 89%*			

> Indicators applicable to investments in real estate assets						
Adverse sustainability indicator		**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
Fossil fuels	17. Exposure to fossil fuels through real estate assets	Share of investments in real estate assets involved in the extraction, storage, transport or manufacture of fossil fuels	N/A	N/A	Share based on the **amount invested in real estate assets** involved in the fossil fuel sector (in Euro million)	
Energy efficiency	18. Exposure to energy-inefficient	Share of investments in energy-	N/A	N/A	Share based on the **amount invested in energy-inefficient real estate assets** (in Euro million)	

> Indicators applicable to investments in investee companies (corporate debts and equities)						
Adverse sustainability indicator		Metric	Impact 2022	Impact 2021	Explanation	Actions taken, and actions planned and targets set for the next reference period
	real estate assets	inefficient real estate assets				
Other indicators for principal adverse impacts on sustainability factors						
Please see **Table 2** for other additional PAI on **climate and other environment-related indicators**.						
Please see **Table 3** for other additional PAI on **social and employee, respect for human rights, anti-corruption and anti-bribery matters**.						

Description of policies to identify and prioritise principal adverse impacts on sustainability factors

See section ‘ AXA Assurances Vie Luxembourg approach to adverse sustainability impacts (PAI)’ in the main body of the document, paragraph ‘**Identification and prioritization of PAI’**

Engagement policies

See section ‘AXA Assurances Vie Luxembourg approach to adverse sustainability impacts (PAI)’ in the main body of the document, paragraph ‘**Engagement policies’**

References to international standards

See section AXA Assurances Vie Luxembourg approach to adverse sustainability impacts (PAI)’ in the main body of the document, paragraph ‘**References to international standards’**

Historical comparison

Historical comparison will be first published in June 2024.

Table 2

Additional climate and other environment-related indicators

Adverse sustainability impact	**Adverse impact on sustainability factors (qualitative or quantitative)**	**Metric**	**Impact 2022**	**Impact 2021**	**Explanation**	**Actions taken, and actions planned and targets set for the next reference period**
> Indicators applicable to investments in investee companies (corporate bonds and equities)						
>> CLIMATE AND OTHER ENVIRONMENT-RELATED INDICATORS						
Water, waste and material emissions	Water usage and recycling	Average amount of water consumed by the investee companies (in cubic meters) per million EUR of revenue of investee companies	**N/A**	N/A	**Weighted average** of **each investee companies' water consumption.** The weighted **average** is based on the **amount invested in each investee companies** (in Euro million)	

This document was issued in June 2023.