astorg.

ESG report 2019

Contents

Astorg would like to thank all contributors to this report, namely AP6, CBRE Caledon Capital Management, GIC and ATP. We would also like to acknowledge the strategy consulting company INDEFI who helped to develop a reporting methodology and to draft this report.

FOREWARD

Thierry Timsit

CEO & MANAGING PARTNER OF ASTORG

"Corporate Social Responsibility will become another key determinant of successful companies: even if profit sharing and the focus on revenue growth remain key management guidelines, they are no longer sufficient to seek market leadership and retain long term value creation."

This statement remains true 16 years later. We believe that our responsibility is even larger as we recently closed Astorg VII at €4.2bn, twice the size of its predecessor, which has put us in the top 14 of European firms and within the top 50 firms globally.

Identifying potential risks linked to environmental, social and governance (ESG) issues has become a mandatory step in our investment process. But we aim to look beyond risks: because when we say that sustainability goes hand in hand with performance, it also means that we see opportunities in ESG. We are neither an impact fund nor a venture capital firm, but we often invest in companies offering innovative solutions to sustainability challenges that have delivered exceptional financial performance. Several of our industrial companies like Aries Alliance or IGM Resins and also services companies like AutoForm provide products and services that allow the market to reduce its environmental impact and anticipate future regulations.

But strong convictions are not enough. That's why in 2018 we decided to strengthen our expertise and management of these issues by hiring Viviana Occhionorelli as ESG Director. Viviana brings 10 years of corporate sustainability experience and her role supports the investment team and portfolio companies.

Already many new tools have been set in place including the drafting of ESG roadmaps for each portfolio company. We also decided to share ESG expertise through regular "ESG club meetings" that focus on ESG best practices across the portfolio.

I am pleased to share this progress with you in our first ESG Report.

Key Features

Astorg is an independent private equity group with over €8 billion of assets under management.

12
PORTFOLIO COMPANIES

ESTABLISHED IN
'98

47
TRANSACTIONS SINCE 1998

3
ACTIVE FUNDS
Astorg V, Astorg VI & Astorg VII

€8bn
AuM

5
OFFICES
Frankfurt, Milan, London, Luxembourg and Paris

85
EMPLOYEES

Astorg's ESG policy

Background and public commitments

Astorg invests in niche leaders of B2B global companies with a specific focus on manufacturing, healthcare and software. For several portfolio companies, ESG is a synonym of product quality, performance and operational efficiency. Astorg believes that ESG enables its companies to thrive in their markets and strengthen their competitive advantage.

In 2018, Astorg published its ESG Policy which illustrates the firm's responsible investment principles and how ESG is integrated into the deals and management of the portfolio.

In the same year, Astorg recruited a dedicated ESG Director, Viviana Occhionorelli, to oversee the implementation of the ESG Policy.

Assets covered by the ESG process

Astorg exclusively manages private equity funds. Astorg has €8bn of assets under management, split between three active funds, with Astorg VII in the investment phase. As of today, Astorg's ESG policy applies to 100% of the private equity investments made by the funds.

Public commitments

As a signatory of the UN-backed Principles for Responsible Investment, Astorg has shown its commitment to be transparent in its ESG processes and by becoming a part of a community of investors sharing good practices. The company is also actively engaged in the fight against climate change and has therefore decided to become a member of the Climate Initiative 2020 (IC20).

PRI Principles for Responsible Investment

The **Principles for Responsible Investment (PRI)** is a UN initiative launched in 2006 by Kofi Annan to voluntarily incentivise financial investors to integrate ESG issues into the management of their portfolios.

This initiative brings together more than 2,300 signatories who are committed to respecting the 6 fundamental principles of responsible investment and to reporting annually to the PRI.

iC20

Climate Initiative 2020 (IC20) is a collective commitment by the French private equity industry in favour of the responsible and transparent management of greenhouse gas emissions by their portfolio companies. The iC20 signatories have pledged to take action to contribute to the COP21 objective of limiting global warming to 1.5°C.
It has been signed by 22 asset managers.

ESG integration in the investment process

Astorg's ESG Policy encompasses several steps which are integrated into the different phases of the investment cycle.

Approach to guarantee the integration of Environmental, Social and Governance criteria into the investment process

Pre-Investment phase

- **Exclusions of prohibited sectors as defined in Astorg's ESG policy**
- **Preliminary ESG analysis in order to determine the focus of the ESG Due Diligence**
- **Pre or post-closing ESG Due Diligence**
  - Identification of ESG risks and opportunities
  - Evaluation of maturity level and areas of progress
  - Recommendations for an ESG roadmap
- **Inclusion of key ESG requirements in the Investment Memorandum**

Ownership phase

- **Engagement with the company**
  - Presentation of the conclusions of the ESG Due Diligence and discussion with management
  - Draft of an ESG roadmap with specific objectives and KPIs in consultation with management
- **ESG reporting**
  - Assess each company's progress on the ESG roadmap
  - Completion of an annual ESG report by each company
  - Publication of an ESG annual report at portfolio level

Exit

- **Maximise ESG contribution to ROI**
  - Feature ESG performance and highlight operational value-add of ESG improvements to buyers
  - Prepare the company for investor questions on ESG

One of the core elements is the ESG roadmap: drafted for each of the investees and based on the ESG due diligence conducted during the pre-investment phase. The ESG roadmap is the main engagement tool used by Astorg during the ownership phase, as it's drafted in consultation with the management of each company. Moreover, it determines the KPIs that are followed up for the ESG reporting, which allows us to measure the value-add of ESG improvements to buyers when exiting the company.

Number of companies invested in 2018 with an ESG roadmap

NUMBER OF PORTFOLIO COMPANIES (% OF PORTFOLIO COMPANIES)

NOTE: * PORTFOLIO COMPANIES INVESTED IN 2018.

Nature of ESG issues taken into account

Astorg's ESG Policy formalises the firm's commitment to prioritise environmental, social and governance issues in its investment operations while improving the portfolio's efficiency, reducing overall costs, increasing workforce stability, and anticipating future regulatory changes. Astorg focuses on the ESG issues which are relevant and material to the type of business and sector concerned. The main ESG issues analysed by Astorg are:

Environment

- Mitigation and adaptation to climate change
- Efficient use of natural resources
- Circular economy
- Effective waste management and minimal land contamination
- Reduction of pollution and appropriate handling of hazardous waste
- Compliance with local environmental regulations

Governance

- Building up a long-term trust with management teams based on transparency, independence and business ethics
- Providing management with strong support and guidance
- Ensuring compliance with all relevant anti-corruption laws and regulations
- Prohibiting corruption in all its forms
- Supporting positive engagement with key stakeholders
- Ensuring data protection and security

Social

- Eliminating child labour or other forms of forced or compulsory labour
- Ensuring compliance with human rights conventions (e.g. ILO)
- Implementing a fair recruitment policy, promote diversity of people and culture as well as gender equality
- Encouraging employee development and individual career plan through tailored training and coaching programs
- Improving safety and well-being at work
- Offering healthcare, retirement and disability insurance

3 questions to Astorg's clients

Q1

What are the specificities of the private asset class in terms of ESG integration?

"Indeed. At Astorg, we believe that a company's management of ESG topics reflects the quality of the management team. In other words, a company with strong ESG management is a better run company. ESG drives performance and that is why we want to be ahead of it. I would even say that private equity is the ideal asset class to integrate ESG."

Jeffrey Orenstein, Partner and Head of Client Relations at Astorg

"We believe that ESG and performance are inseparable to create long-term returns. It fully applies to private equity funds, which should integrate ESG by focusing on most material topics of each portfolio company."

Anna Follér, Sustainability Manager at AP6

"Exactly, private equity gives us much more leverage to push for ESG in portfolio companies."

Susanne Lund, ESG Director at ATP

"And it is probably a virtuous circle. We experienced that it is much easier to integrate ESG to private equity because of the mindset of asset managers: they have a very structured approach on ESG topics."

Maria Daguerre, Vice president at GIC

Q2 What do LPs expect from external asset managers on ESG?

"Several of our clients are pension funds who strongly defend their beneficiaries' interest. As the general public gets more and more aware on sustainability topics, so do pension funds. At Astorg, we have clearly experienced an increasing interest for ESG from our LPs in the last 10 years. I would say that in the last 5 years, we have even seen a shift from moral concerns to business considerations as investors start to realise that ESG can enhance financial performance."

Astorg

"Indeed. At CBRE Caledon Capital Management, we always review an asset manager's ESG Policy when investing in new funds. We expect our GPs to show honest efforts to do what they market with respect to ESG, and not just have a policy for marketing purposes. Given the variety of approaches to implementing ESG initiatives, we rely on the GPs to choose their own way to integrate ESG, and we monitor their progress as part of periodic reviews of our investments."

Justin Kusinskis, Partner at CBRE Caledon Capital Management

"We do not set minimal standards on ESG for our GPs, either. However, we diligence the mindset of asset managers on these topics. We really try to understand how ESG is integrated into the investment process and what are the next steps planned. In our diligence process, we calculate a score which relies on 6 modules including one on ESG. The ESG module mainly follows the PRI Limited Partners Responsible Investment DDQ to which we added a special focus on diversity and climate topics."

AP6

"Same here, ATP conducts ESG due diligence when investing in new funds in order to ensure that the asset manager is able to manage ESG on our behalf. A bad ESG assessment will not result in a no-go, however we plan to conduct annual follow-up assessments on ESG starting this year. If we realise that a manager, which is poorly rated from an ESG perspective, is not improving during ownership, we will most likely not invest in their next fund." **ATP**

Q3 What is a good ESG Report?

"Indeed, this is only our first report, but we tried to do our best by showing a selection of what appears as the most relevant indicators to us. By next year, we should be able to measure progress of our portfolio companies on these indicators and to show the carbon footprint of the portfolio. This year, we wrote case studies on very concrete initiatives of some portfolio companies, which we try to showcase to inspire other portfolio companies at our ESG Club meetings. For us, an ideal report should show the correlation between sustainability and performance. It is not an easy task, but we are working on it."

Astorg

"We see various types of reports from asset managers, some describe the general ESG approach while others present detailed information about the portfolio. We appreciate when an ESG Report includes sections on concrete ESG initiatives."

GIC

"For us, the ideal report would show the parallel between ESG progress and financial performance of each company."

CBRE Caledon Capital Management

"That would be interesting indeed. However, we encourage every asset manager to start reporting even if they have not figured out what is the best reporting format. It will improve over time!"

AP6

"We also believe that a good ESG Report should include high level data on portfolio companies. It should mainly focus on the most material topics and on measuring if the company is on track to reach its ESG targets." **AP6**

ESG events organised by Astorg

Some of Astorg's portfolio companies have developed a deep expertise on specific ESG issues. An **'ESG Club'** has therefore been founded in order to gather the companies' management to discuss good practices. The first meeting was organised in summer 2018 and gathered twelve CEOs and senior management alongside executive professionals from the Astorg team. It focused on cybersecurity risks, where three companies shared good practices and two experts presented on cybersecurity risks and digital trust.

Two meetings focused on ESG have been organised in 2019. Astorg aims to organise three meetings a year.

ESG was also an important topic at the 2019 Annual General Meeting, where Astorg presented the first annual **ESG award**. It recognises a company's achievement and engagement to the ESG programme.

Audiotonix was selected for the award as recognition of its enthusiasm and responsiveness on ESG topics. Examples include their presentation at three of the ESG club meetings, their adoption of a new eco-design strategy and the significant improvements they have made in their supply chain practices.

ESG and climate analysis of the portfolio

The ambition of this ESG reporting is not only to present a selection of KPIs, but more importantly to gather insights from this data in order to measure the progress made by companies on ESG and climate topics. As this is Astorg's first ESG Report, the data presented here is only a snapshot of their performance in 2018. However, next year's ESG Report should present data comparisons and progress measures.

This should help Astorg to identify best performing companies as well as companies where the main efforts should be shifted.

This reporting covers companies invested before 2019 (10 companies out of 12 currently in the portfolio). Climate analysis was conducted for all these companies, while the analysis of ESG performance only covered the eight companies that could report the relevant indicators. Astorg also assesses itself as it has the same firmwide requirements as its portfolio companies.

10 portfolio companies out of 12

ARIES ALLIANCE

Investment year: **2018**
Sector: **Aerospace / Industry**
Fund: **Astorg VI**
Global leader in advanced metal forming and milling technologies for the aeronautics industry.

Echosens

Investment year: **2018**
Sector: **Healthcare**
Fund: **Astorg VI**
Echosens is a world leading non-invasive liver diagnostic company.

IGM Resins

Investment year: **2018**
Sector: **Speciality chemicals / Industry**
Fund: **Astorg VI**
World leading supplier of specialty UV curable material solutions for the inks & coatings industry.

Audiotonix

Investment year: **2017**
Sector: **TMT / Industry**
Fund: **Astorg VI**
Global market leader in the design, engineering and manufacture of professional audio mixing consoles.

Surfaces Group

Investment year: **2017**
Sector: **Manufacturing / Industry**
Fund: **Astorg VI**
World leading supplier of abrasive tools and consumables for high-end materials.

AutoForm

Investment year: **2016**
Sector: **Software / B2B Services**
Fund: **Astorg VI**
Global leading software solutions for Sheet Metal Forming.

Flowbird

Investment year: **2016**
Sector: **B2B Services**
Fund: **Astorg VI**
Flowbird is the global market leader in parking management solutions.

HRA Pharma

Investment year: **2016**
Sector: **Healthcare**
Fund: **Astorg VI**
A specialty pharma focused on women's health and endocrinology with leading positions in Europe.

IQ-EQ

Investment year: **2016**
Sector: **B2B Services**
Fund: **Astorg V**
IQ-EQ is a leading multi-jurisdictional provider of investor and corporate services in Europe and beyond.

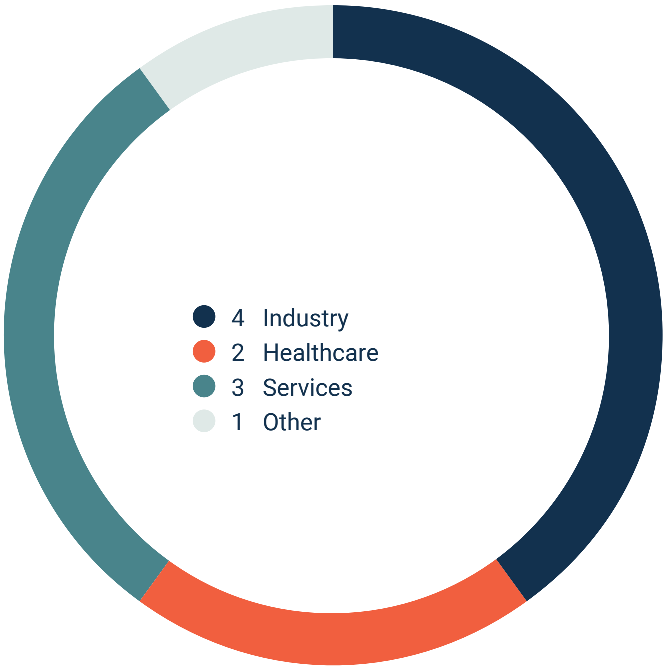
M7

Investment year: **2014**
Sector: **Media - Telecom / Other**
Fund: **Astorg V**
M7 Group is a leading European satellite Pay-TV operator, with more than 3 million subscribers.

Astorg invests in relatively diverse sectors, each of them facing different ESG and climate issues:

Sectors of Astorg's portfolio companies

NUMBER OF PORTFOLIO COMPANIES



140
questions in average were asked to each company

95%
of questions were answered in average

For this reporting, Astorg selected 116 indicators relating to environmental, social and governance issues to be answered via an online reporting tool. Each portfolio company was asked to fill out a selection of indicators for their Group (and their subsidiaries if relevant). All eight companies covered by the ESG reporting showed relatively high response rates.

The ESG and climate analysis of the portfolio is also based on each company's due diligence and ESG roadmap which has been designed following discussion with Astorg. Other documents were used when available, namely environmental assessments of industrial facilities, CSR Policies, Codes of Conduct, Procurement Policies, internal reporting, etc. Some qualitative but also quantitative data stem from discussions with the deal teams and the management of portfolio companies.

Analysis of ESG performance

METHODOLOGY

All collected data, quantitative and qualitative, is analysed by Astorg through a framework of 15 criteria gathered under four pillars: governance, human capital, environment and external stakeholders.

ESG analysis framework

Pillars	Criteria	Definition
Governance	G1: Governing bodies	Analysis of management and main governing bodies, diversity of Board members (gender, nationality, independence)
	G2: CSR strategy and risk management	Definition of key CSR objectives, identification of ESG risks, policy regarding ethics and deontology
	G3: Cybersecurity	Protection of personal data in compliance with GDPR and cybersecurity policy to prevent attacks from hackers
Human Capital	S1: Social policy and strategy	Priorities regarding Group's objectives and context, job creation, capacity to retain staff by providing incentives and opportunities
	S2: Diversity and equal opportunities	Group's commitment regarding diversity, equal opportunities and initiatives undertaken
	S3: Health and safety	Identification of risks and management systems, monitoring of working accidents
	S4: Social dialogue	Employees representation, collective bargaining and internal communication, in all countries
Environment	E1: Environmental policy	Definition of an environmental policy and management procedures, monitoring of environmental KPIs
	E2: Energy and emissions	Energy consumptions and GHG emissions follow-ups, climate risks analysis
External stakeholders	Ex1: Purchasing process and responsibility towards suppliers	Integration of CSR stakes in the value chain: sustainable procurement, sub-contractors selection process, subcontractors audits
	Ex2: Responsibility towards clients	Policy and management systems to guarantee quality standards, customer satisfaction, control over value chain (suppliers and distributors)
	Ex3: Relations with communities	Local content, Group's involvement in social activities and donation programs
	Ex4: Products and services	Impact of products and services

As a first step, Astorg analyses the relevance of each of these 15 criteria regarding specificities of the sector (as industrial companies will face more environmental risks than services companies, for example). The specificities of each company are also considered, depending on its business model, its size and locations (e.g. a company sourcing products from suppliers in emerging countries is more likely to be confronted with human rights violations).

The detail of the relevance or 'materiality' of the 15 criteria for each company is shown below.

Materiality analysis of the portfolio

Pillars	Criteria	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6	Company 7	Company 8	Astorg
Governance	G1: Governing bodies	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
	G2: CSR strategy and risk management	High	High	High	High	High	High	High	High	High
	G3: Cybersecurity	Low	Low	Low	Low	Medium	High	High	High	
Human Capital	S1: Social policy and strategy	High	High	High	High	High	High	High	High	High
	S2: Diversity and equal opportunities	Low	Low	Low	Low	Low	Low	Low	Low	Low
	S3: Health and safety	High	High	High	High	Medium	Medium	Medium	Medium	Medium
	S4: Social dialogue	Medium	Low	Low	Medium	Low	Low	Low	Medium	Low
Environment	E1: Environmental policy	High	Medium	High	High	Low	Low	Medium	Low	Low
	E2: Energy and emissions	High	Medium	Medium	High	Low	Low	Medium	Low	Low
External stakeholders	Ex1: Purchasing process and responsibility towards suppliers	High	High	High	High	High	Low	Medium	Low	Low
	Ex2: Responsibility towards clients	High	Medium	High	High	High	Medium	Medium	High	High
	Ex3: Relations with communities	Low	Low	Medium	Low	Low	Low	Low	Low	Low
	Ex4: Products and services	High	High	High	High	High	High	High	High	High

High materiality Medium materiality Low materiality

Following the materiality analysis, the performance of the companies on each of the 15 criteria is analysed, based on the data and documents received. The individual scores, each assigned a weight based on their level of materiality, are then calculated into a weighted average. The resulting score is used to compare portfolio companies to each other and to assess their progress throughout the years.

Scoring methodology: example

Pillars	Criteria	Perf. 2018
Governance	G1: Governing bodies	1
	G2: CSR strategy and risk management	0.5
	G3: Cybersecurity	–
Human Capital	S1: Social policy and strategy	1
	S2: Diversity and equal opportunities	1
	S3: Health and safety	0.5
	S4: Social dialogue	0.5
Environment	E1: Environmental policy	1
	E2: Energy and emissions	1
External stakeholders	Ex1: Purchasing process and responsibility towards suppliers	0
	Ex2: Responsibility towards clients	1
	Ex3: Relations with communities	0
	Ex4: Products and services	1

76 / 100
ESG score of the company

RATING FOR EACH CRITERION

Good practice 1 Standard 0.5 Weak performance/n.a. 0 Not assessed –

WEIGHT FOR EACH CRITERION - MATERIALALITY OF THE CRITERION

High 3 Medium 2 Low 1

Assessment

Astorg conducts this ESG analysis in order to ensure that all companies have a minimal ESG performance and ESG policies/processes. Most of all, the analysis aims to identify the companies that present portfolio risk factoring for the invested amount of capital by Astorg.

Risk is analysed through two criteria:

1. The level of materiality, calculated as the sum of materiality of the 15 criteria analysed
2. The invested amount which determines Astorg's exposure.

The majority of investments have achieved the ESG performance target set by Astorg. Moreover, all companies should improve if they follow the ESG roadmap developed with Astorg.
As expected, manufacturing companies indicate higher ESG risks (expressed as higher levels of materiality).

Focus on governance KPIs

Governance is one of the most common ESG criteria analysed by private equity investors, as it is often used among asset managers without any formalised ESG Policy.

The governance pillar encompasses three issues particularly material to Astorg:

1. **Diversity among boards** in terms of gender and independence;
2. **The management of ESG issues** through a Code of Ethics, discussions at the board, sensitisation of employees against corruption and bribery, etc.;
3. **Data protection and cybersecurity**.

It is proven that companies with **diversified governing bodies** are more efficient. For this purpose, Astorg gender diversity and the presence of independent members at the board of its invested companies.

It's considered good practice for large companies to have 30% independent members. As of today, the Copé-Zimmermann law requires all French listed companies and French companies with more than 500 permanent employees (on average during the last three years) and with a turnover above €50m to have at least 40% of members of each gender sitting at the board.

Regarding the management of ESG issues, almost all portfolio companies reported that ESG has been discussed at the board at least once in 2018. Moreover, a majority of them have a Code of Ethics. However, the content of the Code of Ethics varies widely from purely ethical issues to broader ESG stakes.

All investees have drafted an ESG roadmap with Astorg including a set of objectives for the following years and KPIs to monitor their progress.

HRA Pharma

CASE STUDY

HRA Pharma's Ethics Programme

HRA Pharma distributes therapeutic solutions to over 90 countries worldwide, some of them answering medical needs that are not addressed by large pharmaceutical groups. In order to do that, the Group relies on many distributors, state officials and medical practitioners. However, there is a risk of corruption when contracting with such players. Therefore, HRA Pharma is implementing an ambitious Ethics Programme:

- In 2012, the company committed to sustainable business practices by signing the UN Global Compact.
- Several policies and processes have been formalised (Code of Ethics, Anti-corruption Policy, etc.).
- Every new distributor has to answer to a due diligence questionnaire. In 2018, **20 distributors received and answered the due diligence questionnaire**.
- HRA Pharma trains every newcomer on ethics and compliance matters.
- In 2018, **87% of employees have successfully passed the e-learning test on ethics and compliance**.
The remaining 13% had to reschedule the test or participate in a face-to-face training.

"Astorg supported us in the implementation of our strategy, which was of great help to convince all management levels."

Valérie Bréon-Normand, Legal Affairs Director at HRA Pharma

Data protection and cybersecurity risks are issues analysed by Astorg on a case-by-case basis, as they are often linked to the sector and business model of the company. Some companies have been assessed on these topics through specific due diligences before the investment. However, Astorg aims to raise awareness on cybersecurity risks within its portfolio. IQ-EQ is the most advanced company on this subject, which is why they were asked by Astorg to present their cybersecurity strategy at one of the ESG club meetings.

IQEQ
Know how Know you

CASE STUDY

IQ-EQ's Cybersecurity Strategy

"2018 has been a busy period of acquisitions for IQ-EQ. It has been challenging to implement our Cybersecurity Strategy across all acquired businesses; however we have made great progress in this regard. To date the implementation of this strategy has had very positive side-effects as it has enabled us to respond efficiently and in detail to any RFP and due diligence requests we receive, which we see is fast becoming of increasing importance to our clients."

David Wild, Group Chief Risk Officer at IQ-EQ

As an investor services company, IQ-EQ is very concerned about protecting client confidentiality and managing the associated risks with respect to cyber security. As part of its overall Cybersecurity Strategy it has recently completed a number of key actions:

- Following a series of recent acquistions, the Group engaged a leading consultant to undertake a comprehensive review of its cybersecurity arrangements, which helped to identify areas for futher enhancement and a clear 'road map' for the ongoing development of the Group's Information Security Management Systems.
- Since then, IQ-EQ has recruited a new Chief Information Security Officer to work with the existing InfoSec.
- Separately, the Group has continued to build out its Internal Audit capability to perform regular independent testing of the Group's cybersecurity arrangements.
- The company follows KPIs on cybersecurity risks at Group level (e.g. the number of malwares neutralised or the number of phishing attempts). They are regularly reported to the Information Security Committee. In 2018, **the company's mail filtering technology stopped and/or quarantined a total of 1.9 million inbound emails including 654 containing harmful viruses and 2,457 with malicious URLs embedded** (i.e. phishing attempts).
- All Information Security Management Systems are developed in accordance with the ISO 27001 guidelines. **Three of the Group's major locations, Luxembourg, Mauritius and the Netherlands, hold ISO 27001 accreditation** (among 23 locations in total), with a plan to bring further jurisdictions formally into the ISO 27001 regime in due course.
- All employees receive regular information security training, either face-to-face or via the Group's e-learning management systems.

Focus on social KPIs

Social issues are key to every company as they rely on their employees to create value.

Astorg pays particular attention to following three KPIs:

1. **Number of employees and type of contracts:** every company is expected to monitor human resources (HR) KPIs (e.g. number of employees, number of permanent contracts, hires and leavers). Astorg considers it as the starting point for every HR strategy, as indicators like employee turnover are essential to determine the need for retention initiatives (trainings, employee reviews, etc.).

2. **Net job creation:** Astorg also considers that companies should be aware of their impact on society through the creation of jobs.

3. **Accident frequency rates:** Astorg is convinced that every company should measure the number of working accidents in order to take measures accordingly if needed. This is very material for manufacturing companies but also for some services companies where there can be psychosocial risks, in the financial sector for instance.

All companies in the scope of this ESG analysis have reported on the number of employees, the contract types, the number of hires and leavers and the number of working accidents. On average, portfolio companies have 93% of permanent employees, which is an example of good practice.

Focus on environment KPIs

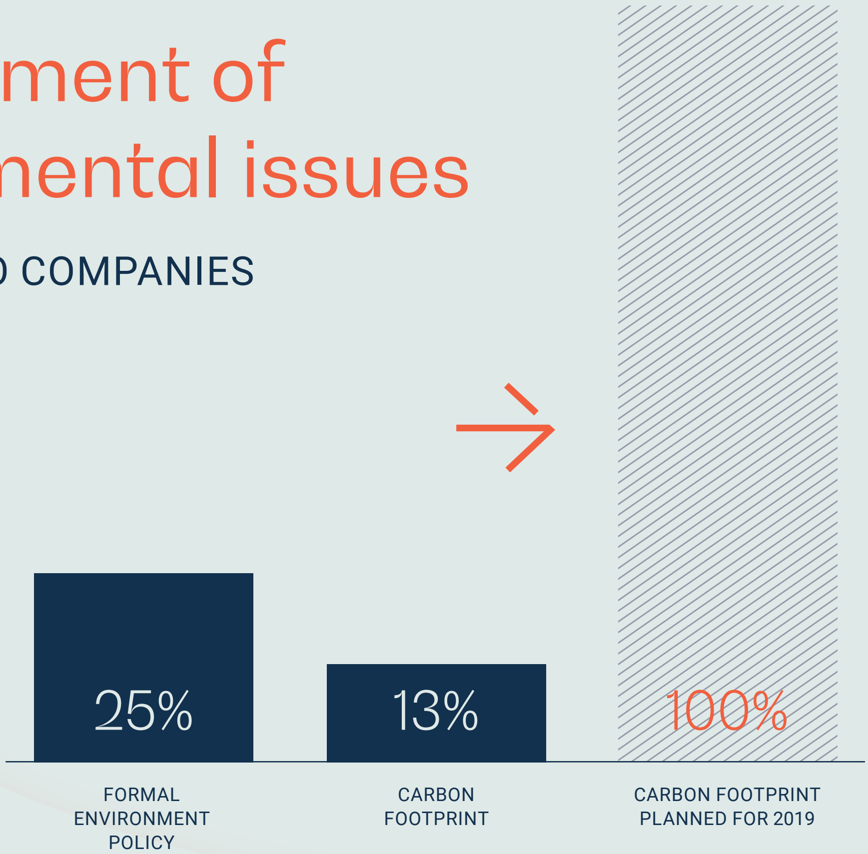
Environmental issues are very material to companies with manufacturing or assembling facilities as well as for some services companies working for industrial sectors.

As the portfolio mainly consists of services and healthcare companies, it's expected that only a few investees have environmental policies in place. However, several companies without any policies have implemented some initiatives to reduce their environmental impact (mainly through a reduction of their energy consumptions).

Given the sector and size of the manufacturing companies of Astorg's portfolio, it is not surprising that only the largest companies in terms of employees have conducted a carbon footprint. However, Astorg now requires a carbon footprint analysis from all companies, which will help them identify their main sources of greenhouse gas emissions. Progress towards relevant mitigation measures will be monitored at board level.

Management of environmental issues

% OF PORTFOLIO COMPANIES



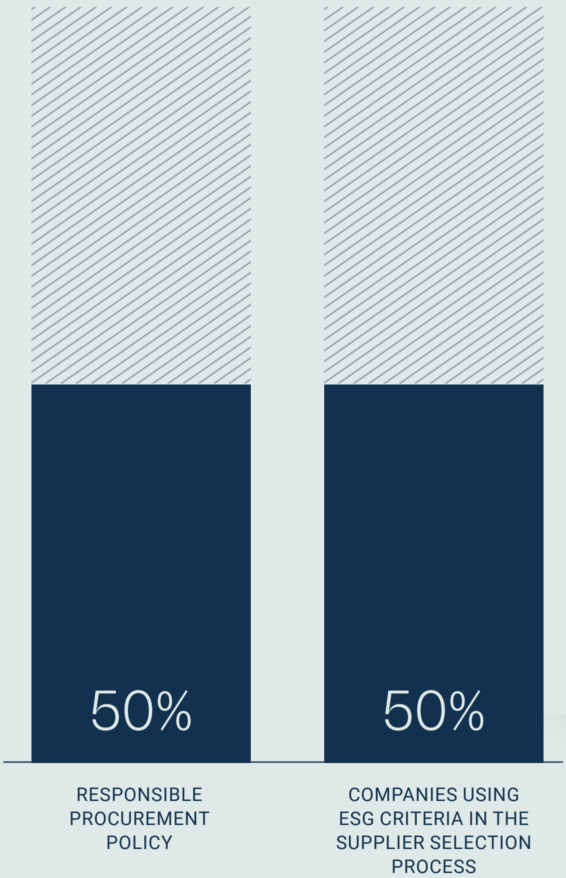
Focus on KPIs related to external stakeholders

Every company should take external stakeholders into account, whether this means its clients, its local community, or its suppliers if the company sources significant amounts of products or raw materials.

In this section, Astorg has decided to focus on the relationship with suppliers, which is material to most of its portfolio companies.

As of today, half of the companies analysed have a responsible procurement policy and also claim to integrate ESG criteria when selecting
their suppliers. All manufacturing companies in the portfolio exhibit at least one of these practices.

Audiotonix is a good example of a company presenting both practices.



ESG issues in the supply chain

% OF PORTFOLIO COMPANIES

Audiotonix

CASE STUDY

Audiotonix - Sustainable management of the supply chain

"Astorg asked us a lot of questions about our supply chain. Our discussions led to the draft of our ESG roadmap which integrates several steps to follow in order to reduce supply chain risks. It was an opportunity for us to pursue our efforts in this direction."

Tony Williams, Group Operations Director at Audiotonix

Audiotonix's audio mixing consoles are both manufactured offshore in China and assembled in the Group's facilities in the UK. The Group has identified the major risks related to its supply chain, most importantly a reputational risk. As an international player, Audiotonix should protect itself from controversies linked to its suppliers (like child labour or land contaminations). The following measures have been taken to reduce these risks:

- The Group has published a Code of Conduct, which was communicated to its main suppliers in October 2018.
- Audiotonix has launched an audit schedule, which foresees to **conduct regular internal audits of the first and second tier suppliers, which together represent 72% of the Group's product materials expense**.
- Audiotonix has already audited its key China contract manufacturer in 2017. In 2018, **4 suppliers have been audited**. According to the audit schedule, all other main suppliers (23) should be audited by the end of 2019.
- The Group participates in TISCreport, a reporting tool which helps registered companies monitor their suppliers against the Modern Slavery Act and improve the transparency of their supply chain overall.

Analysis of climate physical and transition risks

METHODOLOGY

As a signatory of IC20, Astorg is committed to the fight against climate change. The company is currently working on calculating the carbon footprint of its portfolio companies, which should help to identify if the portfolio is consistent with the target of limiting global warming to 1.5°C.

However, it's also important to consider the risks that each company faces because of climate change. According to the Task Force on Climate-related Financial Disclosures (TCFD), two types of climate risks can be distinguished:

1. **Physical risks**, which can be changes rising sea levels or extreme events like cyclones that can affect the company's ability to do business
2. **Transition risks**, which are related to the transition to a lower-carbon global economy, be it through climate regulations, technology changes, etc. Transition risks can be divided into four subsegments as illustrated below.

Definition of physical and transition risks

	Physical risks	Changes in precipitation patterns, rising mean temperatures, rising sea levels, extreme variability in weather patterns and increased severity of extreme weather events (cyclones and floods) that can: • Affect means of production of the company or of its suppliers • Increase production costs and insurance premiums • Reduce revenues resulting from lower sales or outputs
Transition risks	**Policy and legal risks**	Increased pricing of GHG emissions, extension of the scope of systems like the EU Emission Trading Scheme or enhanced emissions-reporting obligations that can lead to increasing operating costs (higher compliance costs, increased insurance premiums) Exposure to litigations that can increase costs and/or reduced demand for products and services resulting from fines and trials
	Technology risks	Substitution of existing products and services with lower emissions options and costs to transition to lower emissions technology that can: • Lead to the early retirement of existing assets and costs to adopt/deploy new practices and processes • Reduce demand for products and services
	Market risks	Changing customer behaviour leading to decreasing demand, increasing cost or scarcity of raw materials (including energy prices). This in turn can lead to important increases in production costs or even supply chain interruptions
	Reputation risks	Stigmatisation of a sector or increased stakeholder concern that can: • Lead to a decreasing demand for goods and services • Reduce revenues from decreased production capacity because of delayed planning approvals or supply chain interruptions

The assessment of physical risks relies on the World Risk Index, which provides maps indicating the level of physical risks faced by each country. Astorg has completed the map by positioning the locations of all its portfolio companies. A distinction was made between offices, manufacturing and assembling facilities as they are not equally affected by physical risks, offices being much easier to move.

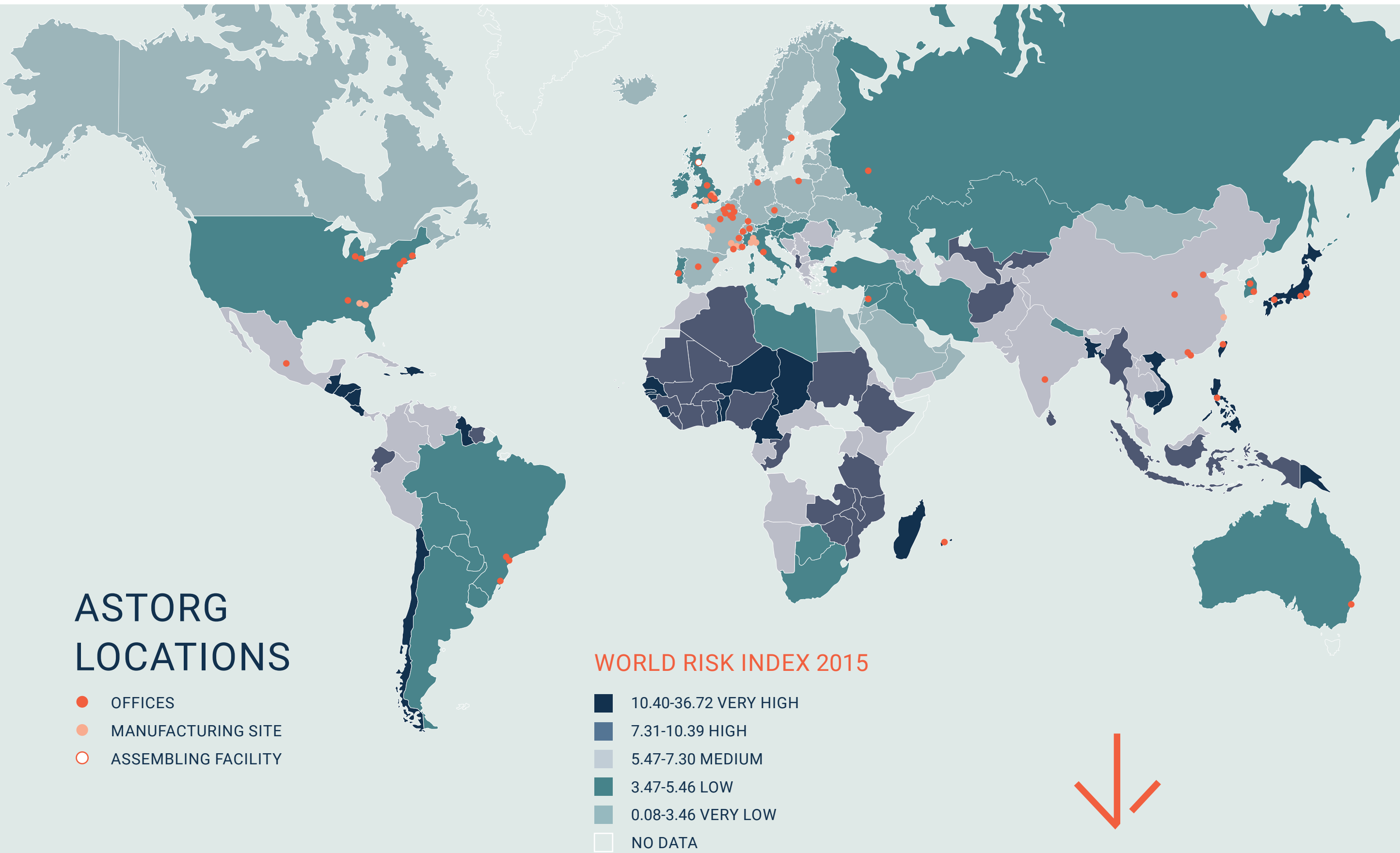
Regarding transition risks, each of the four transition risks identified by the TCFD is assessed. For each type of risk, Astorg analyses the probability for the risk to occur and the impact it could have on the business. Astorg then calculated an average of all risks for each company in order to perform a benchmark analysis.

Assessment of climate physical and transition risks

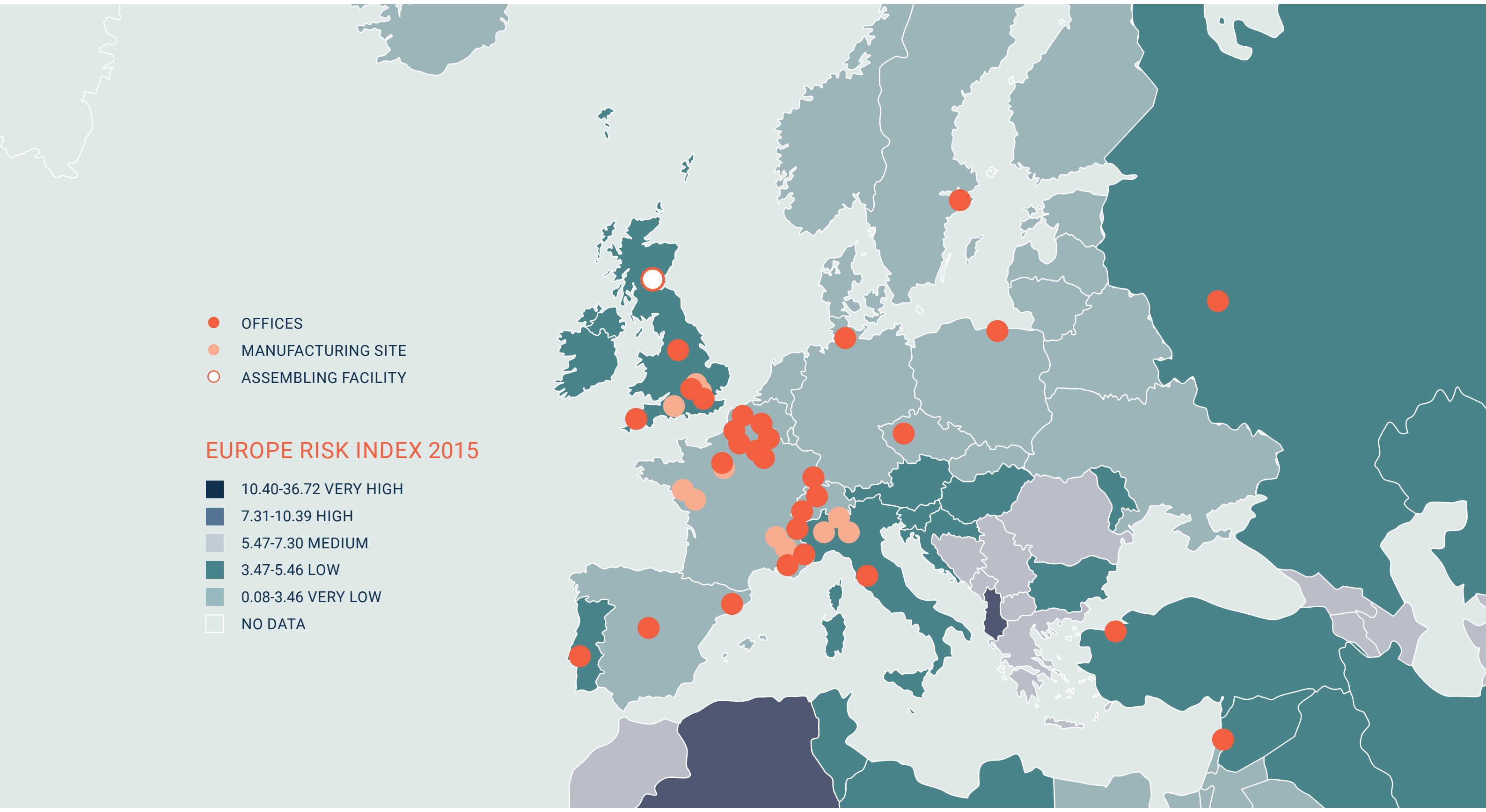
As shown on the map, some portfolio companies have locations in countries facing medium to very high **climate physical risks** (e.g. China and Japan). However, most manufacturing sites are located in Europe. Only two manufacturing sites are located in a medium risk country (China).

Location of companies and physical risk map

Most companies are located in central Europe in the form of offices. Physical risks in this region are considered low or very low, except in the Netherlands because of risks linked to sea level rise. One manufacturing facility is located in the Netherlands.



Focus on Europe



As expected, companies in the manufacturing sector face the highest **climate transition risks** compared to other sectors managed by Astorg. They are exposed to policy and legal risks due to their relatively higher carbon footprint, as well as market risks, in particular rising energy prices and scarcity of raw materials. One company operates in a sector that is likely to face a technological disruption linked to climate change mitigation.
No companies face significant reputation risks due to their sector.

Contribution to the transition towards a low-carbon economy

Astorg often invests in companies offering innovative solutions to sustainability challenges that have delivered exceptional financial performance. Four of the current portfolio companies offer products or services contributing to the transition towards a low-carbon economy.

ARIES ALLIANCE
Shaping a better future

Aries Alliance mainly works with titanium, which, as a much lighter material than the industry standard, allows for the reduction of aircraft weight and therefore their carbon footprint. The increasing pressure on the aeronautic sector to reduce its carbon footprint should allow Aries Alliance to win new market shares.

AUTOFORM
Forming Reality

Climate change also represents an opportunity for AutoForm as the company's software allows customers to reduce the quantity of raw materials necessary for production of goods such as cars. In addition, its technology helps reduce the weight of cars which implies a reduced fuel consumption.

IGM RESINS

IGM Resins has a more limited impact on climate than the industry average as it has included solvent-free products in its offering. Moreover, inks and coatings are fixed with LED instead of energy-intensive mercury lamps, enabling clients to reduce their $CO2$ footprint.

FLOWBIRD
Urban Intelligence

The transition to a lower-carbon global economy represents an opportunity for Flowbird as 25% of their products contribute to the efficiency of public transportation means, encouraging people to favour cleaner transportation modes.

CONCLUSION

Viviana Occhionorelli

ESG DIRECTOR

"I would like to thank the entire Astorg team, our companies and our LPs for the continuous dedication and support in this journey towards sustainable development."

2018 has been an important year for the implementation of Responsible Investment practices at Astorg. We have successfully launched our first ESG event and gathered for the first time all our CEOs and ESG managers together discussing sustainability topics. We have adopted our first ESG policy and communicated it to our team and portfolio. We have linked our team's performance targets to ESG achievements and we have launched an ambitious sustainability programme to engage our companies which includes action plans, data collection and climate change initiatives.

One year after the adoption of our ESG policy, I am proud to say that a lot of progress has been achieved on responsible investment at Astorg and much of it is thanks to our firm belief that sustainable development practices can create and protect value within our portfolio, and that private equity has a vital role to play in influencing the integration of sustainable development in the industry.

For the next couple of years, we have planned brand new ESG projects in line with the sustainable development challenges we see ahead of us. One of them is climate change, a topic which we recognize will impact our companies and the industry as a whole. In line with our commitments with the Climate Initiative 2020, we have launched a carbon footprint campaign in our portfolio, and we plan to adopt climate action plans for all our companies by end of 2020.

I therefore look forward to report to you next year the progress of our ambitious sustainability programme and the results of our engagement activities in our portfolio.

Appendix

Information required by Article 173 of France's Energy Transition Law			Correspondence with Astorg's ESG Report 2019
1	Information related to the entity		
1.1	General approach	Presentation of the entity or asset management company's overall approach for considering ESG aspects in the investment policy and when appropriate in risk management	See section ASTORG'S ESG POLICY
1.2	Content, frequency and tools	Content, frequency and means used by entity or asset management company to inform investors of ESG criteria taken into account in investment policy and, where necessary, the risks involved	See sections ASTORG'S ESG POLICY & ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of ESG performance
1.3	Assets under management	For asset management companies: list of CIUs concerned and share in % of investments in total investments managed by the asset management company	See section KEY FEATURES
1.4	Adhesion to an initiative	Adhesion to any ESG charter, code, label or initiative	See section ASTORG'S ESG POLICY / Background and public commitments
1.5	ESG risk identification process	General description of risk management procedures used to identify ESG risks, exposure of activities to these risks and overall description of these risks	See sections ASTORG'S ESG POLICY / ESG integration in the investment process & ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of ESG performance
2	Availability and accessibility of information		
2.1	Website Presentation on the website of the entity and annual update of information related to ESG criteria considered in investment policy and, where necessary, the risks involved as mention in II-2 of D. 533-16-1	Presentation on the website of the entity and annual update of the entity information mentioned in II-1 of D. 533-16-1	Responsible investment approach available on Astorg's website
		Responsible investment approach available on Astorg's website	
2.2	Annual report	Presentation in the annual report of the entity and annual update of information related to ESG criteria considered in investment policy and, where necessary, the risks involved as mention in II-2 of D. 533-16-1	ESG Report 2019
3	Information related to ESG consideration		
3.1	Distinction of information	Indication of the procedures of distinction by activity, asset class, investment portfolio, issuer, sector or any other relevant breakdown and the reasons for these distinctions	See section ASTORG'S ESG POLICY
3.2	Nature of ESG criteria taken into consideration:	Description of the nature of ESG criteria taken into consideration	-
3.2.1	Selection of ESG criteria	ESG criteria: description of main criteria taken into consideration and reasons for this choice of criteria	See sections ASTORG'S ESG POLICY / ESG integration in the investment process & ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of ESG performance
3.2.2	Climate risk consideration	Risks associated with climate change (physical risk and transition risk)	See sections ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of climate physical and transition risks / Assessment of climate physical and transition risks
3.2.3	Long term environmental objectives	Appraisal of contribution to respect of international goal to limit global warming and reach energy and ecological transition goals	See section ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of climate physical and transition risks / Contribution to the transition towards a low-carbon economy

Information required by Article 173 of France's Energy Transition Law				Correspondence with Astorg's ESG Report 2019
3.3	Information used in the analysis of the portfolio		For ESG criteria and environmental criteria, provide detail as to the nature of information used, which may be financial or extra-financial, internal analysis, external analysis or scoring	See sections ASTORG'S ESG POLICY / ESG integration in the investment process & ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of ESG performance
3.4	Methodology and results for analysis		Description of the ESG analysis methodology and of its results	-
	3.4.1	Description of methodology	ESG Criteria: Description of analysis method, hypothesis used and scope	See section ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of ESG performance / Methodology
	3.4.2	Description of environmental methodology	Environmental criteria: description of analysis methods which may include the following: Consequence of climate change and extreme weather events Compatibility with international goal to limit global warming and reach energy and ecological transition goals Carbon footprint measurement for portfolio companies Investments in assets which contribute to energy and ecological transition	See section ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of climate physical and transition risks / Methodology
3.5	Integration of analysis findings in investment policy		Description of how the results of the analysis are integrated in the investment policy	-
	3.5.1	Information on the achievement of long-term environmental objectives	Description of the information related to the contribution towards meeting the international objective of limiting global warming and achieving the energy and ecological transition goals: methods, objectives, actions, progress compared to objectives, etc.	See section ESG AND CLIMATE ANALYSIS OF THE PORTFOLIO / Analysis of climate physical and transition risks / Contribution to the transition towards a low-carbon economy
	3.5.2	Changes implemented	Description of changes implemented following to the analysis	See section ASTORG'S ESG POLICY / ESG integration in the investment process
	3.5.3	Engagement strategy with emitters	Description of the introduction of an engagement strategy with emitters and portfolio management companies	See section ASTORG'S ESG POLICY / ESG integration in the investment process
	3.5.4	Engagement strategy with management companies	Description of the introduction of an engagement strategy with management companies	Not applicable

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