AEGON
Asset Management

# SUSTAINABILITY REPORT

# AEGON GLOBAL SUSTAINABLE EQUITY STRATEGY

June 2023

Beyond borders™

# Contents



# Welcome

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**Welcome to our latest sustainability report for the Aegon Global Sustainable Equity Strategy, covering the 12 months to 31 December 2022. This was an eventful year for sustainable investors worldwide. We saw a continued acceleration in many sustainable megatrends; debate about what should and should not be considered 'sustainable'; meaningful regulatory evolution; and a worrying anti-ESG backlash in some parts of the US.**

These themes played out against a backdrop of elevated market volatility, as inflation and interest rates wreaked havoc on asset prices across the globe. All in all, we have a lot to report on.

## Sustainable fund statistics

Global sustainable assets under management decreased year-on-year, falling from their peak of around US$3.0 trillion at the start of 2022 to US$2.5 trillion by the year-end. A fall in assets was inevitable given the negative market moves over 2022, although net flows (how much investors contributed to sustainable funds relative to withdrawals) were positive. This contrasted with the significant net withdrawals seen from traditional investment funds. Given the difficult market backdrop, we believe this underlines the enduring demand for sustainable investments.

In terms of regional trends, Europe continues to dominate, accounting for 83% of the total global sustainable assets. This underlines how underpenetrated the rest of the world is when it comes to ESG investing.

## Changing regulation

The sustainable investing landscape is also being shaped by regulation, such as the EU's Taxonomy and Sustainable Finance Disclosure Regulation (SFDR), as well as the proposed Sustainability Disclosure Requirements (SDR) in the UK. One of the most prominent themes this year was the significant number of funds that were downgraded from Article 9 (those with a sustainable investment objective) to Article 8 (those which promote environmental or social characteristics, among other things). This reflected some asset managers being too optimistic in the initial classification of their funds. In total, 307 funds with assets of €170 billion were downgraded in Q4 of 2022 alone, an unhelpful narrative in the battle against 'greenwashing'.

As different regulatory frameworks evolve around the world, this could lead to increased confusion around sustainable investing, one of the very things that the regulations are seeking to avoid. We will be monitoring this topic closely and providing constructive feedback in forums to ensure these frameworks develop for the benefit of all stakeholders.

Regulation in other forms can be a powerful force in addressing sustainability issues and, by extension, boosting sustainable investing. There is no clearer example of this than the US Inflation Reduction Act, which was passed in July 2022. It earmarks over US$350 billion for spending on climate and renewable energy, which will provide a multi-year boost to companies with exposure to this space. There is now talk of a similar package being put together in Europe and a global race to provide targeted support in this manner can only be positive.


## Anti-ESG backlash

One of the more worrying topics to emerge in the latter half of 2022 was the anti-ESG backlash which has taken hold in parts of the US, and which has become an emotive topic for many. Several states have enacted legislation designed to limit ESG investing, with some even disinvesting and blacklisting asset managers which they view as promoting it. This is a worrying trend, which appears to be a thinly veiled attempt to appease the lobbying efforts of polluting, legacy industries with poor sustainability credentials.

Despite this, there have also been bright spots in the US, such as the rolling back of Federal rules that had limited the ability of plan sponsors to include ESG options. We can only hope that more forward-thinking policies like this overcome the demands of the backlash participants.

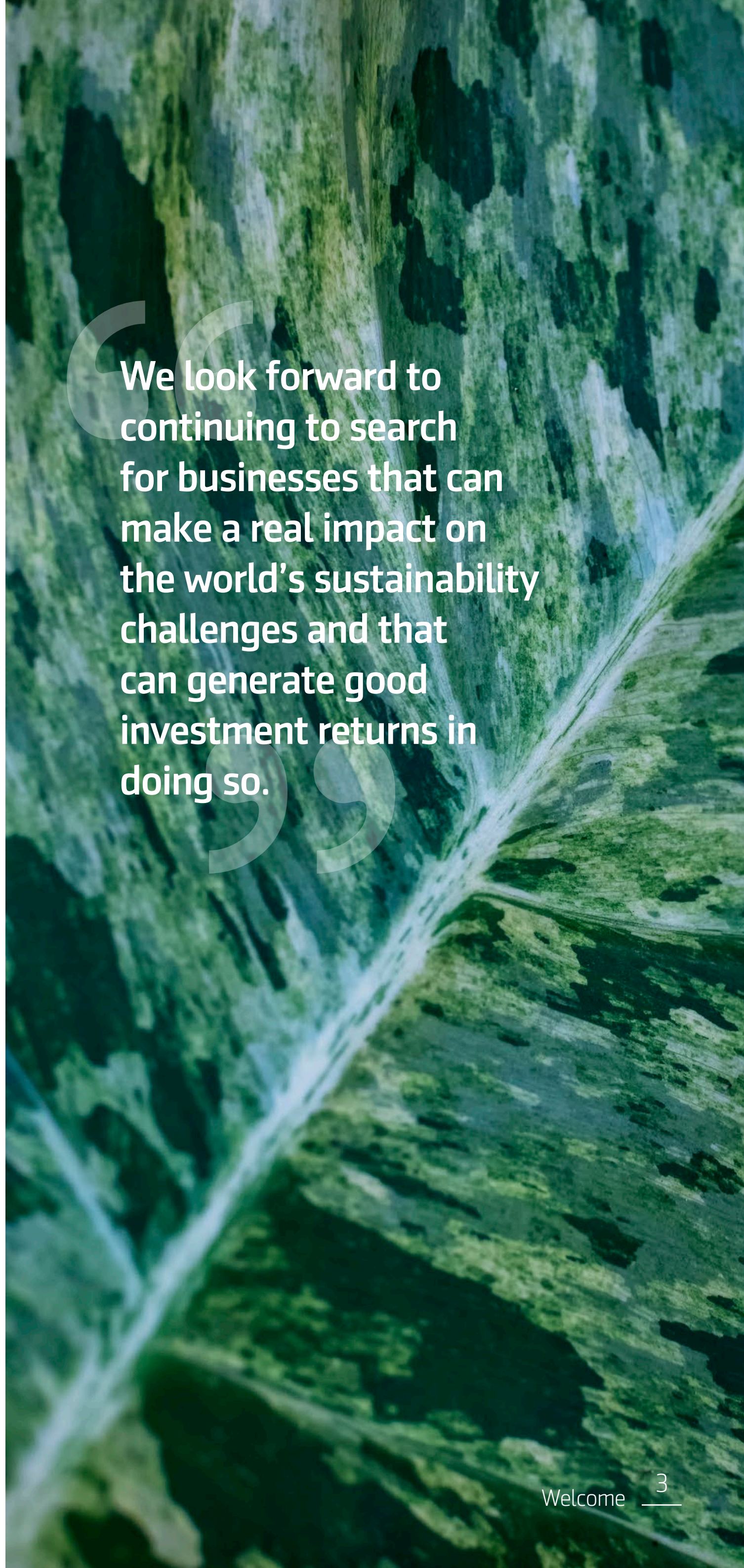
## Our strategy

In performance terms 2022 was a disappointing year for our Global Sustainable Equity strategy, although it has not shaken our belief that companies which are making a positive impact on meeting the world's many sustainability challenges will outperform over the long term. As patient shareholders, we aim to help them achieve their goals.

Throughout this report we look to draw out the impact that our investments are having. We believe the best way to do this is to look at every company in the portfolio individually and describe what it does and how this contributes to solving a sustainability challenge. We do this by organizing the report under the six sustainable 'pillars' that we invest in.

Transparency is key to sustainable investing, so you will also find a section on our voting and engagement activities. As over half of our portfolio by weight is what we call sustainability 'improvers', engagement is key to pushing our investee companies to address topics which we believe they need to improve on.

**We look forward to continuing to search for businesses that can make a real impact on the world's sustainability challenges and that can generate good investment returns in doing so. We hope you will enjoy reading the report.**



# Our mission, philosophy and process

**Our mission, philosophy and process have remained unchanged since the launch of the strategy in 2016, so readers of previous reports will see little new in this section. We believe that our consistency of approach is a key strength.**

## Mission

Our mission is to generate excess returns by investing in sustainable growth companies that have a positive impact.

## Philosophy

The increasing imperative of finding sustainable solutions to the world's many environmental and social challenges is becoming ever more ingrained in the public conscience. This is creating structural tailwinds for companies that can address these challenges through positive impact products and practices. This means that growth and positive impact are inextricably linked.

The sustainability challenges we face are many and varied. Their scale means they can take years and in many cases decades to solve, which means that, as investors, we must take a long-term mindset.

We also recognize that companies providing solutions to these challenges will often be imperfect, but we believe improvement can be a powerful force in terms of both sustainability and alpha generation. Sustainability is not a static concept and sustainability improvement is just as important, if not more so, than high absolute values. As a result, we consider both sustainability 'leaders' and 'improvers' within our Global Sustainable Equity strategy.

## Sustainability process

We begin with a small number of product-based exclusions to remove companies from our investable universe with clear negative impacts on the planet or society. We determine these based on over three decades of experience in ESG investing and our regular dialogue with our clients to gauge their opinions on what should and should not be excluded from an ESG strategy. We set-out these exclusions in the table below:

| | |
|---|---|
| **Adult entertainment** | Own an adult entertainment company or produce adult entertainment |
| **Animal testing** | Engage in the production or sales of animal tested cosmetics |
| **Gambling** | Derive more than 10% of revenue from gambling |
| **Genetic modification** | Conduct genetic modification for agricultural policies |
| **Tobacco** | Derive more than 10% of revenue from tobacco |
| **Weapons** | Produce or sell civilian firearms and firms which manufacture or sell armaments, nuclear weapons or associated strategic products |
| **Nuclear power** | Own a nuclear power facility |
| **Fossil fuels** | Engage in the extraction of oil, gas or coal |
| **Human rights** | Companies failing to address serious allegations of violations of international standards on human rights including the use of child, forced or bonded labour |

## Sustainability analysis

Every idea proposed by our investment team is independently analyzed by our Responsible Investment (RI) team to determine whether it is suitable for the portfolio.

This is a collaborative process, where both the investment and RI teams seek to enhance each other's understanding of a company and its sustainability impact. Crucially though, the final decision rests with the RI team, which has sole discretion to categorize each company as a 'leader', 'improver' or 'laggard'. Only leaders and improvers can make it into the portfolio, while laggards are uninvestable.

All analysis is tailored and the RI team uses the Sustainability Accounting Standards Board (SASB) Materiality Map to help determine what matters most to a specific company. They then use our proprietary Three Dimensions framework to hone these factors. The three dimensions we consider are:

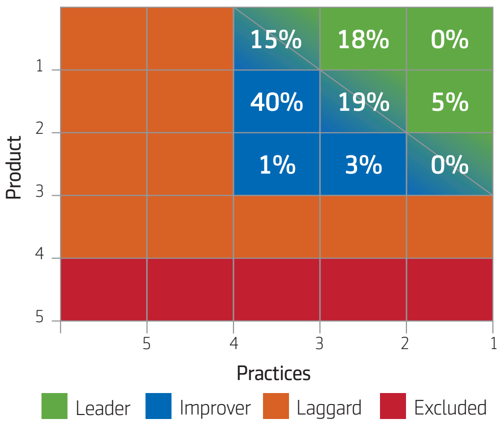
**Products:** The nature of the products and services that a company provides (what a company does). Scored 1 – 5, 1 being best.

**Practices:** Operational practices and standards (how a company does it). Scored 1 – 5, 1 being best.

**Improvement:** Whether a company has a track record of improvement or has meaningful ambitions to improve.

In practice, a company must score at least '3' on both products and practices to be a leader or improver. Anything less automatically becomes a laggard. We illustrate this in the graphic below, which shows the allocation of stocks in the portfolio by sustainabilty products and practices.

### Three dimensions of sustainability




Source: Aegon AM. Global Sustainable Equity representative portfolio as at 31 December 2022.

Sustainability is not a static concept. We set key performance indicators for each company to monitor progress over time and our responsible investment team reviews its analysis annually, at which point they can upgrade or downgrade a stock's categorisation. Should a stock be downgraded to a laggard, it must be sold from the portfolio. This independent oversight is vital for the integrity of our sustainability process.

## Sustainability pillars

The output of our sustainability process is that each stock is allocated to one of six sustainability 'pillars'. These are the main themes that we believe we can have an impact on through public equity investing. Later in the report, we breakdown each pillar and look at the individual holdings within them.

Underlying the pillars is our 'Strong Governance Foundation', which we believe is central for all holdings.

We have selected these themes as a means of categorizing what we believe are the sustainability challenges and themes on which we can have true impact through public equity investment.

We assign each company in the portfolio to a pillar based on its most prominent sustainability impact. It is important to emphasize that this is an outcome of our process, not a driver and there are no set weights or guidance ranges for each pillar.

| | **Environmental pillars** | | | **Social pillars** | | |
|---|---|---|---|---|---|---|
| | Climate Change | Eco Solutions | Resource Efficiency | Health & Wellbeing | Inclusion | Sustainable Growth |
| Purpose | Enabling the energy transition | Protecting and improving our planet's ecosystem | Creating more value with fewer resources | Improving physical and mental wellbeing | Promoting equality and solving demographic challenges | Essential enabling technologies and services |
| Current solutions | Solar Inverters<br>Energy Storage<br>Hydrogen<br>Power Distribution | Water Management<br>Disaster Protection<br>Climate Change Mitigants | Recycling Technologies<br>Cloud Computing<br>Digital Textile Printing<br>Automation | Low Cost Fitness<br>Gene Sequencing<br>Medtech Innovation<br>Biotech | Education<br>Alternative Credit Data<br>Diversity Champions | Semiconductors<br>Digital Transformation<br>Business Resilience |

**Strong governance foundation**

Ensuring protection of shareholders and employees, company transparency and accountability

Source: Aegon AM. As at 31 December 2022.

## How we think about impact

Our mission is to generate excess returns by investing in sustainable growth companies that have a positive impact.

Defining and measuring impact is perhaps one of the greatest challenges facing the ESG investment community. Provision of data, varying regulation and different regional preferences all mean that a universally accepted definition of 'impact' is yet to be agreed.

We define impact as the combination of a company's products or services (what it does) and its practices (how it does it), and we allocate each company in the portfolio to one of our 'sustainability pillars' based on its most prominent impact through these factors.

In defining impact, we also think it is important to decouple company and investor impacts:

- **Company impact** is the change in a specific parameter caused by company activities, for example, selling products that reduce carbon emissions.
- **Investor impact** is the change in company impact that is caused by an investor's activity, for example, enabling a company to sell more products that reduce carbon emissions.

We believe these two concepts are often misunderstood and conflated. Simply owning impactful companies does not mean that we are delivering impact ourselves. We want to be transparent that the 'Real World Impact' is down to the companies we invest in and not our investment dollars.

Of course, we want to find impactful companies, and the Impact Management Project (IMP) provides a broadly endorsed framework on how to assess the impact of companies. This framework consists of five dimensions of company impact: What, Who, How Much, Contribution and Risk. We consider similar questions and look at the real-world impact of each company's products or services and how that impact aligns with our sustainability themes.

IMPACT MANAGEMENT PROJECT

In terms of considering **company impact**, below are some examples of what we look for and the real-world impacts that some of our investee companies are having. The individual pillar sections of the report expand on these and contain further examples.

| Company | ESG | Sustainability theme | Real-world impact |
|---|---|---|---|
| ALFEN | E | Climate change | In 2022 Alfen supplied 283,000 households with renewable energy through its smart grid solutions. Up to 3.8 million tonnes of CO2e emissions were potentially avoided by Alfen charging points, which have been powering electric vehicles. |
| solaredge | E | Climate change | By the end of 2022 the company had 3.3 million monitored systems around the world and shipped 43.6 GW of systems worldwide. |
| TOMRA | E | Resource efficiency | With approximately 82,000 installations in over 60 markets, TOMRA reverse vending machines capture more than 45 billion empty cans and bottles every year. In 2022 the avoidance of carbon emissions enabled by TOMRA products was just over 21.1 million tonnes of CO2 equivalents, representing an 8.7% increase on 2021. The total avoided emissions compare to about 35% of Norway's greenhouse gas emissions in 2021. |
| Penumbra | S | Health & wellbeing | Thrombectomy involves using a specially designed clot removal device inserted through a catheter to pull or suck out a clot to restore blood flow. Using Penumbra's mechanical thrombectomy device increases a patient's chances of functioning independently after 90 days by 19-35% following a stroke. |
| idp INTERNATIONAL EDUCATION SPECIALISTS | S | Inclusion | IDP is an international education business offering student placements. In 2022 IDP enabled 55,400 student courses in various English-speaking countries, such as Canada, UK, and Australia. |

Source: Aegon AM. As at 31 December 2022.

# Sustainability pillar: **Climate change**

**Pillar definition**

Addressing climate change through invention and innovation

**Number of holdings**

5

**Portfolio weight**

12.9%

> **With such a seismic reallocation of capital required and massive government support, this creates enormous long term investment opportunities for those companies that are providing solutions to the climate crisis.**

Source: Aegon AM. As at 31 December 2022.

**If there was one, slim, silver lining to Covid-19 lockdowns, it was that we saw a global dip in greenhouse gas (GHG) emissions for the first time. It also demonstrated that radical change can happen. Then, during 2021, the United Nations Climate Change Conference (COP26) succeeded in getting 197 countries to align on the Glasgow Climate Pact and other landmark pledges.**

However, fast forward a year or so and we are back on an unhealthy upwards trajectory. Following underwhelming progress on key issues at COP27 in Egypt Alok Sharma, the president of COP26, declared that the goal of limiting global temperature rises to 1.5°C was "on life support". More recently, the International Energy Agency announced that fossil fuel emissions in 2022 reached a new high of over 36.8 billion tonnes of CO2 (GtCO2) for the year.

So, what is the solution to humanity's most pressing problem? It requires a mixture of global co-operation to establish a common goal (sticking to the goal is the hard part), government policy and effective capital allocation. We believe that public companies, as one of the key pillars of the global economy and allocators of capital, have a key role to play in what needs to be a rapid transition. Furthermore, we have seen hugely positive developments in government policy over the past year, none more so than the Inflation Reduction Act in the US, which earmarks $369 billion for renewables, energy resilience and reducing emissions. The EU is expected to follow in the near future with its own legislation, and this sort of regulatory one-upmanship can only be a good thing, both for the planet and the companies which are providing solutions to fight climate change.

The good news is we broadly know how to achieve a net-zero world. It is estimated that around 70-80% of the reduction in GHG needed can be achieved with existing technologies. The remainder can come from future technologies or nature – or both.

The transition to a net-zero emissions world opens up an investment opportunity that totals almost $200 trillion by 2050, or nearly $7 trillion a year. Electric vehicles and low-carbon power will be the biggest markets for investors, followed by power grids, according to the latest outlook from Bloomberg NEF.

With such a seismic reallocation of capital required and massive government support, this creates enormous long term investment opportunities for those companies that are providing solutions to the climate crisis.

## Stock profiles: Climate change

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **Alfen (2.6%)** | Alfen describes itself as being "at the centre of the electricity grid" and its three main business lines, smart grids, electric vehicle (EV) charging, and energy storage solutions, provide key solutions to facilitate the green energy transition. As a leader in both EV charging stations and connecting one part of the grid to another, Alfen has a clear advantage in being able to offer an end-to-end solution to its clients. | In 2022 Alfen supplied 283,000 households with renewable energy through its smart grid solutions. Up to 3.8 million tonnes of CO2e emissions were potentially avoided by Alfen charging points, which have been powering electric vehicles. | Leader |
| **SolarEdge Technologies (4.2%)** | SolarEdge manufactures inverters and power optimizers for residential and commercial solar systems. By making each solar panel 'intelligent', the company's technology optimizes the power generation of each solar panel in an array. In the residential space, SolarEdge provides its own smart inverters, cloud-based monitoring systems, solar-based water heating and now its own battery storage systems. | By the end of 2022 the company had 3.3 million monitored systems around the world and shipped 43.6 GW of systems worldwide. | Improver |
| **Plug Power (0.8%)** | Plug Power offers one of the world's only end-to-end hydrogen solutions. It has attracted Fortune 500 companies with large distribution centres and warehouses to buy into its solutions. Hydrogen-powered forklift trucks can increase productivity in warehouses by up to 20% compared to traditional lead battery powered ones. | Plug Power has deployed over 50,000 fuel cell systems for e-mobility, more than anyone else in the world. It has also become the world's largest buyer of liquid hydrogen, having built a hydrogen highway across North America. | Improver |
| **Chroma Ate (2.4%)** | Chroma Ate has a wealth of experience in producing equipment for automated EV battery production, specifically intelligent automation lines and automated testing systems to both the world's major lithium-ion battery and vehicle manufacturers. | We continue to look for the best way to measure Chroma Ate's real-world impact. | Improver |
| **Samsung SDI (2.9%)** | Samsung SDI has three key business lines contributing to the energy transition:<br>1. The automotive batteries section manufactures batteries used in electric vehicles, helping to drive adoption of electric transportation.<br>2. It produces energy storage devices, which allow grid operators to store excess electricity generated by renewables.<br>3. The company makes photovoltaic (PV) panels that can generate renewable energy.<br>All of this contributes to increasing sustainability and availability of green energy. | 40% of the company's revenues are now from EV batteries and 11% from energy storage solutions. | Improver |

Source: Aegon AM. As at 31 December 2022.

## Sustainability Soapbox
# The future of the planet

**For almost three decades world governments have convened to negotiate a global response to the climate crisis. In recent years, the conversation has been dominated by discussion on progress towards the 2015 Paris Agreement, signed by 196 countries at COP21.**

Increasingly, COP summits provide a platform for many more than just government and country leaders. They provide a platform for different areas of the public and private sectors to announce ambitious projects and targets, and to form cross-sectoral collaborations and partnerships. COP26 culminated in the Glasgow Climate Pact, and we saw many pledges made inside and outside the negotiation rooms regarding net-zero commitments, forest protection and climate finance, among many other issues. This kept the goal of curbing global warming to 1.5 degrees Celsius alive, but "with a weak pulse", as the then UK Presidency declared.

After COP26 was penned as a little more talk and a little less action, COP27 was dubbed the year for implementation.

Typically, COP is also a platform for protest on climate action (or the lack of). While a feature of COP26 in Glasgow, we are seeing less of this in Egypt, not known for its tolerance to activism. Protesters have been limited to a specific area, reportedly a 25-minute walk from the negotiations.

Dubious about the location and the choice of Coca-Cola, one of the world's top polluters, as sponsor, interest in this year's COP has waned. Many companies had reservations about attending, not least because of the associated carbon emissions. We include ourselves, so like others Aegon Asset Management chose to attend virtually.

But leaders and experts have been ringing alarm bells that time is fast running out to avert catastrophic rises in temperature, the 'COP for implementation' must live up to its name.

There are three principal areas of focus: mitigation, adaptation and climate finance. We look at each in turn.

## 1. Mitigation: How countries are reducing their emissions

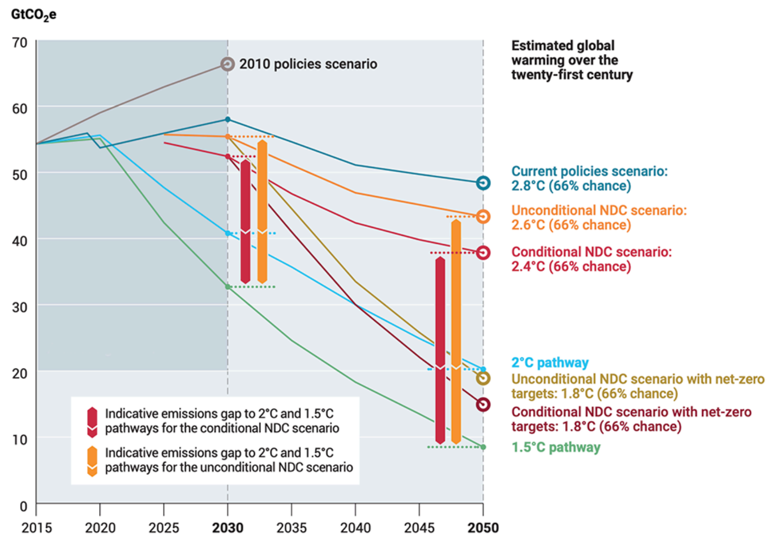
Countries were expected to show how they are implementing the Glasgow Climate Pact, and to review the ambition of their Nationally Determined Contributions (NDCs).

The COP26 summit concluded with a resolution from governments to review and update their targets ahead of COP27. In our discussions following COP26 we expressed our disappointment that this commitment remained voluntary. Our dismay was justified, as only 21 countries out of the 197 had updated their NDCs ahead of COP27.

We remain significantly off where we need to be to deal with the worst impacts of climate change, with no current credible pathway to 1.5.

Figure 1 shows projections of greenhouse gas emissions under different scenarios to 2050 and indications of the emissions gap and global warming implications over this century (based on medians).

### Figure 1: Projections of greenhouse gas emissions under different scenarios




Source: UNEP, Emissions Gap Report 2022.

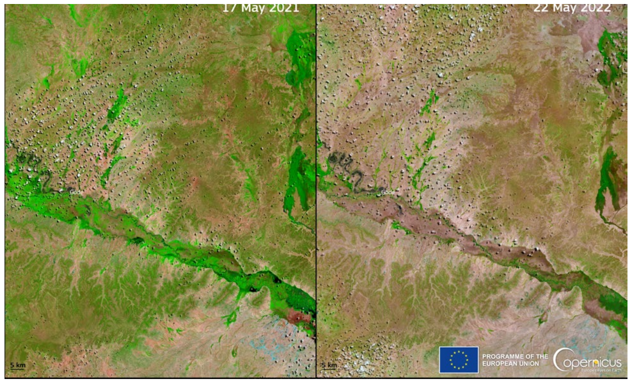
## 2. Adaptation: How will countries adapt and help others do the same?

Climate change is already here. Adaptation is the field of adapting to the climate change that we are already experiencing, and that which we can now expect. It is essentially insurance for mitigation, however with insurance one usually hopes never to have to call up and cash in.

Unfortunately, we already know that we will need adaptation, even at 1.5. The higher the emissions over the coming years, the more severe the impacts of climate change, the more adaptation we will need, and the more this will cost. Developed countries committed to doubling adaptation finance at COP26 from 2019 levels, however the 2021 Adaptation Gap Report concluded that the finance gap continues to widen.

With this being dubbed the 'COP for Africa', we are seeing adaptation rise on the agenda given the impact climate change has on livelihoods across the continent. That impact is two-fold: not only are Africcan countries more likely than most others to experience the direct impacts of increasing temperatures, the region also lacks appropriate finance for adaptation.

These images, acquired by the Copernicus Sentinel-2 satellites on 17 May 2021 (left) and 22 May 2022 (right), show the effects of water scarcity in the Gode area, in the Somali Region of Ethiopia. The country experienced the worst drought since 1981: many crops failed and over a million livestock died, two-thirds of which were in the Somali Region.




Source: European Union, Copernicus Sentinel-2 imagery.

## 3. Climate finance: the elephant that never leaves the negotiation room

Climate finance is a top theme again this year, and we are likely to hear a lot about the yearly $100 billion promise by developed nations that has not yet been delivered. Loss and damage is looking to be the defining issue of this year's COP. Developing nations are calling for specific funding to help them cope with the impacts of climate change, which they increasingly bear the brunt of but contribute to less than developed nations. They want this to be additional to already agreed climate finance, and in the form of grants and not loans. This is likely to be a contentious subject between nations, developed nations are already not providing enough as per the Paris Agreement. Further, paying for loss and damage could translate as an admission of liability and potentially trigger legal battles.

Following a deadly heat wave earlier in the year, Pakistan saw significant flooding which took the lives of over 1,100 people and impacted 33 million others in one of the country's worst monsoon seasons. Pakistan is responsible for less than 1% of global CO2 emissions but is paying a heavy price. A clear example of why a loss and damage finance is desperately needed.

Over the almost three decades since COP began, climate change has gone from a fringe issue to a global priority. The timing of COP27 was pivotal, held against a backdrop of compounding scientific data showing that the world is not doing enough to tackle carbon emissions, an energy crisis propelled by the war in Ukraine, and extreme weather events worldwide, there is no time for complacency.

# Sustainability pillar: **Eco solutions**

**Pillar definition**

Protecting and improving the ecosystem of our planet through modern solutions

**Number of holdings**

2

**Portfolio weight**

5.7%

> **Ultimately, we need to harness engineering and technological capabilities to provide solutions and provisions to the effects of the biodiversity loss, environmental changes, and the effects of natural disasters.**

Source: Aegon AM. As at 31 December 2022.

**To-date, many sustainable investors have tended to focus on carbon risk or climate change. While these are clearly vital to the environment, there are other issues that are worthy of attention. These include biodiversity; efforts to make the environment more resilient; and how we predict and respond to natural (and man-made) disasters, which are, sadly, becoming more common. Our Eco Solutions pillar covers companies providing solutions to these challenges, and more.**

Biodiversity is a topic that has only recently started to emerge from the shadow of climate change as a distinct and significant issue. Biodiversity, which represents the variety of life on earth in all its forms and interactions, is one of the most complex and vital features of our planet. With an estimated one million species at risk, investors are waking up to its intrinsic value and the tangible benefits it has for society and the economy.

According to the World Economic Forum, more than half of the world's GDP (around $44 trillion) is moderately or highly dependent on nature and its services. Now more than ever, we need solutions and alternatives to the way we live, as well as ways to remedy the damage to the planet that has already been done[1].

Natural disasters affect an estimated 218 million people and claim 68,000 lives per year[2]. Natural catastrophes in 2022 resulted in total global economic losses of $284 billion and insured losses of $125 billion, the fourth largest annual amount ever. Hurricane Ian, which hit the US and areas of the Caribbean in September, was the largest single contributor to this, accounting for between $50 billion and $65 billion of the insured losses. This made it the second costliest natural catastrophe on record in terms of insured losses. The year also saw flooding in Australia, which resulted in the largest claims event ever in the country. These statistics highlight that natural disasters are becoming more frequent and more costly.

Physical change to our environment has a devastating impact on millions of people across the globe, and the most unfair part of this is that those in impoverished parts of the world tend to bear the brunt. This has, at least, been recognized by developed nations and perhaps the standout achievement of COP27 was the commitment to establish a 'Loss and Damage Fund' to assist vulnerable nations with the impact of natural disasters. Let us hope this is put into action fast and not left to meander like some of the commitments from previous summits.

Ultimately, we need to harness engineering and technological capabilities to provide solutions and provisions to the effects of the biodiversity loss, environmental changes, and the effects of natural disasters.

[1] Half of World's GDP Moderately or Highly Dependent on Nature, Says New Report > Press releases | World Economic Forum (weforum.org).
[2] Center for Research on the Epidemiology of Disasters - Natural Disaster Statistics and Facts [Updated data from 2020] The Zebra.

## Stock profiles: Eco solutions

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **Everbridge (2.0%)** | Everbridge specializes in critical emergency mass communication for companies, governments, emergency services and healthcare organizations. As a result of increasingly extreme weather events, natural disasters, and terrorism, communicating during emergency events is becoming increasingly important. | In 2022 Everbridge helped manage critical events for over 6,500 customers globally, delivering billions of communications. | Improver |
| **Tetra Tech (3.7%)** | Tetra Tech offers numerous positive environmental and social benefits to the sectors it serves around the world, by using cutting edge technology, engineering, science and data. It provides solutions to some of the world's most pressing issues, including helping local governments and municipal utilities offer safe drinking water; delivering a range of storm water management services; helping corporates to record GHG emissions; and providing engineering and construction expertise for renewable energy projects. | By the end of 2022 the company had 3.3 million monitored systems around the world and shipped 43.6 GW of systems worldwide. | Leader |

Source: Aegon AM. As at 31 December 2022.

# Sustainability pillar: **Resource efficiency**

| Pillar definition |
| --- |
| Reducing finite resource use through automation and circular economies |
| **Number of holdings** |
| 6 |
| **Portfolio weight** |
| 12.4% |

> **We don't believe there has to be a trade-off between returns and ensuring that our planet survives. A more circular economy can work on behalf of shareholders, as it can hugely benefit the bottom line of a company.**

Source: Aegon AM. As at 31 December 2022.

**Resource efficiency means doing more with less. It allows us to create more value with fewer resources, which creates sustainable economic growth, while limiting the associated harmful impacts on society and the environment.**

There exists an intimate relationship between the flow of capital, and the flow of natural resources. But raw materials were assumed to be infinite, not finite. The ever-increasing demand for energy has been met by taking carbon from the ground and releasing it into the atmosphere. It is time to move away from being an extractive economy to a regenerative economy, and policymakers are responding.

The EU adopted an updated Circular Economy Action Plan in March 2020, which targets how products are designed, promotes circular economy processes and encourages sustainable consumption. It also aims to ensure that waste is prevented, and the resources used are kept in the EU economy for as long as possible. However, in other parts of the world the circular economy is often composed of more voluntary initiatives, with few substantive laws that make circularity mandatory. This increases the importance of effective product design and lifecycle management from companies to reduce our reliance on natural resources today.

We don't believe there has to be a trade-off between returns and ensuring that our planet survives. A more circular economy can work on behalf of shareholders, as it can hugely benefit the bottom line of a company. The ability to use resources more efficiently allows us to not only address resource scarcity, waste issues and the associated negative impacts, but it will incentivize innovation and modernisation.

The high and volatile resource prices and uncertain supply prospects of today only increase the importance of moving away from the take-make-waste model we know so well towards a more efficient model. And the principles of the circular economy can be applied across numerous industries, from creative technology that provides solutions to the wasteful ways of the fashion industry, to creating closed loop systems for plastic bottles. Our strategy is exposed to various themes which move us towards a more resource conscious world.

The road to sustainability will be paved with the bricks of the circular economy.

## Stock profiles: Resource efficiency

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **Kornit Digital (1.8%)** | The textiles industry accounts for 20% of global wastewater. Kornit Digital manufactures textile printing machines that that utilize a process that is 100% waterless, with no pre-treatments, steaming or washing required. The company also produces environmentally friendly inks that are non-hazardous, non-toxic and biodegradable. | By 2026, it is estimated that Kornit will enable the production of 2.5 billion apparel items, saving 4.3 trillion litres of water and 17.2 billion kg of GHG emissions, when compared to traditional production methods. | Leader |
| **Energy Recovery (1.1%)** | Energy Recovery Inc has developed a reverse osmosis product which is estimated to reduce the energy costs of desalination by 60%. Indeed, its pressure exchange technology has been a game-changer in the desalination industry and the company is now using that technology to reduce energy needs in the wastewater and refrigeration market, where regulations are moving to reduce emissions. | In 2021, Energy Recovery's products saved water desalination customers approximately $3.9 billion in energy costs, helping customers avoid 30 terawatt hours of energy usage, representing a 4% reduction in the global energy consumption for potable water utilities. | Leader |
| **TOMRA Systems (2.0%)** | TOMRA provides solutions for optimal resource productivity. Its machines are used to reduce plastic waste and food waste. The company is also improving the efficiency of mining, which is an essential but often carbon-intensive process. TOMRA is the world's largest reverse vending machine manufacturer, creating closed loop systems for plastic bottles | With approximately 82,000 installations in over 60 markets, TOMRA reverse vending machines capture more than 45 billion empty cans and bottles every year. In 2022 the avoidance of carbon emissions enabled by TOMRA products was just over 21.1 million tonnes of CO2 equivalents, representing an 8.7% increase on 2021. The total avoided emissions compare to about 35% of Norway's greenhouse gas emissions in 2021. | Leader |
| **Keyence (4.0%)** | Robotics and automation are structural growth trends that are disruptive to existing ways of working, but also extremely beneficial from a productivity, health and safety and resource efficiency perspective. Keyence's products are standard (not custom made) and are designed to be easily integrated into production lines. | Keyence are in the Forbes list of 'The world's most innovative companies', with 70% if products being a world or industry first of its kind. | Improver |
| **Universal Display (1.7%)** | Universal Display is in the business of researching, developing and commercializing OLED (organic light emitting diode) technologies. OLED can offer displays with superior power efficiencies that can reduce energy consumption by up to four times, lower manufacturing costs, improve picture quality and response times. | When Universal Display's technologies are used in flat panel displays it can make them four times more energy efficient. | Improver |
| **Advanced Drainage Systems (1.7%)** | Advanced Drainage Systems manufactures corrugated high density polyethylene pipe and polypropylene pipe used for the drainage, storage, and treatment of water. It is the largest pure-play domestic producer in the US, around five times larger than its closest competitor. Its products are made with a high proportion of recycled material, processed by Green Line Polymers Inc (a wholly owned recycling subsidiary). | ADS is the largest plastic recycling company in North America, holding 155 patents from products that use millions of pounds of recycled plastic. Globally there is over 10 billion feet of ADS plastic pipes installed around the world. | Improver |

Source: Aegon AM. As at 31 December 2022.

## Sustainability Soapbox

# E-waste – an electrically charged issue

**What is EEE and E-Waste? Electrical and Electronic Equipment (EEE) are products with circuitry or electrical components with power or battery supply. E-Waste is the discard of these products, whether through wear and tear or, most likely, due to technological advancements and upgrades. The growth of EEE over the past century has been closely associated with rapid global economic development. With the continuous increase in disposable income levels, mass urbanisation and industrialisation in developing economies, E-Waste is on an exponentially growing trajectory. Globally, it is the fastest-growing waste stream.**

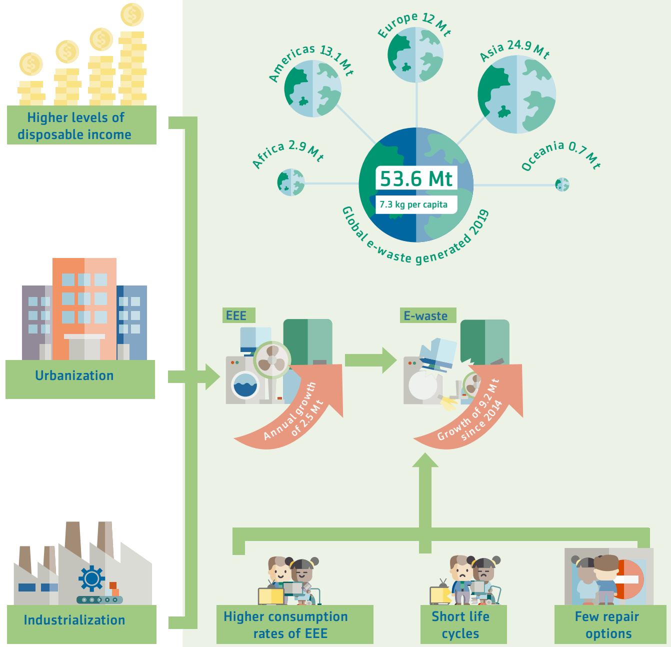
According to the UN Global E-Waste Monitor 2020, global E-Waste reached a record 53.6 million tonnes (Mt) in 2019, of which only 17.4% was recycled. This is not sustainable as E-waste continues to outpace global recycling efforts. Currently, the Global E-Waste market is worth $57 billion. Only $10 billion worth is recycled in an environmentally sound way.

Poor recycling and collection management of E-Waste contributes to global warming. Unsurprisingly, Greenhouse gas emissions are released in the extraction and refinement of primary raw materials for EEE products. If we could recycle materials, it would alleviate the need to mine for new raw materials. Another complicating factor is the type of materials in the waste and the dangerous properties they have. E-Waste includes not only plastic, but also some extreme additives and hazardous substances such as mercury, brominated flame retardants (BFR), chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). Unsurprisingly, this poses significant risks to the environment and human health.

How can companies tackle this problem? Firstly, they can look at product design. Companies need to manufacture products, components and materials that can be kept at their maximum functionality for as long as possible. This can be achieved by repairing and refurbishing a product or certain parts of it. Investment in refurbishment technologies and methods will allow refurbished products to compete with new products in appearance and functionality. Refurbishment is predominantly a time-consuming and manual process. Further research and investment in this area are vital, therefore, to improving efficiencies.

Secondly, we need to address the stigma around using refurbished or used products. Other than the fact that people want to be fashionable and keep up to date with the latest trends, the main deterrents to using refurbished products are the assumption that the performance of the items will be inferior and that there could be a financial cost incurred due to a product malfunctioning. Customers need guarantees and transparency in the secondary market to ensure that the circular economy is utilised.

Lastly, cloud technology can play a crucial role in reducing the pace of hardware obsolescence. Harnessing such technology allows for optimised storage and improved data management and processing capabilities through a network of internet servers instead of a local device.




Source: UN E-waste Monitor 2020 report

# Sustainability pillar: **Health & wellbeing**

| Pillar definition |
| --- |
| Enhancing human wellbeing through better healthcare, diet and fitness. |
| **Number of holdings** |
| 13 |
| **Portfolio weight** |
| 35.6% |

"...these advances make health and wellbeing a diverse and exciting theme to invest in and one with tangible positive impacts."

Source: Aegon AM. As at 31 December 2022.

**The world has seen immense progress in healthcare over the past century, particularly in medical innovation and drug discovery.**

At the turn of the 19th century global life expectancy was estimated to be 32 years. By 2020 it was 72 years[3]. While that is a positive statistic, the disparity within it is not. In fact, the life expectancy gap globally is widening. World Health Organisation (WHO) statistics show that average life expectancy in many African nations languishes in the 50s and low 60s (Lesotho is lowest at 50.75 years), far behind many developed countries, where it is above 80 (Japan has the highest at 84.26 years)[4]. It is a depressingly similar tale for infant mortality which is, unacceptably, more than 10 times higher in Africa than in Europe[5]. The crumb of comfort is that the absolute rate in Africa has fallen significantly in recent decades, although the gap is still too wide.

It is important to emphasise that this is not just a developed vs. developing world issue – it also exists in developed countries such as the UK. Men and women in central Glasgow, Scotland's biggest city, are expected to live 6.5 and 5.8 years respectively less than those in East Renfrewshire, which encompasses some of the outskirts of the city and its surrounding areas[6]. This is both a local and a global issue.

## Noncommunicable diseases

An increase in wealth and living standards has also brought a rise in what the WHO calls 'noncommunicable' diseases. These cover what we tend to think of as the main health issues in the developed world and they now account for 41 million deaths per year, equivalent to 71% of all deaths worldwide[7]. For example, the World Stroke Organization estimated that over 143 million years of healthy life is lost each year due to stroke-related death and disability[8]. Furthermore, diabetes is no longer a problem exclusively for 'rich' nations', and it is estimated it will affect 643 million people by 2030. Finally, cancer accounted for nearly 10 million deaths in 2020[9].

Research and innovation have meant that many cancers and diseases can be treated effectively and cured if detected early. Drug discovery and design have come a long way since the days of iteratively applying known naturally occurring toxins against disease targets until a therapeutic effect was observed. Biology is fast becoming digital, driven by rapid deflation in the costs of gene sequencing.

Just as with discovery, other parts of the process bring idiosyncratic inefficiencies that could be improved. For example, clinical research organisations (CROs) allow large pharmaceutical companies to outsource some of the heavy lifting and focus on the most complex research, thus improving the process of getting new treatments to market. Each part of the value chain is seeing improvement, contributing to a greater whole.

Taken together, these advances make health and wellbeing a diverse and exciting theme to invest in and one with tangible positive impacts. The pace and scale of innovation is providing a paradigm shift in healthcare and is significantly improving people's lives. However, we must not lose sight of the fact that this improvement remains unequal and highly dependent on where you are lucky or unlucky enough to be born.

3 (World Bank https://data.worldbank.org/indicator/SP.DYN.LE00.IN?end=2020&start=2020&view=bar)
4 https://www.who.int/data/gho/data/indicators/indicator-details/GHO/life-expectancy-at-birth-(years)
5 https://www.weforum.org/agenda/2022/04/infant-mortality-africa-safer-future/
6 https://www.edinburghnews.scotsman.com/health/scotland-life-expectancy-the-areas-with-the-highest-and-lowest-life-expectancy-in-scotland-3853778; https://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/east-renfrewshire-council-profile.html
7 (Noncommunicable diseases (who.int))
8 (PowerPoint Presentation (world-stroke.org))
9 ((How Many People Have Diabetes - Diabetes Prevalence Numbers).) ((Cancer (who.int)))

## Stock profiles: Health & wellbeing

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **Oxford Nanopore Technologies (1.0%)** | Oxford Nanopore's aim is to "enable the analysis of anything, by anyone, anywhere". It does this through DNA/RNA sequencing technology that is fast, accessible, and easy to use. It has obvious benefits to many areas of sustainability, including food production, disease control and understanding of how the environment is changing in the sea. | Since the initial outbreak of COVID-19, teams in more than 85 countries around the world have used Nanopore technology to track SARS-CoV-2, the virus that causes COVID-19. | Improver |
| **Insulet (3.1%)** | Insulet manufacturers a 'pump patch' called the OmniPod, which is the only product of its type that has been approved by the U.S. Food and Drug Administration and European health care systems. The product offers a step-change in delivery of insulin to Type 1 diabetes patients by providing consistent, round the clock delivery. | An estimated 360,000 active customers globally use the Omnipod system. | Leader |
| **Certara (1.7%)** | Certara is a leader in biosimulation, utilising AI and machine learning to mathematically model how drugs interact with biological systems. The approach uses virtual patients, which can be modeled to represent diverse populations with different ages, underlying conditions, ethnicity, and more. Certara not only increases safety across the drug development process, it decreases the associated time and costs. | In 2022 90% of new drug approvals by the U.S. Food and Drug Administration (FDA) were received by customers of Certara. This was the ninth consecutive year that Certara's customers, which use the company's biosimulation software and technology-driven services, have had novel drugs approved by the FDA in a wide range of therapeutic indications, from oncology to rare diseases. | Improver |
| **Amplifon (3.1%)** | Amplifon is a customised hearing aid solutions provider with a powerful sustainability story. According to the World Health Organisation, 466 million people live with disabling hearing loss. 34 million of them are children and, due to recreational exposure, over one billion young people from 12-35 are at risk of hearing loss. | Amplifon hearing aids have been used by more than 10 million people worldwide. | Leader |
| **ICON (3.9%)** | ICON is a clinical research organisation used by the pharmaceutical and biotechnology industry to accelerate and improve drug trial processes. With the average cost of developing a new drug now over $2 billion, ICON adds value by leveraging its experience and data in large-scale trials, ultimately reducing costs and time in the drug development stage. | 470 clinical studies were completed in 2022, with 13 new products approved. | Improver |
| **Veracyte (1.8%)** | Veracyte engages in the research, development, and commercialization of diagnostic products. Its portfolio includes Afirma, Percepta and Envisia. It aims to improve the diagnostic process for thyroid cancer, lung cancer screening, and clarify the diagnosis of idiopathic pulmonary fibrosis. Using RNA sequencing combined with machine learning they seek correlations of disease indications. | Over 400,000 patients have benefitted from Veracyte's tests in over 35 countries. | Improver |

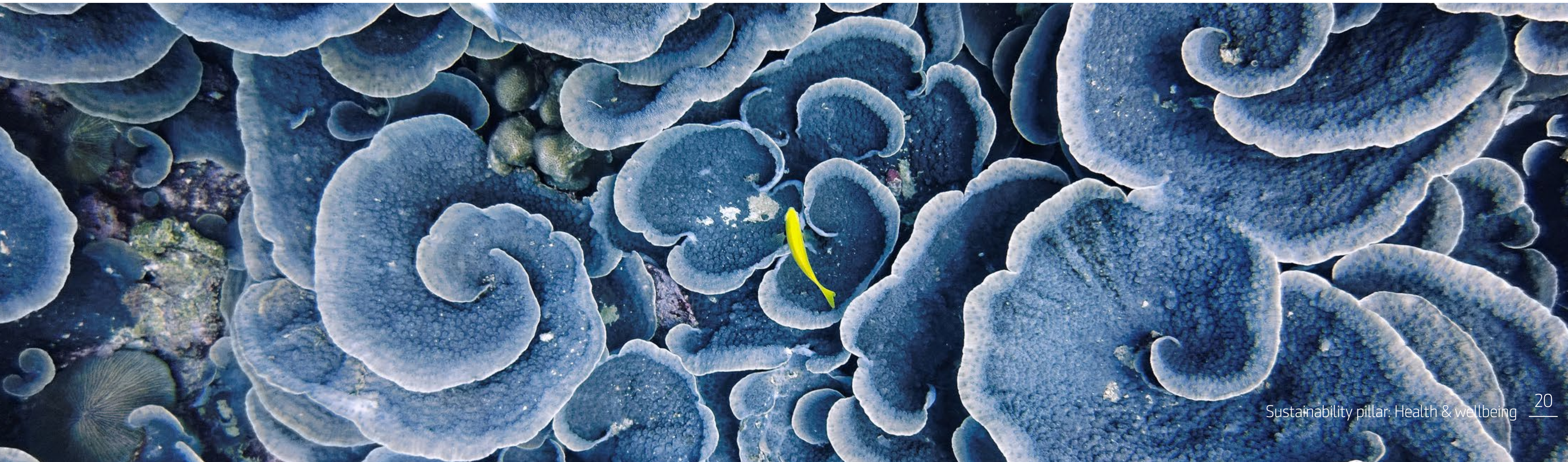
## Stock profiles: Health & wellbeing (continued)

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **M3 (2.8%)** | M3's mission is to use the internet to increase the number of people living healthy, long lives, and to eliminate unnecessary medical spending. The company's online platform allows patients to engage with healthcare professionals online and reduces the physical burden on healthcare systems, improves patient and doctor access to specialists, provides compliance advantages for pharmaceutical companies, and offers access to research and educational webinars. | M3's physician member panel of over 300,000 in Japan and six million globally is the world's largest panel of verified healthcare professionals. It serves as a central platform in advancing innovation and reform across healthcare worldwide. | Improver |
| **Eurofins Scientific (4.1%)** | Eurofins is one of the world leaders in food and biopharmaceutical product testing, as well as environmental laboratory testing services. Its applications serve a wide range of end markets, including agroscience, genomics, pharmaceutical discovery and clinical diagnostics, meaning it helps to address a number of important sustainability issues. | Eurofins performs more than 450 million tests each year to evaluate the safety, identity, composition, authenticity, origin, traceability, and purity of biological substances and products, as well as providing innovative clinical diagnostic testing services. | Improver |
| **Genmab (3.4%)** | Based in Denmark, Genmab develops innovative treatments and is best known for its antibody technology platforms, DuoBody and HexaBody, and multiple myeloma drug Darzalex (daratumumab), which is partnered with Johnson & Johnson. The company also has several pipeline candidates targeting other diseases. | Five approved therapies incorporating Genmab innovation, four proprietary Genmab technologies, and nine therapies in clinical development incorporating Genmab innovation. | Leader |
| **Danaher (3.8%)** | Danaher contributes positively to both social and environmental issues, including providing capital to and optimising the sustainable management of life sciences (in particular bioprocessing) and diagnostics businesses which aim to improve healthcare. Some of this is supporting cutting-edge healthcare research.<br><br>The environmental, more cyclical part of the business includes a water quality business, which helps with the sustainability challenge of water scarcity.<br><br>The environmental, more cyclical part of the business includes a water quality business, which helps with the sustainability challenge of water scarcity. | It is difficult to measure Danaher's impact through a single metric. One example is Beckman Coulter Diagnostics, which is addressing a healthcare inefficiency through its high-sensitivity troponin assay, which aids in diagnosing myocardial infraction for patients presenting with chest pain or other ischemic symptoms. Danaher's Access and AMI Clinical Decision Support software can shorten aggregate emergency department wait-times by up to 36 million hours per annum. | Improver |
| **Penumbra Inc (2.6%)** | Globally, the American Stroke Association estimates that 25.7 million strokes occur annually, and that stroke is a leading cause of serious long-term disability and the second-leading cause of death. Penumbra provides solutions to this problem and has pioneered the technique of mechanical thrombectomy. | Studies show that using mechanical thrombectomy increased chances of functioning independently after 90 days by 19-35% following a stroke. | Leader |

## Stock profiles: Health & wellbeing (continued)

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **Basic-Fit (1.3%)** | Basic-Fit is a European low-cost fitness chain, Europe's largest by number of clubs. As with Planet Fitness (below), the company has a low-cost disruptive business model that is opening-up exercise to the masses, providing huge benefits to society. | Basic-Fit has 3.35 million members across 1,200 clubs. | Leader |
| **Planet Fitness (3.2%)** | Planet Fitness offers gym membership at a fraction of the price of a traditional gym and with a much more inclusive environment than the traditional male-oriented culture. | Planet Fitness has over 17 million members across 2,410 clubs. It is at the forefront of opening-up fitness to the masses, which has a hugely beneficial social impact. | Improver |

Source: Aegon AM. As at 31 December 2022.



# Sustainability pillar: **Inclusion**

**Pillar definition**

Addressing inequality through differentiated products and practices

**Number of holdings**

4

**Portfolio weight**

16.2%

> ...we have seen some real progress on company disclosures relating to this topic and we continue to focus on strategies to improve, as more still needs to be done.

Source: Aegon AM. As at 31 December 2022.

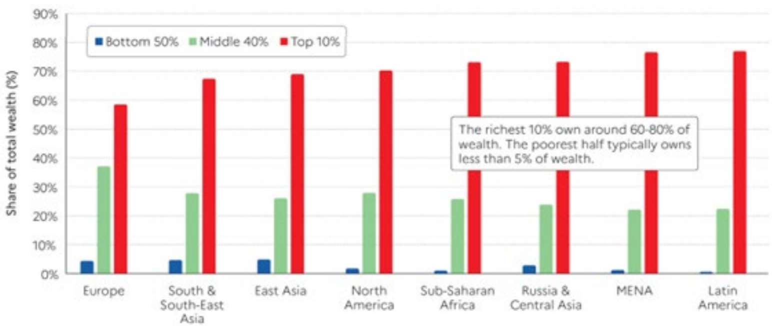
**The past few years have really brought the topic of inclusion to the fore, from Black Lives Matter demonstrations to access to Covid vaccines through the pandemic.**

As equity investors, we are realistic and acknowledge that it is harder for us to invest in companies that influence this pillar of sustainability directly than it is for other pillars, such as climate change. For the most part, our main influence comes from engaging with the companies we invest in to improve diversity and inclusion within their organizations. Happily, we have seen some real progress on company disclosures relating to this topic and we continue to focus on strategies to improve, as more still needs to be done.

Notwithstanding the above, there are two areas where we do see clear, direct links to improved inclusion - the financial and education sectors.

Wealth inequality is, without doubt, a significant contributor to many issues in society. Statistics show that the gap between the richest and the poorest is widening, both globally and within countries, something we touched on in the Health & Wellbeing section. According to the most recent World Inequality Report, the richest 10% of the global population currently takes 52% of global income, whereas the poorest half of the population earns 8.5% of it.

### Wealth inequality across the world




Source: World Inequality Report 2022. Interpretation: In Latin America, the top 10% captures 55% of national income, compared to 36% in Europe. Income is measured after pension and unemployment contributions and benefits paid and received by individuals but before income taxes and other transfers. Sources and series: www.wir2022.wid.world/methodology.

The financial system can have a role to play in helping to build a more inclusive society, by ensuring that everyone has access to basic financial services and that financial transactions can take place globally without undue frictions, but also with the appropriate level of oversight to ensure tax and regulatory compliance. Technological development can be a powerful force for good here by providing increasing choice and ease of market access.

Then there is education, which is, after all, a basic human right. One of the most effective ways to ensure greater inclusion and social mobility is to provide education to as much of the world's population as possible. Investing in companies that can provide opportunities for people across the globe to further their educational achievements can help build more inclusive societies and provide increased career options for people from lower income backgrounds or in developing nations.

These issues cannot be solved overnight and we need long-term and lasting solutions from all sections of society, including governments, corporations, charities and cultural institutions.

## Stock profiles: Inclusion

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **RELX (4.9%)** | RELX is a world leader in scientific, technical, medical, and legal information, as well as risk and business analytics. | RELX mobilized content and data analytics expertise in support of the global response to the Covid-19 pandemic, with over 50,000 articles generating over 200 million downloads. | Leader |
| **First Republic Bank (3.3%)** | First Republic is a very sustainable bank. Lending is targeted to high-income earners in selected coastal areas with good lending practices, split 50/50 between business and consumer deposits. | First Republic has twice the level of client satisfaction compared to other banks, with only 2% client attrition per year. 36% of their business loans were to non-profit organizations in 2021. | Leader |
| **IDP Education (4.3%)** | IDP is an international education business offering student placements. It has a market-leading proposition in English language testing and university placement for students looking to study overseas. | In 2022 IDP enabled 55,400 student courses in various English-speaking countries, including Canada, UK, and Australia. IDP also delivered 83,300 English courses to students in Cambodia, Vietnam and Thailand and helped students gain entry to more than 39,700 quality courses across popular English-speaking countries. | Improver |
| **HDFC Bank (3.6%)** | Due to reforms that took place in India's financial sector around 2014, 75% of the population now have bank accounts. However, the country still ranks poorly for financial inclusion, particularly in rural regions and access to online banking. HDFC operates in around 70% of India's 706 rural districts and plans to double its presence in rural villages over the next few years. It has also invested heavily in building online banking capabilities. We are also positive on financial inclusion within the bank's mortgage lending activities. | By the end of Q1 of 2022 HDFC had cumulatively financed 9.3 million housing units, with a third of these loans to lower income groups. | Leader |

Source: Aegon AM. As at 31 December 2022.

# Sustainability pillar: **Sustainable growth**

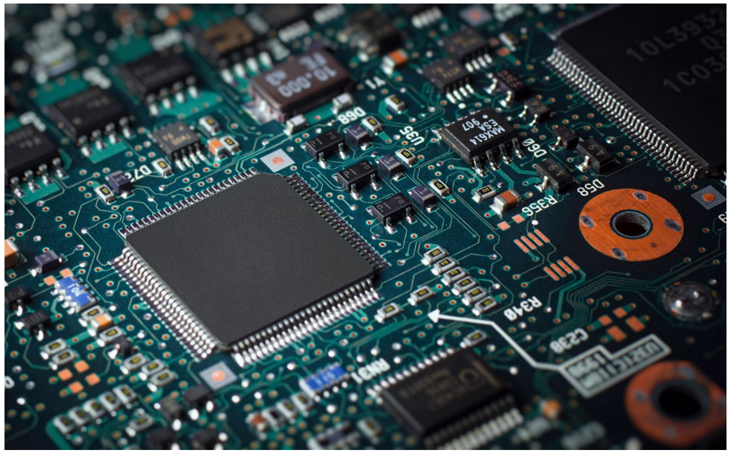
| Pillar definition |
|---|
| Innovation and disruptive growth with positive first or second order impacts |
| **Number of holdings** |
| 7 |
| **Portfolio weight** |
| 17.3% |

"We believe that innovative and disruptive growth is integral to addressing many of the sustainability challenges we face today."

Source: Aegon AM. As at 31 December 2022.

**Things are not always as they appear. Often a company's role in creating a sustainable future is not clear at first glance, but a closer look shows its products are a key enabler of the transition. Similarly, a company may not have the most world-changing products, but its practices - the 'how' it does things - are having a considerable positive impact on society. Our sustainable growth pillar looks for those underappreciated companies that we think have meaningful positive impact, even if it is not entirely obvious at first look.**

We believe that innovative and disruptive growth is integral to addressing many of the sustainability challenges we face today. This can take many forms, although is often linked to the pace of technological growth. Electric vehicles and wind turbines alone will not secure a sustainable future – it is going to take much, much more. It will require strong innovation right through the value chain.



Technology is increasingly a vital enabler of many positive impact solutions. It can provide the essential components and infrastructure underpinning the transition, meaning it can have both positive direct (first order) and indirect (second order) impacts, the latter coming when products are used in downstream applications.

Semiconductors are a prime example and are the backbone of technology. They perform a wide variety of functions within electronic products and systems, including data processing, sensing, information storage, and conversion or control of electronic signals. They are synonymous with technological development and are increasingly used in a greater range of applications than ever before. They help make the world smarter, more efficient, and more interconnected. This will only accelerate if the current pace of development in artificial intelligence continues.

Another example is the rapidly evolving field of gene sequencing. Advances here over the past couple of decades have made sequencing faster, cheaper and more efficient, making it more accessible for a wide variety of end uses. It now has applications as diverse as healthcare, agriculture, forensics and industrial uses and has obvious benefits to many areas of sustainability, from food production, to disease control, to understanding how the environment is changing.

These examples both highlight areas where core, innovative products go on to have significant and far-reaching impacts on many other applications. That, in a nutshell, is exactly what we are looking for in our Sustainable Growth pillar.

## Stock profiles: Sustainable growth

| | Sustainable rationale | Sustainable impact | Rating |
|---|---|---|---|
| **Teradyne (1.1%)** | Teradyne designs, manufactures, and sells semiconductor test products and services. Semiconductor testing equipment is central to the production of chips that drive efficiency in electronic devices. Testing also improves quality control, performance, reduces production time and increases yields. | We continue to look for the best way to measure Teradyne's real-world impact. They currently have around 50% share of the semiconductor testing market. | Improver |
| **Workiva (2.5%)** | Reporting and compliance requirements are becoming increasingly complex. Workiva has been able to increase its value to customers by providing products to address changing financial regulations implemented by various regulatory bodies. Workiva was originally developed to help customers file regulatory documents with the SEC in the wake of the financial crisis of the late 2000s. | Workiva serves over 4,300 customers across 180 countries, simplifying complex reporting tasks. | Improver |
| **NVIDIA (2.2%)** | NVIDIA is one of the companies responsible for the adaptation of the graphics processing unit (GPU) to every aspect of digital life. Examples of the impact NVIDIA has are readily visible within the company's impact report, demonstrating how its software can be used to combat a range of social, medical and environmental issues, including wildfires, fast medical scans and imaging and waste reduction. | NVIDIA states that its GPUs are 20-25 times more energy efficient than traditional central processing unit servers for artificial intelligence workloads. | Leader |
| **Endava (2.7%)** | Endava is a leading next-generation technology services provider and is helping to accelerate disruption by delivering rapid evolution to enterprises which have become laden with legacy IT infrastructure. | Endava now has roughly 11,800 employees and continues to tap into a large pool of eastern European IT talent, establishing itself as an employer of choice in areas it operate. | Improver |
| **Trustpilot (0.9%)** | Founded in 2007, Trustpilot aims to create what it calls an "independent currency of trust". It is a digital platform that hosts reviews to help increase transparency for customer experiences and to enable customers to have confidence in their buying decisions and the businesses they choose to work with. The platform is free to use and open to everyone. | Platform for 124 million trusted and verified reviews which increases consumer confidence. | Improver |
| **Dynatrace (3.8%)** | Today's world of digital applications is characterized by increasing amounts of data and complexity. Dynatrace offers a software intelligence platform which helps engineers monitor the performance of their applications, using AI to suggest improvements. It also offers a cybersecurity product. Together, its products help to underpin the safe and efficient running of digital environments, which are key to the modern world. | Supporting over 560 technologies and more than 3,000 customers worldwide, including high-profile organizations such as SAP, Samsung and Experian. | Improver |
| **Taiwan Semiconductor Manufacturing (4.1%)** | Semiconductors are ubiquitous with technological progress and at the heart of innovations spanning a huge variety of end markets. They enable us to live in a healthier, cleaner, safer and more efficient world. Taiwan Semiconductor Manufacturing Company (TSMC) is the world's leading semiconductor foundry, with a dominant market share and technological moat in the production of semiconductors. | In 2022 TSMC served 532 customers and manufactured 12,698 products for various applications. It covered a variety of end markets, including high performance computing, smartphones, the Internet of Things (IoT), automotive, and digital consumer electronics. | Improver |

Source: Aegon AM. As at 31 December 2022.

## Sustainability Soapbox
# Workiva – doing things by the electronic book

**Electronic bookkeeping may not strike you as a particularly rich vein of interesting sustainable growth ideas, but a closer look reveals some surprising opportunities.**

When it comes to reporting their accounts, companies today must navigate an increasingly complex environment. Modern businesses often sit on top of highly structured supply chains, deriving revenues across many countries, and in different currencies. Many sources of financial data all need to be collated, processed, and analyzed to provide senior managers with the certainty that the numbers they are looking at are accurate.

Regulatory demands for timely, detailed disclosure keep growing, as do the penalties levied on companies which make errors in their reports or don't report on time. Regulators have mandated electronically readable financial reporting from companies under their supervision so that they can better aggregate and interrogate complex financial data to spot concerns. Likewise, investors don't take kindly to companies having to restate their financial statements when a mistake is found. All of this adds up to significant financial and reputational risks that come with regulatory reporting.

Workiva's cloud-based product is designed to help businesses ensure accurate reporting of financial data. It allows companies to collate widely spread sources of data into a single 'source of truth'. This master ledger is accessible in real-time to all the relevant personnel across the firm's accounting and audit departments, allows for collaborative editing and copy control, and provides the firm's financial controllers with an accurate, up-to-date picture of the company's accounts. Risk of errors is vastly reduced, making timely financial reporting much faster and easier.

Having secured dominant share in the US regulatory reporting market, Workiva is taking its product international and to a new cohort of clients – US Federal customers – who appreciate the product's reliability and high security ratings.

Finally, Workiva is having an impact on the sustainable investing space itself by helping to address one of the major challenges facing investors: the provision of ESG data. To a large extent, investors rely on ESG data disclosed by investee companies but what is disclosed varies wildly from company to company, leading to difficulties in completeness and comparability. Regulation will help solve part of this problem, as will Workiva's ESG reporting platform.

The company is also rolling out a tailored ESG reporting module, as more and more firms are striving to improve the timeliness and quality of their ESG reporting. This is proving to be in high demand by clients and offers the potential for significant revenue growth in the coming years.

So, whilst perhaps not one to get the pulse racing on first glance, it may now be clearer why Workiva sits perfectly in our Sustainable Growth pillar, as a company providing products and services to help others make a positive impact.

> **Due to our focus on sustainability improvers, governance becomes even more important for our strategy.**

Source: Aegon AM. As at 31 December 2022

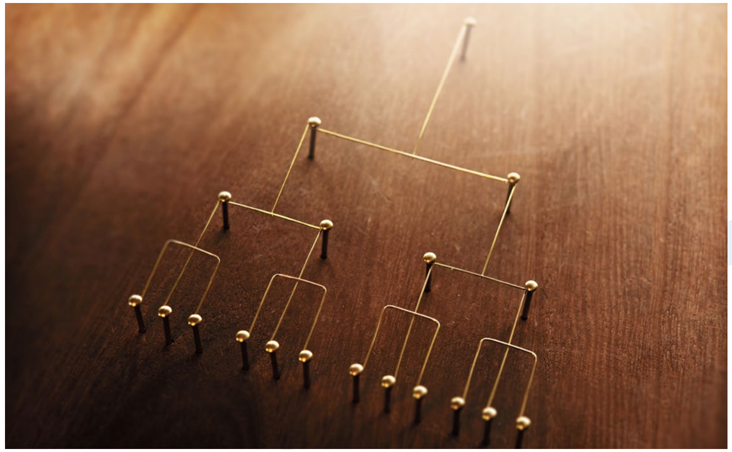
# Governance

**Trust is something that seems to be lacking in the world at the moment. However, society needs to be able to trust institutions, whether governments or corporates, to enable the achievement of any meaningful sustainability goals, including the 17 UN Sustainable Development Goals (SDGs). Economic growth that benefits everyone requires effective legal and regulatory systems, fairness, and equality.**

As part of this, we need to be confident that the companies we invest in are being run in an appropriate fashion. Our belief is the safest returns come from businesses that are run well and have responsible business practices. Allied with positive impact products and services, this can be a powerful driver of shareholder returns.

Corporate governance may seem like a box-ticking exercise to ensure that policies and procedures are disclosed and the board has the right expertise. However, there is more to it than that. When reviewing the corporate governance of the companies that we invest in, we examine the 'traditional' corporate governance policies (committee structure, board independence and diversity) alongside motivations and behaviours (disclosures, pay practices, shareholder rights). Ideally, we want the right governance framework and evidence of demonstrable shareholder-friendly practices, although we are flexible enough to recognise that companies come in different shapes and sizes.

A one-size-fits-all approach to governance does not tend to work in areas such as IPOs, smaller companies, and many companies in less developed markets. We applaud entrepreneurial spirit and strong cultures and this should be encouraged rather than overly constrained through governance structures. However, there needs to be a base level of good governance to ensure that the interests of all stakeholders are being catered for, rather than just a few.



Academic studies have found a positive link between family firms and profitability, which typically have less value-destructive R&D, less debt and are more focused on their core businesses. Yet, markets often misprice both the growth and risks associated with such companies. Owner/founder managers can be effective, provided their egos are kept in check, as they know their businesses intricately. Furthermore, other academic studies show the benefits of good corporate governance practices on company performance in terms of better risk management and decision making, so we need to maintain a balanced approach when looking at the companies we invest in.

Due to our focus on sustainability improvers, governance becomes even more important for our strategy. We find that the typical profile of an improver is a company with a strong product or service, but with areas to work on when it comes to practices. Others might overlook the opportunity because of limitations in governance, but we believe many of the smaller, younger companies that have strong products are most deserving of our support through the provision of capital and we should engage with them to help them on their journey of improvement. This is not just something we do because it sounds nice, there is good evidence to suggest that this improvement also tends to lead to investment alpha.

## Sustainability Soapbox

# The power of diversity

**It was not too long ago that boardrooms were largely dominated by white men of advancing years, with personal networks used to source board candidates. Female board members were a rarity. The preference for candidates to have previous boardroom experience was a consistent barrier to entry for women. A catch-22 situation existed. Why did it take so long to realise that omitting 50% of the population from the board reduces the potential of a company? The answer is best left to social scientists rather than an asset manager. So why are we talking about it?**

The fact is that from an investment perspective, we recognise that cognitive diversity leads to better decision making, and the best way to benefit from this fact is to have people on boards with diverse characteristics. More on this point later, but first let's take a look at where we are and where we have come from.

## UK taking the lead

The UK was among the first to recognize the benefits of cognitive diversity and led the way in attempting to address the gender imbalance. Initially, the government set up the five-year Davies Review (2011 to 2015) and, more recently, the Hampton-Alexander Review (2021). The latter called for women to comprise a third of boardroom representation within FTSE 350 companies. With the current FTSE Woman Leaders review the bar has been raised even further. As a result, the UK can point to some progress; most companies have a gender balance on their board. The recommendations are now to get more women into those most senior roles of Chair, Chief Executive and Finance Director.

At AAM, we have predominantly engaged with companies falling short of sufficient diversity. This has largely proved successful. However, we are increasingly taking voting action against directors at those companies where progress has been slow.

Of course, we recognise that gender is just one form of diversity, and our engagement activities increasingly focus on improving all forms of diversity. Over the past few years, the Parker Review in the UK has acknowledged the need for companies to improve the ethnic diversity of Boards. The first target encouraging FTSE 100 Boards to appoint at least one director from an ethnic minority background has largely been met – 89% at the end of 2021.

Other regions, such as Europe and the US, also have some good initiatives that tackle gender and racial representation. However, momentum in the Far East – particularly Japan – has lagged somewhat. Traditionally, boardrooms in Japan have been almost entirely male dominated. In recent years though, the government has introduced a voluntary directive encouraging companies to target 30% of management positions to be filled by women. This is now filtering through to the boardroom, as evidenced by many of our Japanese investee companies having recently appointed their first female directors.

## Diversity brings opportunity

While all these reviews have good intentions, implementing their recommendations is sometimes difficult. One major obstacle is that there is often an insufficient pool of diverse talent in the pipeline – mostly because companies are fishing in the same pools of talent rather than thinking outside the box. This predicament can, in turn, lead to over-boarding of the most highly sought-after candidates. This is particularly apparent in the more traditionally male dominated sectors, such as engineering and mining.

Challenges aside, the journey of building a diverse Board is worth pursuing as mounting evidence shows it does improve a company's performance, not only in terms of decision making but also through risk management and the ability to identify opportunities. It helps to drive change throughout organisations where employees, suppliers, customers, and the community can identify with the people leading these companies. These are important points for us as investors. A 2021 global research report from Bank of America, for example, indicated that a lack of diversity leads to less innovation, weaker revenue and cash flows, and lower employee retention. And a 2020 Citi Global Perspectives and Solutions report showed that if four key racial inequality gaps – wages, education, housing, and investment – were addressed 20 years ago, $16 trillion could have been added to the US economy.

In our opinion, there is no downside to improving diversity in the boardroom and we are pleased to see that good progress is being made, with many companies publicizing their commitments to diversity. We will continue to use our voting and engagement activities to push companies to be authentic in their diversity commitments and to encourage further change in the names we choose to invest in.

# Engagement and voting

**We passionately believe that engagement is a key part of active management, especially for sustainable strategies. As a significant shareholder in many companies, we are well placed to actively promote best practices in environmental, social and governance matters.**

This is particularly true in the small and mid-cap space, where our portfolio has a strong weighting, as these smaller, growing companies are often more responsive to shareholder interactions. Consequently, engaging and working with companies to help them address limitations is an important aspect of our strategy, particularly when it comes to the sustainability improvers in the portfolio.

In fact, we think it's a reflection of our role as committed engagement partners that there have also been instances of investee companies reaching out to us to proactively ask for our opinion on potential proposals they are considering taking to the market.

Our engagement activities cover a wide range of topics and can be grouped into three categories:

| | |
|---|---|
| **Pre-investment: Issues preventing investment** | • Engagement to encourage improvement to acceptable levels.<br>• Idea can be reconsidered if sufficient improvement. |
| **Post-investment: Ongoing monitoring of our investments** | • Monitoring for changes to original case.<br>• Tracking improvement in KPIs. |
| **Thematic: Wider engagement on broad issues** | • Broad thematic issues covered, such as diversity.<br>• Trying to improve overall market standards. |

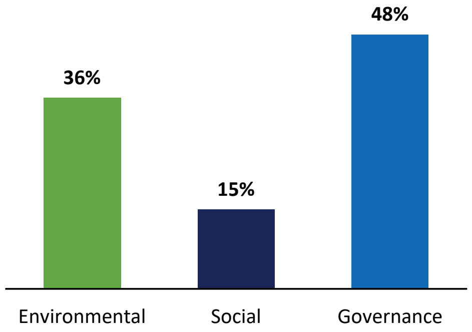
Not all engagements are successful. We engage with numerous companies during the initial analysis process and sometimes find their products and practices do not meet our standards and therefore, they become laggards and are uninvestable.

Furthermore, there are instances where we have failed to see improvement on specific factors in a reasonable time frame, which led us to determine that that a company is no longer improving and should be downgraded. There have been no instances of this throughout 2022, although previously we have downgraded and sold the likes of Kingspan, Tesla and Anta Sports due to either significant controversies or a lack of improvement on KPIs over time.

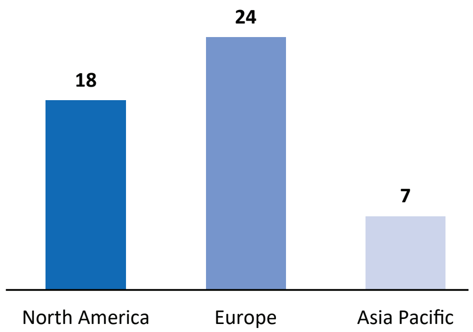
## Engagement statistics

During 2022 we had 39 engagements with 27 companies within the portfolio on a range of environmental, social and governance issues. The average number of holdings during the period was 40. Below, we have broken down these engagements by topic, region and milestone status to give you a better idea of the nature of these interactions.

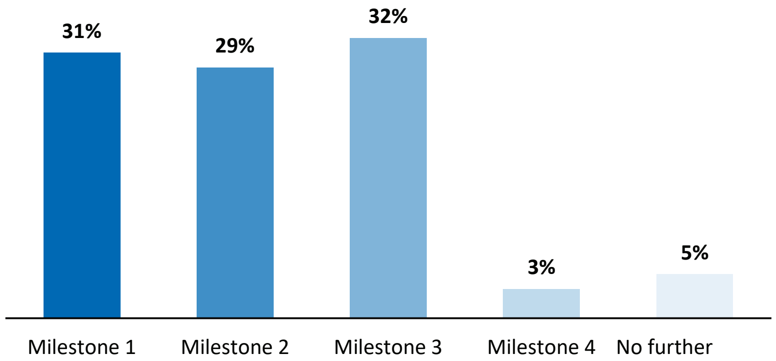
### Engagements per topic




### Engagements per region




### Engagements status




Source: Aegon Asset Management

**We define our milestones as the following:**

| | |
|---|---|
| **Milestone one** | We flag concerns with the investee |
| **Milestone two** | When a company/investee responds and dialogue begins |
| **Milestone three** | Once concrete steps have been taken to resolve our concerns, such as achievement of a commitment |
| **Milestone four** | When the engagement objective has been fully achieved and verified |
| **No further action** | In some cases, our assessment of the ESG issue at stake may change and we subsequently decide to no longer pursue the engagement |

TETRA TECH

## Engagement case study: Tetra Tech

Tetra Tech has been a portfolio holding since inception. The company has great sustainable credentials in terms of what it does but we had some concerns with some of the governance practices. We have engaged throughout the holding period and have been pleased to see steady progress.

We began engaging in 2017 on a range of issues and are pleased to have seen steady improvement across a range of factors from the independence of the board to shareholder rights. In addition, there has been an improvement in the balance of incentives being subject to performance conditions, which was another area we had pushed the company to address.

We continue to encourage improvements in the structure of the key board committees and the diversity of the organisation. However, we are pleased to see that during 2022 it introduced proxy access after many conversations on the merits of giving shareholders the ability to have a stronger say on board composition.

These improvements over time have resulted in our Responsible Investment team upgrading Tetra Tech from an 'Improver' to a 'Leader' over our holding period.

ALFEN
POWER TO ADAPT

## Engagement case study: Alfen

Similar to Tetra Tech, we have engaged with Alfen on a number of topics a over a multi-year period. Alfen is exactly the type of company where we believe our engagement can have the greatest impact – a small, young (newly listed when we first invested), fast growing company with great products but some limitations on the practices side.

We have seen improvements in Board structure, have received commitments on improvements to remuneration disclosure and are further discussing their approach to Net Zero. Again, similar to Tetra Tech, the improvements we have seen over time led us to upgrade the rating from Improver to Leader.

## Voting

Our Responsible Investment Policy sets out how we vote and our views on specific governance issues. We vote the proxies of all UK and Dutch listed companies that we own on behalf of clients and for overseas companies, we vote on all holdings where we own greater than or equal to 0.1% of the outstanding share capital.

Over the period we voted at 21 company meetings. We voted against at least one resolution at 10 meetings and abstained on at least one resolution at two meetings. Each meeting was considered on a case-by-case basis. Issues that led us to vote against or abstain included remuneration, capital structure and director-related proposals.

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