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Investing for a  
world of change

# Global Multi-Asset Sustainable Growth

Sustainability Report

January 2023

# Contents

**General risks.** The value of investments, and any income generated from them, can fall as well as rise. Where charges are taken from capital, this may constrain future growth. Past performance is not a reliable indicator of future results. If any currency differs from the investor's home currency, returns may increase or decrease as a result of currency fluctuations. Investment objectives and performance targets are subject to change and may not necessarily be achieved, losses may be made. Target returns are hypothetical returns and do not represent actual performance. Actual returns may differ significantly. Environmental, social or governance related risk events or factors, if they occur, could cause a negative impact on the value of investments.

**Specific risks.** **Currency exchange:** Changes in the relative values of different currencies may adversely affect the value of investments and any related income. **Default:** There is a risk that the issuers of fixed income investments (e.g. bonds) may not be able to meet interest payments nor repay the money they have borrowed. The worse the credit quality of the issuer, the greater the risk of default and therefore investment loss. **Derivatives:** The use of derivatives may increase overall risk by magnifying the effect of both gains and losses leading to large changes in value and potentially large financial loss. A counterparty to a derivative transaction may fail to meet its obligations which may also lead to a financial loss. **Interest rate:** The value of fixed income investments (e.g. bonds) tends to decrease when interest rates rise. **Equity investment:** The value of equities (e.g. shares) and equity-related investments may vary according to company profits and future prospects as well as more general market factors. In the event of a company default (e.g. insolvency), the owners of their equity rank last in terms of any financial payment from that company. **Sustainable Strategies:** Sustainable, impact or other sustainability-focused portfolios consider specific factors related to their strategies in assessing and selecting investments. As a result, they will exclude certain industries and companies that do not meet their criteria. This may result in their portfolios being substantially different from broader benchmarks or investment universes, which could in turn result in relative investment performance deviating significantly from the performance of the broader market. **Emerging and Frontier market (inc. China):** These markets carry a higher risk of financial loss than more developed markets as they may have less developed legal, political, economic or other systems.

# Welcome

This report aims to provide a complete picture of the sustainability characteristics of the Global Multi-Asset Sustainable Growth strategy. The objective of this investment strategy is to deliver capital growth to shareholders. However, the strategy also promotes environmental and social objectives by investing in companies that aim to minimise their harmful effects on society and the environment, or whose products and services seek to benefit society and the environment. We believe that an investment approach which actively seeks positive sustainability and demonstrable impact can mitigate specific risks and benefit from structural growth opportunities. Environmental and economic risks are intrinsically linked, affecting government bond yields, currencies and company operations and revenue. The strategy, therefore, employs a long-term thematic macro framework and rigorous bottom-up analysis to identify investment opportunities. This internal research-led approach integrates macro and micro level sustainability research.

Events over the past year have provided a stark reminder of the importance of an active sustainability-driven approach to investing. The environmental and related social challenges are increasingly urgent, and while 2050 is a totemic target we must remember that the shape of the world then will be decided by the actions taken today. Delays will have a compound effect. Thus private capital and companies have a critical role to play alongside governments with positive policies and spending. Mobilising the capital necessary to meet the challenges of the Sustainable Development Goals will require a public and private partnership. Our investment strategy provides finance to both private and public actors in the search for returns.

**Iain Cunningham**  
Co-Head of  
Multi-Asset Growth



**Michael Spinks**  
Co-Head of  
Multi-Asset Growth



## Heading in the right direction

The past year has seen some climate policy progress from major developed markets. In the US the outcome of the 2021 election resulted in a change of climate policy and in August 2022 the Senate passed the Inflation Reduction Act which, despite its title, represents an unprecedented commitment to tackling climate change from the world's largest economy. With provisions for US\$369 billion of funding, it provides four times more money for climate initiatives than former US President Barack Obama's 2009 Recovery Act. As costs have decreased there will be an even bigger multiple in terms of investment impact. It is an inclusive programme for American energy policy and sets the country on track to reduce emissions by 40% by 2030, according to Senate projections, building an energy system that should eventually provide lower-cost energy over the long run.

In Australia the political stage has also shifted in 2022 with the rise of independent candidates, united by a strong pro-environmental agenda and overturning the previous administration's slow progress. Perhaps the increasingly apparent physical climate-risk events have galvanised support to reverse prior climate policies. The newly elected government moved swiftly to update its Nationally Determined Contribution (NDC) in June 2022, submitting to the UNFCCC (United Nations Framework Convention on Climate Change) a new target of a 43% reduction of greenhouse gas emissions by 2030 below 2005 levels, including land use, land-use change and forestry (LULUCF<sup>1</sup>) activities, and net zero by 2050. The Climate Change Act was passed into law in September, containing a clause that any future targets must be a progression beyond current commitments. As with all countries the policy implementation is more important than the announcement, but we view this step positively for the financing risk of Australia and future environmental outcomes.

That said, COP27, the UN's annual global climate conference held in November, had a mixed reception. The agreement failed to go beyond the 2021 Glasgow climate pact's promise to "phase down unabated coal power", and announced no new targets or commitments, threatening the goal of limiting global temperature rise to 1.5°C, established seven years ago in the Paris agreement. Instead, there was a request for new country pledges, or NDCs, for COP28 – another year's delay.

However, we were heartened by the agreement to create a new fund in which countries responsible for high carbon emissions will compensate lower-income countries – although the details still need to be thrashed out.

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1. Land Use, Land Use Change and Forestry: According to the United Nations Framework Convention on Climate Change, "[carbon mitigation] can be achieved through activities in the LULUCF sector that increase the removals of greenhouse gases from the atmosphere or decrease emissions by halting the loss of carbon stocks".

We also support the announcement of Just Energy Transition Plans by key emerging markets such as South Africa.

What is patently obvious to us is that the rapid development and adoption of decarbonisation technology offers the best hope to avert climate change. Some 86% of new installed energy capacity over 2021-2022 has been renewable energy.

## Tangible risk

This year has demonstrated how physical and transition risks translate into economic risk. Q3 2022 saw significant, sustained drought across the globe, from Europe to China, to the US and Africa, which brought with it serious ripple effects, from energy shortages to food insecurity.

Transition risk analysis for countries typically focuses on fossil fuel dependence and highlights the need for countries to reduce their reliance on these sources of income over the long term. Rising fossil fuel prices due to the Russian invasion of Ukraine and pent-up demand have given fossil fuel exporters a short-term boost but these events are likely to speed up the long-term transition towards energy independence and therefore, renewables. The EU, which has been particularly dependent on Russian gas, is a case in point. Its 'Fit for 55' package, which makes reaching the EU's climate goal of reducing EU emissions by 55% by 2030 a legal obligation - was supplemented in 2022 by the €300 billion REPowerEU plan. This aims to rapidly phase out the EU's dependence on Russian energy supply.

## Risk translates into opportunity

Thus it is clear that in many regions the massive capital investment required to help address environmental challenges is being supported by constructive government policies. This underpins compelling long-term investment opportunities. From a risk perspective the rising incidence of physical risk affects both countries and companies which depend on stable operations and growing spending from individuals and businesses. This year demonstrated how acute physical risk can cause supply chain disruptions and sudden stops of economic activity. Understanding the physical and transition risks at a country level is therefore critical. As detailed later in this report we use this analysis to steer our investments in sovereign debt as well as to understand the implications for companies. Our ambition is that this report is informative and interesting and explains how this strategy's investments fit as part of a sustainable future within our framework. We welcome the opportunity to discuss any questions that may arise or provide further detail on specific investments within the strategy.

# Letter from the Chief Sustainability Officer

## Measuring ourselves as we measure others

Ninety One's Global Multi-Asset Sustainable Growth strategy, the seeds of which were planted in 2011, has continued to evolve. In 2022 we launched Sustainability 3.0, a firm-wide initiative that aims to drive real-world impact and put Ninety One on a path to net zero by 2050. This advances our Sustainability 2.0 strategy which was developed over several years and saw our investment teams taking primary responsibility for sustainability and ESG integration.

Prior to this, we joined the Net Zero Asset Managers Initiative in June 2021 and set net-zero targets designed to encourage the adoption of credible real-world emissions reduction plans, rather than a linear reduction in portfolio emissions.

This involves both advocacy and action. On the former, we continue to motivate for a just and inclusive transition across emerging and developed markets. On the latter, we provide active support to our investment teams - which are responsible for addressing and embedding ESG and active ownership. This work is assisted by our Sustainability team, our Investment Risk function, and our Engagement and Voting team.

Taking this a step further, we have set net-zero targets for our investments. At least 50% of the corporate emissions financed by Ninety One will be generated by companies with Paris-aligned science-based transition pathways by 2030. The Science Based Targets initiative (SBTi) shows companies how much and how quickly they need to reduce their greenhouse gas (GHG) emissions to prevent the worst impacts of climate change.

In addition, the proportion of our corporate AUM covered by Paris-aligned science-based transition pathways will meet the SBTi requirements for Ninety One to obtain a verified SBTi. We calculate this to be 56% of our corporate assets under management with science-based transition pathways by 2030. In practice, we will be engaging actively with our highest emitters and largest holdings to maximise the proportion of our corporate AUM with science-based transition pathways.

As our goal is to have real-world impact rather than simply portfolio impact, having both good data and appropriate targets is key. What real-world impact means is that we recognise that there is a vast difference between reducing portfolio emissions and reducing emissions in the real world. To drive real-world climate action, we need to focus not on today's carbon emissions but on financing the solution providers and holding companies to account to deliver on their carbon-reduction targets.

While we at Ninety One have focused heavily on climate change over the past few years, we recognise that sustainability is a broader concept than simply climate change and global warming. Our focus on climate change has been driven by our recognition that without urgent and targeted action in this regard, we may not have a planet and people to invest in.

That said, sustainability is a complex concept, involving our planet, people, resources, extraction and disposal. It is our intention, as time unfolds, to devote more energy to this balancing act, which aims to provide enough resources for people to live full, healthy lives, without compromising humanity's future.

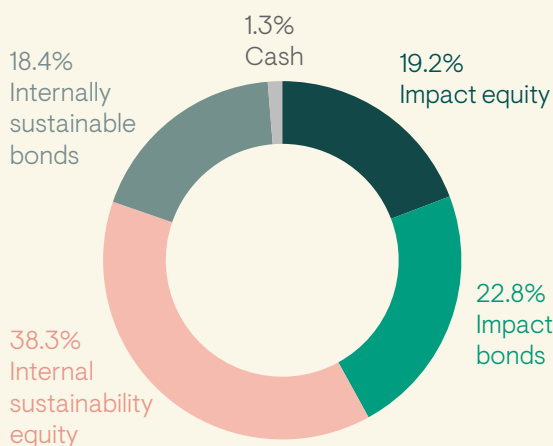
In our [Sustainability & Stewardship Report](#), Ninety One set out its own transition plan. As part of our targets, we have been clear that we will avoid the easy option of divestment and seek instead to work with all companies and countries, particularly emerging nations, that are committed to the net-zero transition.

**Nazmeera Moola**  
Chief Sustainability Officer

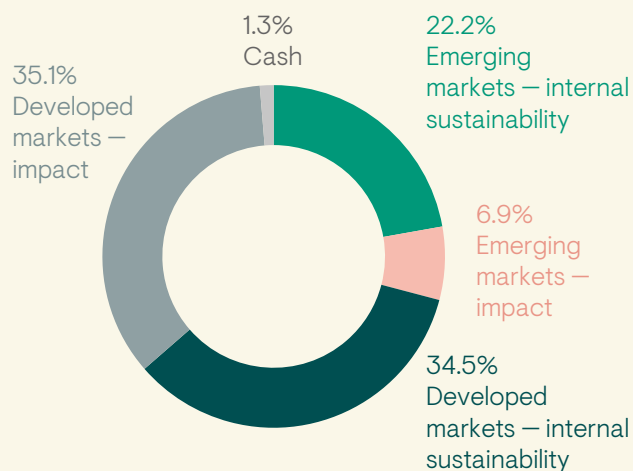


# Global Multi-Asset Sustainable Growth: Sustainability dashboard

Portfolio composition by impact and internal sustainability

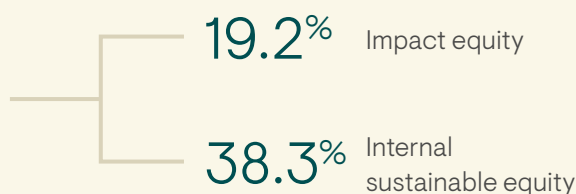


Portfolio composition by market

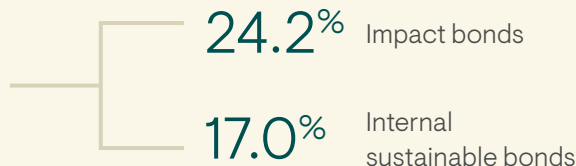


Source: Ninety One, 30 June 2022.

**57.5%**  
Total equity



**41.2%**  
Total bonds



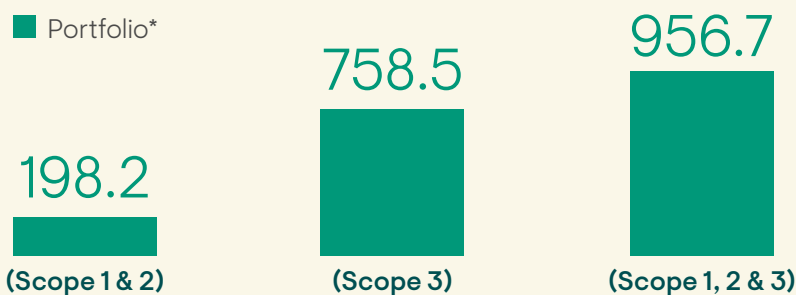
**1.3%**  
Cash, currency, derivatives and other



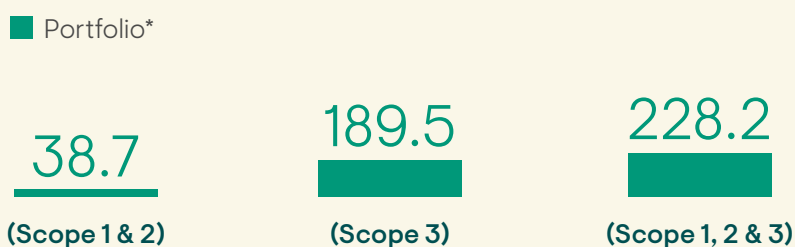
## Corporate portfolio: carbon intensity (Scope 1, 2 & 3)



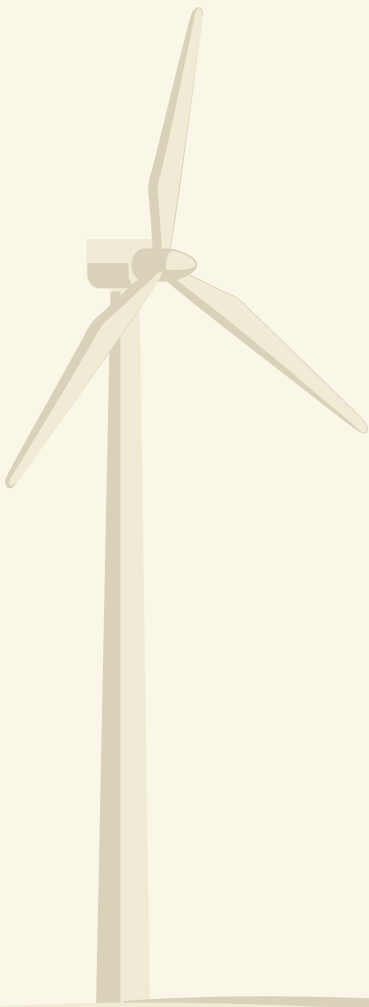
## Weighted-average carbon intensity (tCO<sub>2</sub> e/US\$m sales)



## Carbon footprint (tCO<sub>2</sub> e/US\$m sales)



\*Carbon data shown is latest reported as at 30 June 2022. Please note that we have applied our latest dataset and methodology to estimate emissions across the portfolio. We have recalculated last year's data on this basis, and so this year's data will not be comparable to that given in our previous report. We expect methodologies to continue to evolve and will continue to adopt an approach that implements our most up-to-date methodology, rather than referring to figures provided in earlier reports.



Renewable energy generation

**40** MWH for  
US\$1m invested

EU taxonomy alignment

**8%**

Average EU taxonomy alignment **at the total portfolio level**

**40%**

Average EU taxonomy alignment **across impact equity holdings**

## Net-zero dashboard

**6.9%** p.a.

Projected corporate emissions reduction to 2025 (Scope 1 & 2)

**43%**

Proportion of portfolio committed to science-based targets (SBTs) for emissions reduction

**18** Companies with approved SBTi net-zero targets

**9** Companies committed to SBTi net-zero targets

**21** Companies with internal net-zero targets

**15** Companies with no net-zero targets

# Introduction to the analysis



# Global Multi-Asset Sustainable Growth: investment approach overview

## The Capitals Framework: evaluating externalities

As the focus on sustainability intensifies, we believe it is increasingly important for investors to understand and price externalities – the impacts companies and governments have on individuals, society and the environment.

To this end, we have developed the Capitals Framework, a research methodology designed to enable the analysis of externalities across various dimensions of sustainability: natural capital, social capital and human capital. Another important function of the Framework is to guide our engagements with sovereign issuers and company management teams, with a view to encouraging positive progress.

### Natural capital

This analysis covers impacts on environmental assets (the earth's stock of natural resources, such as plants, animals, oceans and forests), and the ecosystem services derived from them (e.g., precipitation, pollination and the nutrient cycle).

### Social capital

For countries, the analysis focuses on the quality of the built environment including infrastructure and the inclusivity of growth and social protections. For companies, it encompasses policies, programmes and spending that may impact a range of stakeholders.

### Human capital

Analysis at the country level focuses on impacts on the productive capacities of a population, including through education, training and the care for individuals delivered via health systems. For companies, it examines externalities generated through employee training and development.



We describe the analysis for sovereigns and companies in the following pages. We would note here that we developed the Framework ourselves for several reasons. First, we believe sustainability assessments need to be conducted as part of our fundamental analysis and should directly inform our investment decisions. We designed the Framework specifically to enable this. Second, we believe the proprietary methodology means we can gain differentiated insights into investments in generally under-researched areas. Lastly, sustainability-related data and reporting remains patchy and inconsistent, requiring both careful interpretation and the ability to handle incomplete datasets, which the Framework is designed to do.

## Capitals Framework to assess sustainability of companies

### Natural capital

Our natural capital analysis primarily focuses on three aspects: carbon, biodiversity and water. The components of natural capital could be defined in other ways, but we believe these three fields capture the essential dimensions of this broad area. Within each component of our natural capital analytical framework, externalities are assessed on a 'sustainability spectrum' that runs from risk to impact. The aim of this approach is to help us form a view on how an externality may influence the growth and return potential of a company.

Our approach is to use quantitative metrics where we can, and to build out analytical methodologies where analysis is currently only possible through a qualitative approach. We believe this emphasis on including qualitative analysis supports our intention to evaluate natural capital externalities using the most effective methodology, rather than defaulting to the simplest approach (which often means focusing on areas where data is easily obtainable, even if that provides an incomplete picture of natural capital risks and positive-impact potential).



## Social capital

In academia, social capital is typically defined as networks with shared norms, values and understandings that facilitate cooperation within and among groups. Applying this definition to investing, we analyse how a company may impact networks of stakeholders, positively or negatively. Our social capital analysis comprises two main components: stakeholders and diversity & inclusion. As a side note, we believe that social capital generally – a complex and multi-faceted area – is usually poorly understood in the investment community.

As with our natural capital process, the aim is to help us form a view on how a social-capital externality may influence the growth and return potential of a company. For example, social capital factors can:

- Lead to negative growth if consumers perceive a company's products as harmful to society.
- Improve returns if a company's positive social impacts allow it to 'premiumise' its products.
- Drive growth if a company's products or services are aligned with a structural shift in demand driven by a shared social aspiration, such as better health outcomes.

## Human capital

The World Bank defines human capital as “the knowledge, skills and health that people invest in and accumulate throughout their lives, enabling them to realise their potential as productive members of society”. Taking this definition into an investment context, our Capitals Framework examines the externalities generated by businesses that impact their employees.

Our approach to analysing human capital draws heavily on a methodology developed by Ninety One for evaluating corporate cultures, which we think is a distinctive lens through which to understand how a business affects the productive capacity and potential of its workers. For the purposes of our analysis, we define culture as an organisation's work practices, namely how the place is run and the way that work is done there. We regard corporate cultures as 'strong' when all the following are present:

- Employees are treated well and given the tools to flourish at their work.
- Employees can be partners in the business's success.
- Work practices are fit for purpose considering the business context.

# Applying the Capitals Framework to sovereigns

## Natural capital

Natural capital can be defined as a country's stock of natural assets which includes soil, air, water and all living things<sup>2</sup>. These stocks deliver valuable services to society and business. While these services add value to humans, natural capital also has value in its own right.

The Climate & Nature Sovereign Index (CNSI), developed by Ninety One and WWF, provides data highlighting areas of particular natural capital stress and strength. It is a quantitative assessment of countries' positioning using real-time data and forward-looking projections made possible by ongoing work in geospatial modelling and remote sensing. The indicators used are designed to capture overall economic and financial channels of exposure to both physical and transition risk from natural capital and climate deterioration. Crucially this will also help understand the potential future impact on growth, debt and currency reserves.

We look for trends in this data and then focus research on policies to make a forward-looking assessment of a country's exposure to material natural capital risks and the action they are taking to adapt and improve future outcomes relative to the current trajectory. These policies help to define which countries meet our threshold definition of sustainability, and potential improvers.

## Natural capital pillars

Natural capital risks can be a source of economic and financial risk. If not properly addressed, both physical and transition risks can reduce the structural growth rate of an economy as well as affect the volatility of growth. Those countries that are particularly exposed must also have plans to manage and adapt to likely changes which we expect to affect the economic and health progress of a country. Financial market responses to physical and transition risks may also be non-linear, such as sudden stops in capital for countries at risk if positive action is not taken today.

### Biodiversity

This captures the variety of life on earth. It is typically measured in species richness — the total number of species in an area — with the tropics having more species than temperate regions. The data we capture covers degradation or loss in ecosystems/biomes and ecosystem services driven for example by deforestation, which can undermine existing economic functions like pollinators, coastal biomes and water yield.

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2. Source: [Convention on Biological Diversity](#).

Climate impacts hit the poorest nations the hardest, largely because of their starting economic positions and geographic location. These nations are reliant on ecosystem services for their livelihood and will see the greatest impact from biodiversity changes. Pollination of crops, protection of coasts from flooding and erosion, water supply, timber production, marine fisheries and carbon storage are all captured under ecosystem services. While the WWF calculates the global impact on growth from climate impacts on natural assets at -0.7% p.a. out to 2050<sup>3</sup>, this will be disproportionately borne by the poorest nations. In these countries nature is the main provider, with ecosystem services and other non-marketed goods comprising 50-90%<sup>4</sup> of the total source of livelihoods among poor rural and forest-dwelling households – the so-called ‘GDP of the poor’.

## Physical risks

Physical climate risks include **acute** risks from extreme weather events (flooding and storms) and **chronic** risks from longer-term shifts in climate patterns, for example higher average rainfall or groundwater salination. Shifts in climate or local weather events undermine and interrupt existing economic functions and can result in economic and financial losses. For instance, hours lost to work through excessive heat, or whole areas becoming uninhabitable because of climate changes are examples. From a financial market perspective these risks will play out in currencies and government bond markets. Also, companies operating in these regions could face operating and revenue risks, for instance if the labour force was not able to work, or power outages led to factory shut-downs. Longer term the impact of physical risks could lead to conflict and migration – for example in areas where water capacity is stressed or is shared by nations.

Therefore, countries must develop their infrastructure and processes to adapt to these physical risks and reduce the potential for economic damage. The CNSI separates the effects of physical risk into three categories, each with associated indicators:

### Atmospheric

- Exposure to natural hazards for example earthquakes, floods and cyclones
- Drought risk and exposure to extreme heat events
- Pollution impacts on the population

### Water

- Scarcity, flooding and quality risks

### Agriculture

- Economic exposure and dependence on agriculture

3. Source: [Global Futures: Modelling the global economic impacts of environmental change to support policy-making.](#)

4. Source: [Convention on Biological Diversity: What is the GDP of the poor?](#)

Our qualitative research then focuses on mitigation policies and action to build greater resilience to manage and recover from climate shocks as well as adaptation to transform in readiness for the risks highlighted above. The aim is to assess the extent to which a country is prepared to meet any short- and long-term challenges it may face. This covers both economic and ecological resilience, for example maintaining ecological environments such as forests that can act as carbon sinks.

The changing climate continues to lead to second-order impacts. According to the US Environmental Protection Agency (EPA), sea levels have risen 15-20 cm in the past 100 years. By 2050, more than 570 low-lying coastal cities will face projected sea level rises of at least half a metre. This would put over 800 million people at risk from the impacts of rising seas and storm surges including over 20 locations worldwide with 10 million+ populations.

In terms of policy action, financial players are likely to pay special attention to a country's climate policies given the need to limit global warming to below 2°C. Our research therefore has a specific focus on climate policy within the climate action category. Reducing the emissions intensity of economies and absolute emissions is a global responsibility and the NDCs, which form part of the Paris Agreement, provide the targets for climate action around which national policies are shaped.

The NDCs are still determined by the governments of individual countries, so there can be significant difference in the ambition levels between different countries. A growing number of countries are making net-zero commitments, and the credibility and scope of these are likely to come under greater scrutiny in the years ahead. We expect that a progressive climate policy and ambitious NDC commitments with demonstrable progress will be rewarded with a lower risk premium as they attract capital and the opposite result for those that do not meet high standards.

## Transition risk

This is the exposure of economies to changes in global demand and government policy (e.g., carbon borders) driven by environmental factors. This is a source of risk and opportunity for countries and the purpose of our analysis is to find those acting proactively for the challenges ahead. Economies that are carbon intensive and reliant on extractive industries, particularly fossil fuels, face higher transition risk with the nuance that many metals are essential for transition.

Qualitatively we consider the sensitivity of the overall economy to the transition to a lower carbon economy which will affect corporate and household income as well as reducing the tax take. Some countries also carry high stranded-asset risk which will face value impairments and have implications for employment. For government bond yields there is the potential for a deteriorating rating and rising term premium as well as balance of payments and FX reserve implications from unaddressed transition risks.

## Social and human capital

Social and human capital are key components of the Sustainable Development Goals. To evaluate and compare countries we use the Social Progress Index framework which assesses the quality of lives and the communities in which people live. Economic growth does not always lead to social progress which we define as improving the real standards of living, measured by a broad range of factors over the long term.

Countries taking necessary steps to improve social outcomes should be rewarded if there is the fiscal latitude to reform, reflecting the importance of financial sustainability in the overall assessment. In assessing social and human capital it is important to adjust for levels of wealth. There is a strong and positive relationship between social progress and the wealth of nations as measured by GDP per capita. But this is not linear. For the least developed countries small differences in GDP per capita are associated with large improvements in social progress. As countries reach higher levels of income, however, the rate of change slows.

### Social capital

- Infrastructure
- Housing and the built environment
- Inclusive growth - labour markets and targeted inclusion
- Social protections and rule of law

### Human capital


- Education and learning
- Health outcomes

The growth achieved during the 20th century and early 21st century has lifted billions of people out of absolute poverty. However, this growth has created large social imbalances and come at significant ecological cost. The importance of supporting emerging markets through the transition to lower carbon economies to minimise the social impact is well documented and this creates opportunities with a social-economic dimension that are as important as the dramatic environmental needs.

## Exclusion is not the way

Finally, we would highlight that the purpose of this analysis is to enable an inclusive – as opposed to exclusionary – approach to investment. We do not believe that the latter is in the interests of our investors, potential borrowers or, indeed, the achievement of the Sustainable Development Goals (SDGs). Rather we consider the specifics of each country and decide whether individual policies and actions will lead to improving outcomes across sustainability categories. Countries face trade-offs across the sustainability spectrum and many face a clear ‘just transition’ challenge. We recognise that for many developing countries more time is required to maintain standards of living, employment and government finances while the transition to a lower-carbon future takes place. Our belief is that countries with appropriate, ambitious policies which recognise these limitations deserve our investors’ capital and will reward with returns.





# Internal sustainability assessments



In this section, we provide detail on the sustainability characteristics of the investments in the portfolio that meet our criteria for internal sustainability. The section is structured as follows:

#### Corporate investments (top 5 by weight)

- HICL Infrastructure
- Alibaba
- Midea
- Roche
- AIA

#### Sovereign investments

- Chile
- Colombia
- New Zealand
- Peru
- South Korea

We define internally sustainable companies as those with business models and targets to minimise negative externalities that affect society and the natural environment. When investing in countries, we look for evidence that authorities are focusing on long-term environmental and social sustainability, rather than short-term growth and consumption.

# Corporate investments

As at 30 June 2022, the portfolio was invested in 55 internally sustainable holdings, 9 bonds and 46 equities. The full breakdown of portfolio holdings is set out in the appendix and we would be delighted to share sustainability commentaries for our holdings on request.

As we did last year, we have focused on the sustainability characteristics of the top five internally sustainability equity holdings by weight. We assess corporate entities from a sustainability perspective via our Capitals Framework (described in the previous pages).





# HICL Infrastructure Plc

## Financial summary

HICL Infrastructure Company Ltd, which manages an international portfolio of infrastructure investments, is a FTSE 250 company. It launched in March 2006 with an initial £250 million and has grown to a market capitalisation of over £3.5 billion. Its portfolio has developed from just social 'availability-based' infrastructure (the contracts to operate schools and hospitals, for example) to include renewable energy, mobile telephony towers and 'demand-based' infrastructure such as transport.

As at 31 March 2022 (HICL's financial year-end), 73% of HICL's investments were in the UK, 18% were in the EU, with the remainder located internationally including Canada. The UK bias has fallen over time. There are now over 100 underlying projects, with the 10 largest representing 48% of the portfolio, and spread across sectors. The operational and availability-based bias of the portfolio means that underlying cashflows are typically unrelated to equity market movements, though as HICL is a listed entity there can be some market price volatility and correlation. The underlying assets provide a degree of inflation linkage due to the underlying contracts and nature of the assets. Dividends have gradually increased over time and are well covered. We expect some capital appreciation in addition to the dividend yield, which was 4.8% at the end of June 2022.

## Sustainability summary

HICL provides full transparency of the portfolio through to the project level, complies with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) and has joined the Net Zero Asset Manager's Initiative, committing it to achieve net zero across the HICL portfolio by 2050, with interim targets for 2030. The primary strength of the company lies in delivering socially orientated and essential infrastructure, with the company quoting 11.9 million people with access to HICL healthcare facilities and 140,000 places across schools, colleges and university facilities.

In 2021, HICL established an Education Taskforce to engage with the schools in the portfolio and help address social challenges they face. The results of its survey highlighted child hunger and poor IT as the two most common issues as well as scarcity of books, musical instruments and sports equipment. Over the coming year the company is working with the schools and contract partners to address these social issues and we will be monitoring the outcome of this work.



# Alibaba Group Holding Ltd

## Financial summary

Alibaba operates the largest online marketplace in China and is the dominant e-commerce player, with over 60% market share and a brand that is synonymous with online shopping in the country. It owns and operates the leading C2C (customer-to-customer) platform Taobao.com, B2C (business-to-customer) platform Tmall.com, group-buying platform Juhuasuan, and B2B (business-to-business) platform 1688.com. Other business interests include cloud computing (the company is China's biggest cloud-computing provider) and online financial services via its 30% ownership in Ant Financial. The largest revenue exposure at present is the Core Commerce segment with over 85%, while cloud computing accounts for c.8% of revenues, and Digital Media and Entertainment about 4%.

As China's largest e-commerce platform, it is closely linked to the secular trends of rising Chinese incomes, the requirement for China to rebalance its economy from infrastructure investment to consumption, and the widely communicated strategic priority of the government to increase levels of digitisation within the economy. China already has one of the highest e-commerce penetration rates in the world, particularly relative to its level of wealth as measured by GDP/capita. The key driver of future growth will be the progression of e-commerce in the lower tier cities and rural areas.

With the business trading at a significant discount to our estimate of intrinsic value, we see potential upside from the core business and Alibaba's emerging cloud exposure alone, with additional potential growth from other areas ignored in valuation estimates at present. Near-term investments' incremental returns are understood by the company as a long-term strategic imperative, and the business is materially 'cheap' relative to its five-year history (at the time of writing).

## Sustainability summary

In December 2021, Alibaba announced its first carbon-emissions reduction strategy involving plans to decarbonise operations before 2030, including reducing Scope 3 emissions intensity by 50%, and achieving full Scope 3 carbon neutrality in the cloud business. It also set an ambitious 2035 target to reduce the absolute carbon emissions of its entire ecosystem by 1.5 gigatons and committed to joining the Science-Based Targets initiative.

Alibaba creates positive social-capital externalities by facilitating the ease of doing business in China. It has a goal of helping 10 million businesses to operate, in turn serving 2 billion consumers and creating 100 million jobs. It has recently invested US\$15 billion in facilitating social and economic progress in underdeveloped areas in China, and created social good through its rural development initiatives, which saw it connecting farmers to urban buyers.





# Midea Group Co Ltd

## Financial summary

Midea is the world's largest appliance manufacturer in revenue terms, with its sales split roughly half in China and half internationally. As well as smart home services, appliances and air conditioning, the company owns KUKA, a leading industrial robotics and automation company.

In 2022, the World Economic Forum included four of Midea's factories in its Global Lighthouse Network which recognises advanced manufacturing sites and value chains that exhibit efficiency, sustainability and workforce engagement through innovation. Midea's plants were noted for their advanced use of automation and industrial artificial intelligence which enabled the company to increase worker productivity by c.50% while reducing product lead times and customer reported defects.

This is an additional recognition of the company's commitment to design and manufacturing innovation which enabled it to maintain market shares across numerous product categories. The result is industry leading margins and returns on capital even during a period of challenging macro headwinds. Continued transformation of its manufacturing base will support further profitable growth as these measures will act as an additional catalyst to earnings. Financial performance has been matched with a shareholder return policy that has seen dividends grow at a double-digit annualised growth rate over the last five years.

## Sustainability summary

Midea explicitly referenced the Chinese Communist Party's Five Year Plan and demands from the government to improve emissions by 2030 and achieve carbon neutrality by 2060. Although Midea has not yet set out explicit Paris-aligned carbon reduction targets, it has been working on a data gathering process which has included a CDP<sup>5</sup> submission using The Greenhouse Gas Protocol and setting a baseline for emissions reduction. We expect the company to introduce carbon reduction targets in the next two years. This will include calculating the carbon emissions of all its factories, to first set the target for 'peak carbon emissions' and establish policies related to green factories. It will also establish a carbon emission management system and monitor progress to optimise the carbon emission management model.

The company is working towards reducing its carbon emissions ahead of the release of its targets including increasing its renewable energy consumption ratio which increased by 10.1% in 2021.

Deriving 57% of its revenue from China, where e-waste regulations are becoming increasingly stringent, Midea has adopted strong initiatives, such as take-back programmes for end-of-life products. It reduced total waste by 4.4m tonnes in 2021. Water consumption was also reduced by 3.6m tonnes as part of its broader efforts to reduce its environmental footprint.

Home appliances are the second largest source of household energy consumption, generating up to 30% of residents' carbon emissions. Midea has invested significant R&D time and money to improve the energy efficiency of its product suite. Among the various products that Midea produces, products at Level I Energy Efficiency accounted for 75% of the total domestic sales of air conditioners, much higher than the industry average of 21%. Its other product categories exhibited similarly positive penetration of energy efficient offerings relative to the industry average.

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5. A leading carbon-data provider formally known as the Carbon Disclosure Project.



## Roche

### Financial summary

Founded in 1896, Roche is a Swiss multinational healthcare company that develops and manufactures pharmaceutical and diagnostic products worldwide. As of 30 June 2022, 80% of earnings are attributable to pharmaceuticals and 20% to diagnostics. The company produces prescription drugs in the areas of cardiovascular, infectious, autoimmune, respiratory diseases, dermatology, metabolic disorders, oncology, transplantation, and the central nervous system.

Roche's industry-leading research and development spending and productivity have enabled it to rejuvenate its product pipeline resulting in top-line growth and margin resilience. The company has a market-leading position in diagnostics which has synergies with the pharmaceutical business, allowing for better population segmentation and driving efficiencies in research and development.

### Sustainability summary

Roche has commercialised 36 breakthrough therapy designations<sup>6</sup> since 2013, contributing positively to individuals and healthcare systems. Roche stands out from its peers for extending healthcare access to underserved populations, though this is difficult to quantify.

Roche has its own internal emissions targets, with a long-term goal to reduce Scope 1 & 2 emissions to zero by 2050. Shorter term, the company is aiming to reduce Scope 1 & 2 emissions by 40% from 2019-2025 and to move to 100% renewable electricity by 2025.

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6. The US Food and Drug Administration's breakthrough therapy designation is intended to expedite the development and review of drugs for serious or life-threatening conditions. The criteria for breakthrough therapy designation require preliminary clinical evidence that demonstrates the drug may have substantial improvement on at least one clinically significant endpoint over available therapy.



## AIA

### Financial summary

AIA Group, the Hong-Kong based multinational, is the largest publicly listed life insurance and securities group in Asia. The company offers life, critical illness, accident, disability protection, savings and medical insurance services. Growth opportunities arise from low insurance penetration across Asia, combined with favourable demographic trends and household-income growth in China and ASEAN countries. This should support strong book-value growth. Solid margins and volume growth are forecast as the market transforms into an agency-based protection-type market, where AIA has had a competitive edge for the past 90 years.

### Sustainability summary

AIA creates positive social capital externalities by reducing the wide protection gap that exists for individuals in Asia, in the process improving their financial resilience. In many of the 18 countries and markets where AIA operates, the state provision of health and social-security safety nets is limited. AIA primarily offers life, accident and health insurance that meets the protection needs of individuals thereby fostering socio-economic wellbeing. It differentiates itself from regional and international peers by focusing on talent rotation, which it sees as key to retaining high performers and developing connections across the business.

AIA Group has committed to setting a near-term science-based target in 2023 and has pledged to achieve net zero by 2050.

# Sovereign investments

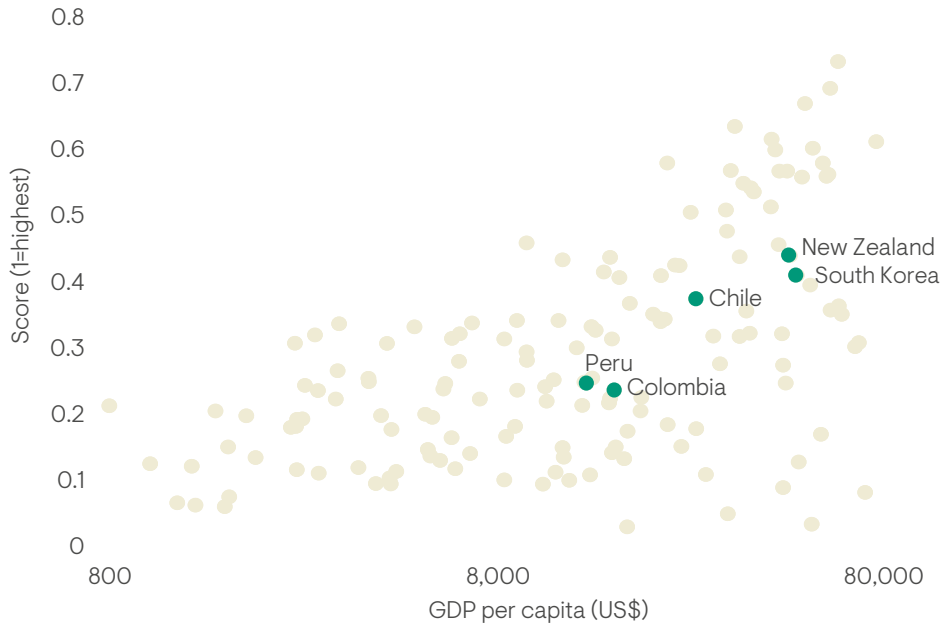
As at 30 June 2022 we owned sovereign bonds (or derivatives based on sovereign bonds) issued by Chile, Colombia, Egypt, Indonesia, Kenya, New Zealand, Peru and South Korea. In addition we owned bonds issued by supranational institutions.

In deciding whether to invest in the debt of a country, we carry out in-depth sustainability reviews. To evaluate sovereign bonds, we assess current material issues for a country with the support of data from the [Ninety One/WWF Climate and Nature Sovereign Index](#) and the [Social Progress Index](#) framework. Our research then focuses on the forward-looking policies that will shape the direction of travel in these areas, with a view to identifying key risks and potential for improvement.

Introduced earlier in this report, the Climate and Nature Sovereign Index (CNSI) was created by Ninety One in collaboration with conservation organisation WWF. The index seeks to address the urgent need of investors and policymakers for a single, coherent framework through which to assess long-term climate and nature risk at a country level. Covering developed and emerging countries, the CNSI incorporates real-time data and forward-looking projections to the extent possible. The index covers nature- and transition-risk exposures, as well as the climate risks traditionally measured in indices, and makes explicit the economic and financial links to them. In total, 85 indicators are incorporated into the index.

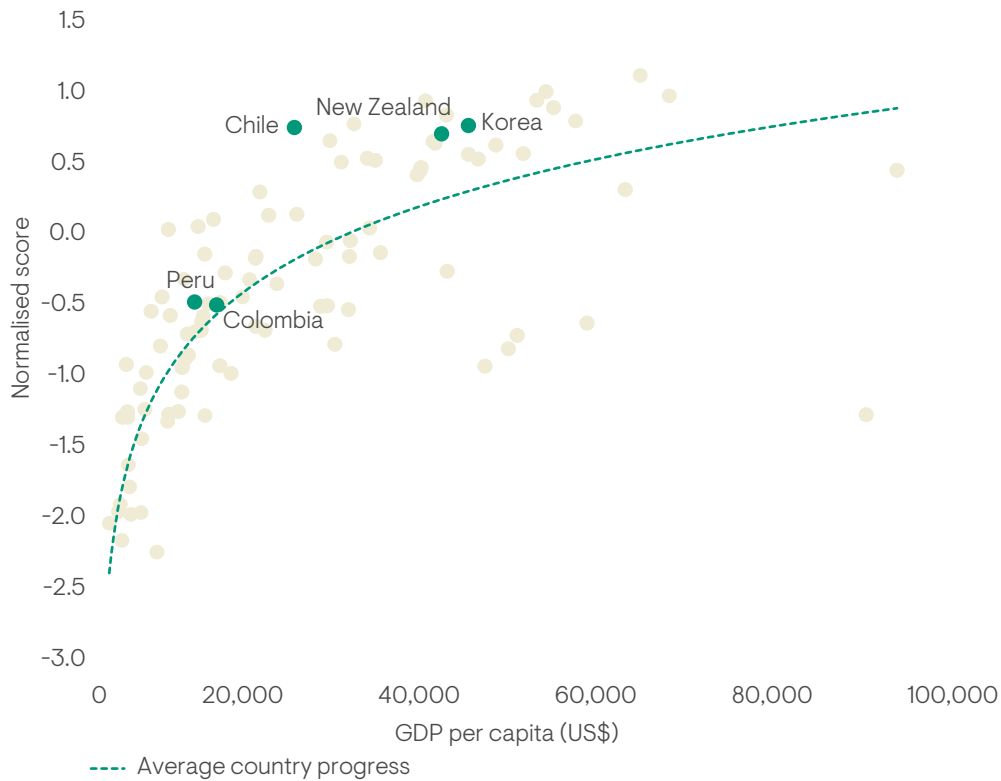
Below, we provide a detailed overview of the sustainability characteristics of the five countries. We refer to the CNSI and Social Progress scores of each country relative to its global and regional peers.

### CNSI score vs GDP for all countries (invested countries labelled)



Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).

### Social Progress Index vs GDP for all countries (invested countries highlighted)



Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).



# Chile

## Natural capital

Chile continues to make strong progress on climate action and its commitment to be carbon neutral by 2050 is credible. This commitment was enshrined in law in June 2022 through the Climate Change Framework legislation.

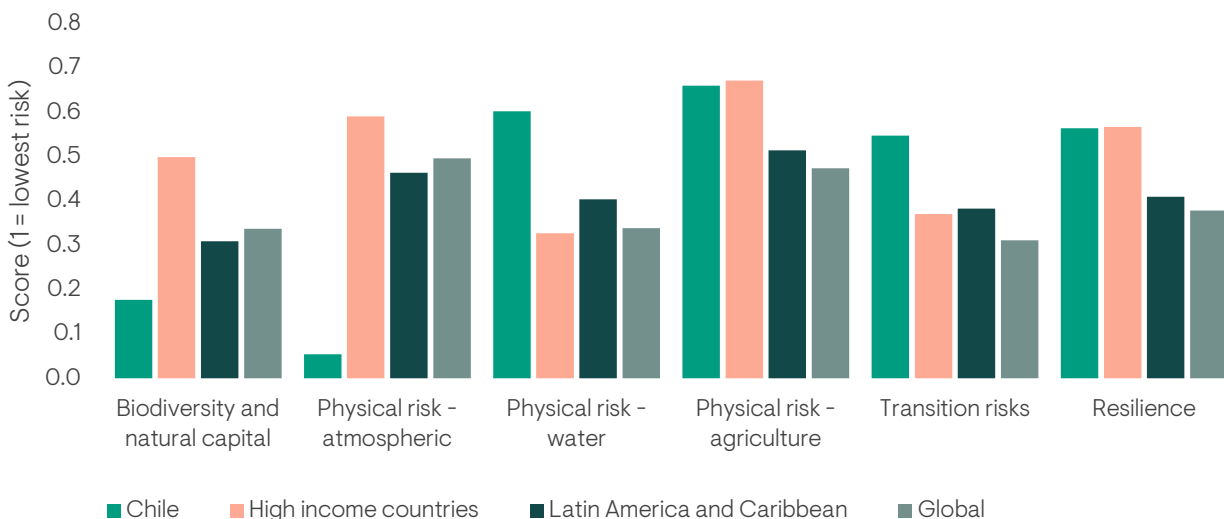
The net-zero plan does rely on negative emissions attributable to the 200,000 hectare reforestation programme, but also includes a 60% renewable electricity grid by 2035 (and 70% by 2050).

Its phase-out of coal and significant investment in renewable energy should lead to peak emissions before 2025, over-delivering on its 2030 NDC target. If these plans are implemented, they would establish Chile as a front-runner on climate action, putting emissions on a declining trend only slightly above a 1.5°C-compatible pathway.

Chile is the world’s largest copper producer supplying around a quarter of all mined output raising the importance of a robust approach to natural capital management. Mining activity consumes 30% of electricity and a high proportion of water. In response, environmental protection laws are rising in prominence and the environmental regulator is putting increasing pressure on mining companies to enforce high standards broadly. A transition from fresh water to desalination sources of water is being pursued. Water usage is likely to face increased regulation in the years ahead.

Chile is well positioned to continue developing green hydrogen, potentially becoming a key exporter. The move into renewables is endorsed by virtually all political factions.

## Chile CNSI data



Source: Ninety One, WWF, CNSI; as at 2019/2022 (latest available data). Scale: 0-1 (1 is lowest risk).

## Social and human capital

The [Social Progress Index 2021](#) places Chile 37<sup>th</sup> out of 168 countries (the country ranks 51<sup>st</sup> for wealth, implying that it is outperforming with respect to social progress, as discussed below).

As part of the updated NDCs Chile has attached a social pillar to address the issue of just transition. This stipulates that the climate commitments must contribute to the fulfilment of one or more SDGs and consider the fair allocation of costs and benefits.

Between 1975 and 2015, per capita income in Chile quadrupled to US\$23,000, the highest rate in Latin America. As a result, poverty fell from 45% of the population to 8% and life expectancy rose from 69 to 79 years. Chile has a good healthcare system, steadily increasing health spending to 9% of GDP, and over 76% of the population is covered by social health insurance.

There have been a number of protests in recent years and in response the government has responded with measures to make labour markets more inclusive and reduce gender inequality. We view these policies positively but it will take time for noticeable changes to materialise.

	Chile	Global
Emissions intensity (tCO <sub>2</sub> e/million US\$GDP)	198.6	567.7
Emissions per capita (tCO <sub>2</sub> e/person)	2.9	6.5
Absolute emissions (MtCO <sub>2</sub> e)	55.3	497.6
Absolute emissions as proportion of global total	0.11%	100%

Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).

# Colombia

## Natural capital

Colombia’s unconditional NDC target was updated in 2020 to an absolute emissions limit of 165 MtCO<sub>2</sub>e by 2030, equivalent to 51% emissions reduction compared to business as usual. This is heavily reliant on reducing deforestation which presents its own challenges with government figures showing a 1.5% increase in forest reduction over 2021. Rainforest covers over half of Colombia, of which 14% is classified as primary forest, which has the highest levels of biodiversity and carbon absorption.

Investment in hydropower has led to a clean grid from a carbon perspective, with this source providing 62% of installed capacity. Solar and wind energy has been building towards a target of 12% of the installed base from the current 1%, with a further auction planned for 2023.

Colombia has a net-zero policy target by 2050 and a policy instrument called Estrategia 2050, which defines goals combining long-term trajectories of socioeconomic development and GHG emission reduction by identifying priorities for public and private investments. The incoming left-wing government (a first for Colombia) has pledged to prioritise environmental and climate issues.

We have also invested in the Colombia green local-currency bond, issued in 2021 to help address critical environmental issues.

Biodiversity and natural capital data may differ from the previous report due to methodology changes.

## Social and human capital

Colombia has an average score for an emerging market in the Social Progress Index, although as noted it outperforms relative to its level of wealth (as measured by GDP per capita - see page 26), while trends in the core areas of health and education are positive, backed by decent policies.

From public and private sources, Colombia spends around 6.7% of its GDP on education, with 65% of the total coming from the government. Public health spending is relatively high, at 4.2% of GDP, and has been stable over the last couple of years. Both spending and outcomes are largely in line with peers. However the trend is gradually improving.

Since the 1993 introduction of the health-insurance law, healthcare coverage has increased from less than 25% of the population to 97%, and Colombia’s universal healthcare system has been praised by the WHO which ranks it as the 22nd most efficient globally.

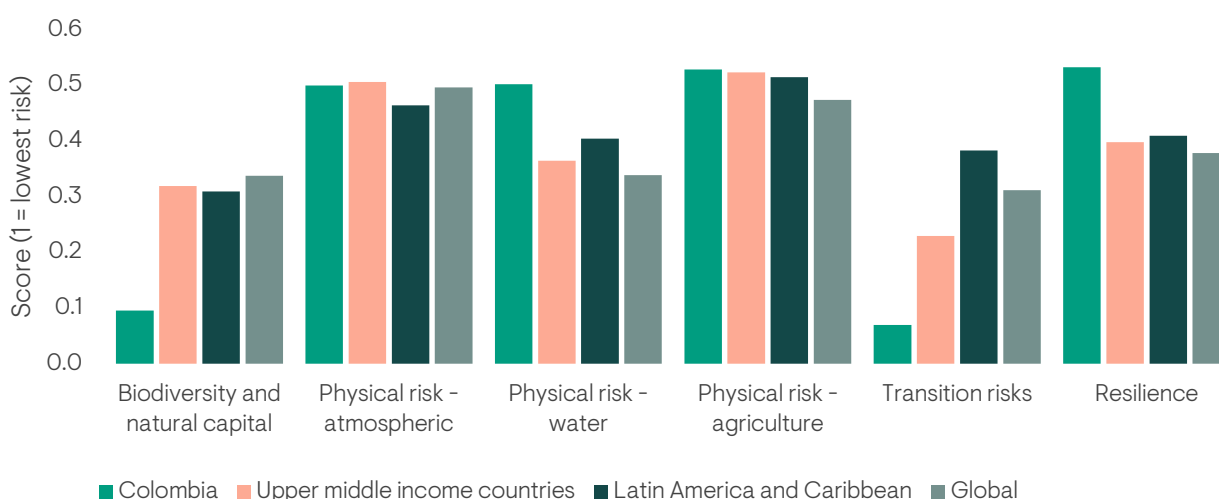
The government aims to reduce crime and specifies drug trafficking as one of its major targets in the National Development Plan. Other priorities include addressing relatively high levels of inequality, with a goal to remove 1.9 million Colombians from extreme poverty. The proportion of women in the workforce has been steadily increasing and is now well above its peers.

### Colombia Global

Emissions intensity (tCO <sub>2</sub> e/million US\$GDP)	836.3	567.7
Emissions per capita (tCO <sub>2</sub> e/person)	5.4	6.5
Absolute emissions (MtCO <sub>2</sub> e)	270.5	497.6
Absolute emissions as proportion of global total	0.5%	100%

Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).

## Colombia CNSI data



Source: Ninety One, WWF, CNSI; as at 2019/2022 (latest available data). Scale: 0-1 (1 is lowest risk).

# Peru

## Natural capital

Peru has over 60% of energy sourced from hydroelectric power. The most recent update to its NDC was in 2020 and included a commitment to carbon neutrality by 2050 and to limit absolute emissions to 123 MtCO<sub>2</sub>e by 2030.

Mining accounts for about 14% of the Peruvian economy and can have governance challenges, but Peru was an early adopter of the Extractive Industries Transparency Initiative (EITI), which promotes better governance and transparency between mine operators and governments.

Peru is one of the largest fishing countries in the world and in recent years several new marine protected areas have been created, taking protected area coverage to 9%.

Biodiversity and natural capital data may differ from the previous report due to methodology changes.

## Social and human capital

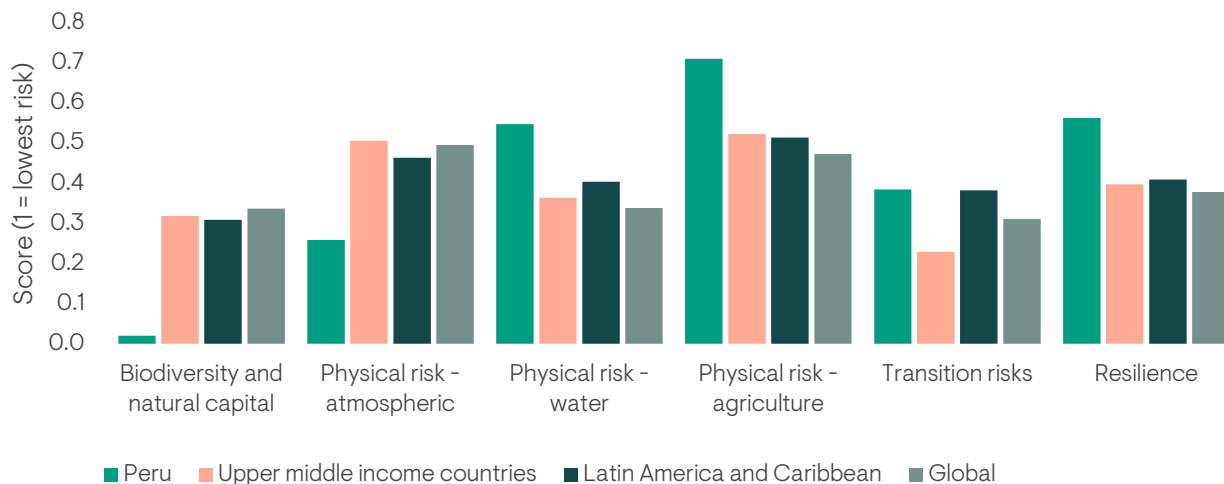
Peru ranks 61<sup>st</sup> out of 168 for social progress, despite ranking 90<sup>th</sup> for wealth globally. Health and education flag as material areas for consideration. Government spending on education is relatively low, at 3.8% of GDP, and both primary and secondary school enrolment needs to increase, especially in rural areas. Peru underperforms its income cohort in access to quality healthcare because of low numbers of doctors and limited healthcare capacity in rural locations.

Female workforce participation is fairly high at 74%, a datapoint that has risen steadily from 45% in 1990. As GDP grows and recovers following COVID lockdowns, bulk infrastructure and basic services improvement are a priority.

	Peru	Global
Emissions intensity (tCO <sub>2</sub> e/million US\$GDP)	835.0	567.7
Emissions per capita (tCO <sub>2</sub> e/person)	5.9	6.5
Absolute emissions (MtCO <sub>2</sub> e)	190.7	497.6
Absolute emissions as proportion of global total	0.4%	100%

Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).

## Peru CNSI data



Source: Ninety One, WWF, CNSI; as at 2019/2022 (latest available data). Scale: 0-1 (1 is lowest risk).

# New Zealand

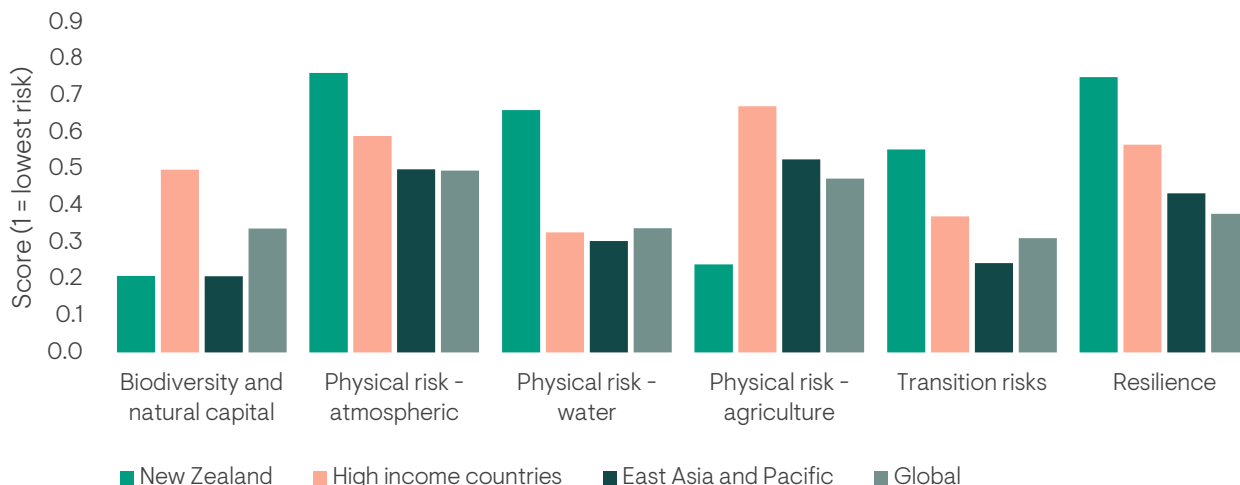
## Natural capital

New Zealand's Climate Change Response (Zero Carbon) Amendment Act 2019 sets out a framework to reduce net GHG emissions to zero by 2050 (except biogenic methane, which has a target of 24-47% below 2017 levels). The country has also established an independent Climate Change Commission to provide advice to government on the transition to a low-emissions economy. The country is a success story for the development of renewable energy, including hydropower and geothermal energy, without government subsidies.

New Zealand submitted its updated NDC in November 2021, increasing its nominal, headline emissions reduction target from 30% to 50% below gross 2005 levels by 2030 including land use, land-use change and forestry (LULUCF) activities. While the update strengthens the country's 2030 target, the effect is nowhere near a 50% reduction, as the government has deployed two different accounting methods that more than halve its effective reduction in net emissions to 22% below 2005 levels by 2030. These accounting approaches raise questions about the environmental integrity of the target.

New Zealand scores well for atmospheric risks - its low population in a large country area means the population is under-exposed to pollution risks. In contrast, the country scores surprisingly badly for natural capital and biodiversity. Of particular note is the poor coastal erosion score, with Auckland, Wellington and Christchurch all being coastal cities. So far, there have been no major incidents, but it is estimated that a sea level rise of just 30-45cm will be enough to see regular flooding and increased erosion.

## New Zealand CNSI data



Source: Ninety One, WWF, CNSI; as at 2019/2022 (latest available data). Scale: 0-1 (1 is lowest risk).

## Social and human capital

The Social Progress Index 2021 ranks New Zealand 12<sup>th</sup> out of 168 countries, compared to its ranking of 21<sup>st</sup> for wealth, indicating broad outperformance.

Education is an area of strength in New Zealand. Students score higher than the OECD average in reading, mathematics and science although PISA<sup>7</sup> scores have been declining over the past 20 years with more rapid declines observed among the country's lowest-achieving students.

New Zealand also performs strongly when it comes to health outcomes with a publicly funded system that covers inpatient and outpatient hospital services. New Zealand ranks first in the Social Progress Index for Personal Rights with freedom of religion and political rights areas of strength.

Areas of weakness include housing affordability. New Zealand ranks 130 in the Social Progress Index on 'Dissatisfaction with housing affordability'. The country moved into a housing bubble in 2016 as real house prices accelerated and affordability constrained future growth. This prompted authorities to introduce demand-side measures such as a ban on purchase of residential property by non-residents as well as supply-side policies such as the 'KiwiBuild' programme.

	New Zealand	Global
Emissions intensity (tCO <sub>2</sub> e/million US\$GDP)	340.1	567.7
Emissions per capita (tCO <sub>2</sub> e/person)	14.6	6.5
Absolute emissions (MtCO <sub>2</sub> e)	72.6	497.6
Absolute emissions as proportion of global total	0.2%	100%

Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).

7. PISA (Programme for International Student Assessment) is an OECD scheme for measuring 15-year olds' ability in reading, mathematics and science knowledge.

# South Korea

## Natural capital

Korea has set a target of reaching carbon neutrality by 2050 by substantially increasing the share of renewable energy sources, gradually phasing out coal, significantly improving energy efficiency and fostering the country’s nascent hydrogen industry. Korea’s energy sector is characterised by a dominance of fossil fuels, with a strong dependence on energy imports.

Korea is making progress in climate change mitigation and energy sector planning, but lacks the necessary speed and stringency it needs to get onto a pathway compatible with the Paris Agreement’s 1.5°C temperature limit.

While the share of coal-fired power generation has decreased in recent years, the share of fossil fuels remains very large at 67% in 2020. The share of renewables in the sector has doubled in the last five years but remains small at around 6%.

The revised Renewable Energy Law, passed in March 2021, strengthens South Korea’s Renewable Portfolio Standard, requiring major electricity utilities to increase their renewables share to 25% by 2034, from 10% by 2023.

In July 2021, the government communicated updates to the Korean New Deal, which also increases the budget for the Green New Deal by about 40%, up to 61 trillion won (c.US\$52bn).

## Social and human capital

The Social Progress Index 2021 places Korea 17<sup>th</sup> out of 168 countries. Korea scores particularly well in infrastructure, ranking third out of 149 countries in terms of Access to Information and Communications.

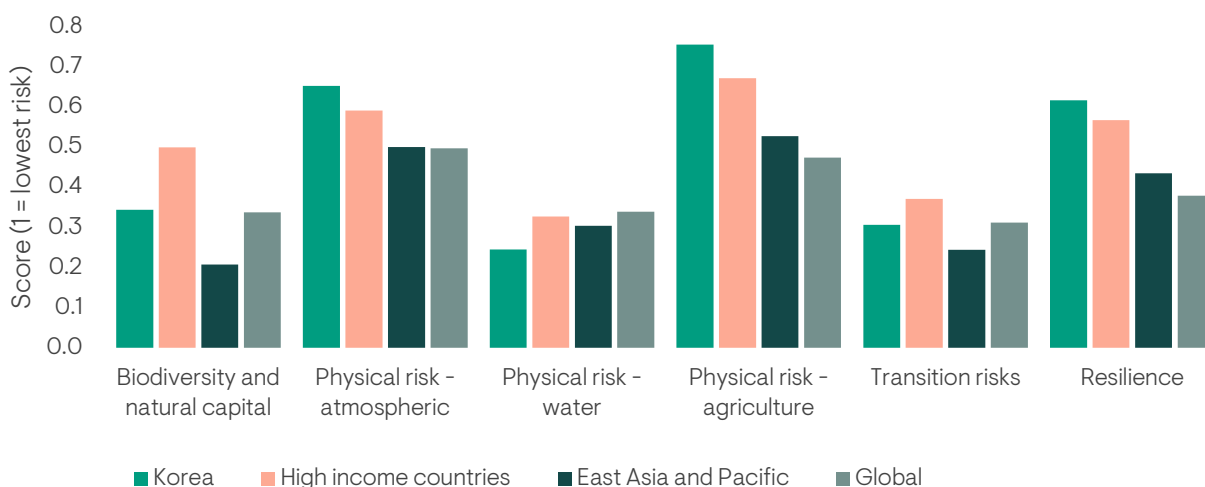
Korea’s strengths include education and learning as well as health outcomes. The Sustainable Society Index scores Korea at 9.7 (out of 10) in terms of education while the Global Competitive Index ranks Korea eighth out of 141 countries on health.

Areas of weakness centre around inclusive growth. Labour market efficiency scores poorly in the Global Competitive Index while a lack of affordable healthcare provisions makes the labour force less competitive relative to peers. Female participation rates are relatively low and there is poor protection for vulnerable employees. Poverty among the elderly is high at close to 50%, although the Gini coefficient (a measure of inequality from 0-100 with 0 expressing perfect equality) is somewhat better than peers at 32.3.

	South Korea	Global
Emissions intensity (tCO <sub>2</sub> e/million US\$GDP)	395.1	567.7
Emissions per capita (tCO <sub>2</sub> e/person)	12.6	6.5
Absolute emissions (MtCO <sub>2</sub> e)	652.7	497.6
Absolute emissions as proportion of global total	1.3%	100%

Source: Climate Watch Data, CAIT, CO<sub>2</sub> gases, as at 2019 (latest available data).

## South Korea CNSI data



Source: Ninety One, WWF, CNSI; as at 2019/2022 (latest available data). Scale: 0-1 (1 is lowest risk).





# Impact assessments





In this section, we report on the portfolio's equity impact allocation as at 30 June 2022 – which comprises decarbonisation-related equities – and on the green, social and sustainable bonds that make up the fixed income impact allocation. The section is structured as follows:

## Impact equities

Overview of our decarbonisation-related equities, including summary carbon metrics for the equity impact allocation.

### Individual company impact analyses

- Ansys
- Aptiv
- Autodesk
- Beyond Meat
- Brambles
- Croda International
- Iberdrola
- Infineon Technologies
- NextEra Energy
- Novozymes
- Orsted
- Rockwell Automation Inc
- Schneider Electric
- TE Connectivity
- Trane Technologies
- Vestas Wind Systems
- Waste Management
- Wuxi Lead Intelligent Equipment
- Xinyi Solar
- Zhejiang Sanhua Intelligent

## Impact bonds

Overview of the fixed income impact allocation, spanning defensive sovereign debt and growth-oriented emerging market debt.

### Individual issuance analyses

- Kenya infrastructure bonds
- New Zealand social housing bonds
- Australia state green bonds
- Colombia green bonds
- Inter-American Development Bank bonds
- Chile green bonds



# Impact equities

While our focus is on individual company carbon emissions, carbon impact and provisional EU taxonomy alignment, below we provide the aggregate carbon avoided (carbon impact) for the decarbonisation companies in the portfolio. Carbon avoided is the carbon emissions avoided by using a product that has fewer carbon emissions than the status quo thereby contributing to decarbonisation.

**Portfolio carbon-avoided footprint**

**228.2**

tCO<sub>2</sub>e/US\$1m invested

**Portfolio carbon-avoided intensity**

**956.7**

tCO<sub>2</sub>e/US\$1m revenue

**Weighted-average EU taxonomy alignment across the decarbonisation companies in the portfolio (estimated)**

**40.0%**

**Portfolio-level EU taxonomy alignment (estimated)**

**8.0%**

In the next section, we provide analysis of each decarbonisation company in the portfolio, including our rationale for investing in the business, as well as detail on carbon emissions and on the positive carbon impact each company is having, measured through the 'carbon avoided' metric.

Please note the information on the following pages differs by date: The market capitalisation and enterprise valuation figures are as at 30 June 2022 while the sales and ROE figures are as at 31 Dec 2021.

# Ansys

## Environmental thesis

Ansys develops simulation software for computer-aided engineering, which is used to predict how products will behave in the real world. Its software allows customers to reduce material inputs, increase energy efficiency and stimulate innovation within low-carbon technologies.

## Environmental data progression

Final Carbon data	FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	18,470	12	16,045	10
Scope 3	806,172	532	170,354	101
Carbon avoided	115,994	77	279,432	166

Ansys began reporting Scope 1 & 2 emissions in 2020 (FY2019). Scope 1 & 2 intensity has fallen by almost 20%. Scope 3 emissions are not yet reported, and while the company remains committed to disclosing Scope 3, this is complex given the breadth of applications and industries it sells its products into. Consequently, Scope 3 emissions in FY2019 and FY2020 are estimates. Carbon avoided is based on our estimate. We have restated FY2019 carbon avoided (from 485,613 tCO<sub>2</sub>e), due to an error in sector-intensity calculations.

## Net-zero targets

Ansys does not yet have carbon-reduction targets. It has a small Scope 1 & 2 footprint, which it is reducing using more renewable energy. Prior to setting any targets, all 15 Scope 3 categories must be reported.

## Structural growth from decarbonisation

Ansys' addressable market is growing rapidly, notably through electrification and autonomy. The company's technology leadership is bolstered by the focus on R&D, technology focused acquisitions and partnerships with key users. It has an estimated 20-25% market share.

## Engagement progress

Ansys has undertaken a preliminary analysis of its Scope 3 emissions and is working on these calculations. Regarding carbon avoided, the company has released product handprint use-cases for electric vehicles and autonomous vehicles, which provide detail in specifying how its products are supporting global decarbonisation.

## 2022 engagement goals

- Scope 3 emissions disclosure.
- Reporting carbon avoided estimates.
- Board gender diversity.
- Engagement on Principal Adverse Impacts data.

**US\$20.8bn**

Market capitalisation

**US\$26.5bn**

Enterprise valuation

**11.8%**

1-year sales growth  
per share

**14.1%**

5-year sales growth  
per share

**10.6%**

1-year RoE

**13.1%**

5-year average RoE

## Aptiv

### Environmental thesis

Aptiv’s technology solutions enable the transition to an electrified, software-defined vehicle of the future.

### Environmental data progression

Final Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	370,964	26	357,549	25	322,870	25
Scope 3	8,415,068	583	8,303,399	578	7,298,105	559
Carbon avoided	1,190,000	82	434,726	30	2,302,288	176

Aptiv has reported Scope 1, 2 & 3 emissions since 2017, with emissions falling over this period. Scope 1 & 2 fell by 10% in absolute terms and 1% in intensity terms. This is partly explained by lower energy consumption during the year due to COVID. Scope 3 fell 21% on an absolute basis and 3% on an intensity basis. The Scope 3 categories ‘purchased goods and services’ and ‘use of sold products’ make up 44% and 32% of total emissions, respectively. Aptiv’s sales continue to shift from conventional to electric vehicles and we expect this to drive Scope 3 emissions lower and carbon avoided higher over time.

### Net-zero targets

Aptiv is aiming for a 25% reduction in Scope 1 & 2 emissions by 2025, carbon-neutral operations and 100% renewable-energy consumption by 2030, carbon-neutral products by 2039, and carbon neutrality by 2040.

### Structural growth from decarbonisation

Aptiv’s technology spans the brain and nervous system of the car and the wider mobility industry. Growth is driven by the move towards an electrified transport system and is outpacing that of the auto market. Aptiv provides high-voltage auto content in 50% of all electric vehicles and its high-voltage book has grown from seven customers to over 20 today, with more than 25 forecast for 2025.

### Engagement progress

We engaged on the Science-based Targets initiative (SBTi) progress, carbon avoided, culture, diversity and inclusion. Aptiv applied to SBTi almost two years ago and is on-track to meet the two-year deadline.

### 2022 engagement goals

- SBTi progress.
- Company-wide carbon avoided reporting.
- Engagement on Principal Adverse Impacts data.

**US\$24.1bn**

Market capitalisation

**US\$26.5bn**

Enterprise valuation

**16.4%**

1-year sales growth per share

**5.1%**

5-year sales growth per share

**6.5%**

1-year RoE

**28.6%**

5-year average RoE

# Autodesk

## Environmental thesis

Autodesk provides computer-aided design (CAD) software for the construction and manufacturing industries. Its building information modelling (BIM) tools facilitate low-carbon design and greater resource efficiency by reducing embodied emissions and buildings' operational emissions. In addition, its manufacturing tools support lower carbon-intensity design and improved energy efficiency of buildings in use.

## Environmental data progression

Final Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	2,727	1	3,291	1	969	0
Scope 3	246,382	120	237,526	92	124,884	38
Carbon avoided					86,057,400	26,283

Autodesk has been reporting Scope 1, 2 & 3 emissions for several years. Scope 1 & 2 intensity has declined dramatically recently, albeit from a low base, driven by increasing use of renewable energy. Autodesk reports all 15 categories of Scope 3; most of these emissions are from 'purchased goods and services' and 'capital goods'. It has significantly reduced Scope 3 emissions, in line with its first science-based target. The carbon avoided shown is our estimate.

## Net-zero targets

Autodesk was among the first companies to set a science-based target and has now set a second science-based target: a further 50% reduction in Scope 1 & 2 by FY2031 and a Scope 3 per-dollar-of-gross-profit decline of 25% by the same year. The company has achieved net zero in terms of carbon offsets.

## Structural growth from decarbonisation

Stricter regulation and rising demand for low-carbon construction is providing a tailwind for Autodesk's products, particularly its BIM tools. The company has a c.30% market share in design software, and it has been focused on providing a one-stop solution covering the design, construction and manufacturing processes, creating a significant competitive moat.

## Engagement progress

We initiated a position in Autodesk in Q4 2021, so engagement with the company is at an early stage. We have already discussed carbon avoided reporting, which Autodesk is currently developing a methodology for.

## 2022 engagement goals

- Report carbon avoided.
- Improve water and biodiversity reporting.
- Engagement on Principal Adverse Impacts data.

**US\$37.4bn**

Market capitalisation

**US\$38.8bn**

Enterprise valuation

**15.6%**

1-year sales growth per share

**17.0%**

5-year sales growth per share

**54.8%**

1-year RoE\*

\*There is no 5-year RoE figure available due to the company's subscription model transition

# Beyond Meat

## Environmental thesis

Beyond Meat sells plant-based meat and has a broad portfolio of products. While livestock and related by-products generate 18% of global greenhouse gas emissions, Beyond Meat's main ingredient - pea protein - is superior to other plant-based foods in terms of land use, water stress and nitrogen-fixing qualities.

## Environmental data progression

Final	FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	35,774	88
Scope 3	278,903	686
Carbon avoided	448,447	1,102

We have been engaging regarding the need to start reporting Scope 1, 2 & 3 emissions. Progress has not been as quick as we would like, and the company needs to work harder to align its sustainability reporting standards with its decarbonisation credentials.

## Net-zero targets

Beyond Meat does not yet have carbon-reduction targets.

## Structural growth from decarbonisation

The global agri-food system needs to produce 50% more food for the world's population which is forecast to reach ten billion by 2050, and to reduce the greenhouse gas emissions that are caused by livestock and related by-products. Its competitive advantage comes from its R&D ability and food-science knowledge: it has over 200 biochemists and food scientists working on R&D, more than most competitors.

## Engagement progress

Beyond Meat informed us that it will report all three 'Scopes' in 2022.

## 2022 engagement goals

- Scope 1, 2 & 3 reporting.
- Scope 1, 2 & 3 science-based targets.
- Carbon avoided and forestry reporting.
- More aggressive targets on packaging.
- Additional reporting on waste.

This holding has been sold.

**US\$1.5bn**

Market capitalisation

**US\$2.1bn**

Enterprise valuation

**12.6%**

1-year sales growth per share

**15.7%**

5-year sales growth per share

**-72.9%**

1-year RoE\*

\*There is no 5-year RoE figure available due to the company's initial public offering in 2019.

## Brambles

### Environmental thesis

Brambles operates the world's largest pool of reusable pallets, crates and containers used in the transportation of goods. This removes cost and complexity from the supply chain, saves water, wood, trees, and waste and generates carbon avoided.

### Environmental data progression

Final Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	90,440	20	48,888	11	43,540	9
Scope 3	3,321,295	743	4,624,011	1,006	1,604,066	339
Carbon avoided	2,588,015	579	1,998,587	435	2,307,948	488

Brambles has made progress in reducing its Scope 1 & 2 emissions intensity, with a 14% decline, by using more renewable energy. The material decline in Scope 3 emissions resulted after we moved from an estimated to a reported number.

### Net-zero targets

Brambles is targeting carbon neutrality by 2025. It is already carbon neutral for Scope 1 & 2, including offsets. Excluding offsets, the company is making progress on reducing its Scope 1 & 2 emissions. It has developed a science-based target, which should be confirmed in FY2022.

### Structural growth from decarbonisation

Brambles controls the original pallet pool developed in Australia and has expanded into markets including the UK and US. It offers a high-quality pooling solution that reduces costs by making FMCG customer supply chains simpler and more efficient. In 2021 returns moved higher, in line with longer-term levels. The company has been improving its capital discipline and addressing inflation impacts. While lumber inflation is a headwind, the company is focused on maximising asset efficiency to dampen any negative impacts.

### Engagement progress

Following engagement, the company disclosed all Scope 3 categories this year, establishing a base for target setting. As noted, Brambles' science-based target should be confirmed in FY2022.

### 2022 engagement goals

- Progress on the science-based target.
- Board gender diversity.
- Engagement on Principal Adverse Impacts data.

**US\$10.3bn**

Market capitalisation

**US\$13.0bn**

Enterprise valuation

**15.6%**

1-year sales growth  
per share

**2.6%**

5-year sales growth  
per share

**19.3%**

1-year RoE

**21.7%**

5-year average RoE

## Croda International

### Environmental thesis

Croda is a bio-based chemical producer. The company produces inputs for skin creams, vaccines and biological pesticides, replacing fossil-fuel-based alternatives.

### Environmental data progression

Final	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	199,185	108	174,362	99	177,464	99
Scope 3	1,134,680	613	986,383	561	984,871	552
Carbon avoided	700,000	378	850,500	484	839,220	470

Croda reports Scope 1 & 2 and all 15 categories of Scope 3. This provides a strong base from which to monitor emissions. Scope 1 & 2 intensity remained the same over the last year which is offset by other efforts.

### Net-zero targets

Croda has committed to reduce absolute Scope 1 & 2 emissions by 25% by 2024 and c.46% by 2029 relative to 2018. The company has also committed to reduce upstream Scope 3 by 13.5% within the same timeframe.

### Structural growth from decarbonisation

Within consumer care, there is increasing demand for products based on 'natural' or 'organic' ingredients derived from bio-based sources. Croda's healthcare products focus on the delivery of drugs to plants and humans, while its agricultural products increase crop productivity, reducing pressure on land and mitigating negative agricultural impacts such as deforestation and soil degradation.

The company is focused on developing its in-house intellectual property and growing revenues from what it calls 'New and Protected Products', which represent about 37% of sales. The company has shown its ability to deliver strong returns over time. Its oleochemicals are often critical inputs into products, and account for only a small proportion of the total cost of a product, which should allow it to retain pricing power.

### Engagement progress

Croda has not increased the number of products covered by its carbon-avoided calculation but has set a target of saving 2 million tCO<sub>2</sub>e by the end of 2024. It is providing information on its supplier partnerships and renewable-material sourcing, but more detail is required. And it is aiming to improve its sourcing of certified palm-oil derivatives.

### 2022 engagement goals

- Reporting carbon avoided on more products.
- Science-based target Scope 3 detail.
- Land/biodiversity targets and reporting.
- Engagement on Principal Adverse Impacts data.

**US\$11.0bn**

Market capitalisation

**US\$11.4bn**

Enterprise valuation

**26.6%**

1-year sales growth per share

**7.1%**

5-year sales growth per share

**19.2%**

1-year RoE

**23.9%**

5-year average RoE



# Iberdrola SA

## Environmental thesis

Iberdrola is a global leader in renewable-energy (RE) generation and operates more than 38GW of RE in Europe, the US and Latin America. It also owns regulated networks in Spain, the UK, US and Brazil.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	16,184,909	391	15,508,851	380	14,885,263	393
Scope 3	52,031,559	1,256	54,278,200	1,331	57,851,881	1,529
Carbon avoided	19,500,000	471	22,920,441	562	31,299,730	827

	2019 (2020 Disclosure)	2020 (2021 Disclosure)	2021 (2022 Disclosure)
	Absolute (MWh/yr)	Absolute (MWh/yr)	Absolute (MWh/yr)
Renewable generation	59,074,000	67,846,000	73,950,000

There has been a significant increase in carbon avoided because of the fast growth of Iberdrola's renewables business.

## Net-zero targets

The company increased its commitment to reducing absolute Scope 1, 2 & 3 emissions and is targeting a 43% reduction by 2030 from a 2017 base. It aims to reduce the intensity of its CO<sub>2</sub> emissions to below 50 grams per kWh in 2030, 73% less than in 2015. It has also committed to being carbon neutral by 2050.

## Structural growth from decarbonisation

Iberdrola is well positioned to capitalise on the ongoing drive towards RE in Europe. The company has access to the best sites, competitive turbine pricing and better financing terms, providing a healthy competitive advantage. Its return-on-equity compares well to other European utilities, and earnings quality has improved.

## Engagement progress

Our engagement continues to focus on succession planning and the joint Chairman/CEO role.

## 2022 engagement goals

- Succession planning.
- Progress against the science-based target.
- Engagement on Principal Adverse Impacts data.
- The Cenyt case. The Chairman and eight members of the management team have been linked to an alleged corruption case involving large Spanish corporates and politicians. We have reviewed detailed reports from BakerMcKenzie and PwC are comfortable that Iberdrola has not been involved in corruption but will continue to monitor the situation.

**US\$66.8bn**

Market capitalisation

**US\$138.7bn**

Enterprise valuation

**18.0%**

1-year sales growth per share

**6.3%**

5-year sales growth per share

**10.2%**

1-year RoE

**9.0%**

5-year average RoE



# Infineon Technologies

## Environmental thesis

Infineon supplies the renewable energy and electric vehicle markets with power semiconductors.

## Environmental data progression

Final Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	915,472	101	928,973	103	864,748	90
Scope 3	2,627,002	290	8,272,094	913	4,206,435	438
Carbon avoided	56,000,000	6,190	56,000,000	6,183	56,000,000	5,836

While its scope 1 & 2 intensity declined in FY2020, carbon savings have remained about the same for several years. The company is increasing the number of semiconductors it sells to electric vehicles and renewable-energy applications. Exposure to these technologies is still small but will increase in the medium to long term.

## Net-zero targets

Infineon has a goal to reduce Scope 1 & 2 emissions 70% by 2025 relative to 2019, and to be carbon neutral by 2030. This not a science based target, and we would like to see the company go through the SBTi approval process. We would also like to see this goal incorporate Scope 3 emissions.

## Structural growth from decarbonisation

Since 1999, Infineon has grown revenues by 11% per year on average, faster than the global semiconductor market's 6% CAGR. Because of the company's large market share in power semiconductors and tailwinds from the structural growth drivers, we expect this trend to continue. The company has a global market share of 20% in power semiconductors, double the #2 player. It has historically generated strong and increasing returns.

## Engagement progress

Infineon is working to comply with more demanding EU disclosure regulations but has also prioritised setting a science-based target. We emphasised the need to calculate and report 'use of sold products', and continue to engage with management on gender diversity.

## 2022 engagement goals

- Science-based targets.
- 'Use of sold products' reporting.
- Improving gender diversity.
- Engagement on Principal Adverse Impacts data.

**US\$31.6bn**  
Market capitalisation

**US\$35.9bn**  
Enterprise valuation

**25.5%**  
1-year sales growth  
per share

**8.1%**  
5-year sales growth  
per share

**12.2%**  
1-year RoE

**12.1%**  
5-year average RoE

# NextEra Energy

## Environmental thesis

NextEra Energy is the world's largest generator of electricity from wind and solar, a market leader in battery storage, and the market leader in North American renewable energy.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	44,923,952	2,686	49,956,427	2,601	43,326,682	2,407
Scope 3	25,657,037	1,534	34,332,972	1,788	19,666,464	1,093
Carbon avoided	47,600,000	2,846	40,727,661	2,121	39,382,821	2,188

	2019 (2020 Disclosure)	2020 (2021 Disclosure)	2021 (2022 Disclosure)
	Absolute (MWh/yr)	Absolute (MWh/yr)	Absolute (MWh/yr)
Renewable generation	49,867,518	58,666,741	69,911,666

At this point Nextera is only reporting Scope 1 & 2 emissions. We would prefer to see Scope 3 emissions reported in future, in order to capture renewable-energy and battery supply-chain emissions. It's worth noting that NextEra's emissions rate is 47% better than the industry average, and that absolute emissions from generation have decreased 24% since 2005 while generation has increased by 76%.

## Net-zero targets

NextEra's goal is to reduce its CO<sub>2</sub> emissions rate by 67% by 2025 from a 2005 baseline – even as it doubles expected electricity generation over this period. This target is not yet approved by SBTi.

## Structural growth from decarbonisation

NextEra is the market leader in renewable-generating and battery-storage capacity in the US and is well positioned for growth. The development of the hydrogen economy also offers opportunity. The company has consistently generated market-leading returns, with returns on equity about 2% above the sector average.

## Engagement progress

Our key engagement goal for NextEra relates to carbon disclosure, and we were delighted to see the company report to CDP. We would like to see it set a science-based target, incorporate other climate policies, and report all Scope 3 emissions.

## 2022 engagement goals

- Science-based targets.
- Reporting of Scope 3 emissions.
- Independent chair of the board.
- Engagement on Principal Adverse Impacts data.

**US\$152.2bn**

Market capitalisation

**US\$221.1bn**

Enterprise valuation

**-5.3%**

1-year sales growth per share

**0.0%**

5-year sales growth per share

**9.7%**

1-year RoE

**14.0%**

5-year average RoE

# Novozymes

## Environmental thesis

Novozymes sells enzymes and microbes, and biological catalysts that speed up chemical reactions. Its technology is used in the food and beverage, agriculture and household sectors and helps to improve yields, increase energy efficiency, and reduce carbon emissions.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	437,162	192	330,181	153	234,000	109
Scope 3	700,458	307	640,624	297	602,250	281
Carbon avoided	88,000,000	38,589	87,000,000	40,366	49,000,000	22,831

2020 saw progress on Scope 1, 2 & 3 emissions.

## Net-zero targets

Novozymes has two science-based targets: to reduce absolute Scope 1 & 2 by 50% by 2030 against a 2018 baseline; and to reduce absolute Scope 3 from 'purchased goods and services' by 15% by 2030 relative to 2018.

## Structural growth from decarbonisation

Household care, Novozymes' largest division, should benefit from pressure to produce more sustainable detergents. The company also sells enzymes into the plant-based meat sector while tougher regulation in the livestock sector is a tailwind. Tackling plastic waste and carbon capture are other opportunities. Its focus on R&D – it holds over 6,500 patents – is an asset. This, together with its market share in the oligopolistic enzyme industry should enable Novozymes to maintain a continuous flow of enzyme product launches and maintain its technological leadership. A large proportion of its customers are in defensive sectors such as household care, which supports the sustainability of returns. The company is also moving into the plant-based meat and dairy sector, selling enzymes that enable salt reduction and improve the texture of products.

## Engagement progress

We continue to monitor progress towards setting a net-zero target validated by SBTi. We also engaged on why Novozymes' carbon avoided methodology has changed. In the past, we have engaged on improving gender diversity in management and have seen progress here.

## 2022 engagement goals

- Monitoring science-based target progress.
- Full carbon avoided reporting
- Engagement on Principal Adverse Impacts data.

**US\$16.9bn**

Market capitalisation

**US\$17.8bn**

Enterprise valuation

**7.7%**

1-year sales growth per share

**2.7%**

5-year sales growth per share

**27.3%**

1-year RoE

**27.1%**

5-year average RoE

# Orsted

## Environmental thesis

Orsted is the global leader in developing, constructing, and operating offshore windfarms.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	3,529,000	295	1,850,000	175	1,852,790	241
Scope 3	36,234,400	3,028	33,864,140	3,207	25,114,200	3,269
Carbon avoided	8,100,000	677	11,300,000	1,071	13,100,000	1,705

	2019 (2020 Disclosure)	2020 (2021 Disclosure)	2021 (2022 Disclosure)
	Absolute (MWh/yr)	Absolute (MWh/yr)	Absolute (MWh/yr)
Renewable generation	15,478,000	20,900,000	22,160,000

Scope 1 & 2 intensity increased by 38% in 2020, following a reduction of 41% the previous year. Fossil-fuel based heat and power generation accounts for 98% of Orsted's Scope 1 emissions. While absolute Scope 1 emissions increased marginally and market-based Scope 2 emissions reduced by 50%, slower sales in 2020 led to a mathematical increase in emissions intensity.

## Net-zero targets

Orsted is committed to a science-based target to reduce Scope 1 & 2 intensity by 98% by 2025 from a 2006 base year; to reduce Scope 3 by 50% by 2032 from a 2018 base year; to a supply-chain decarbonisation programme and to initiatives to deliver a net-positive biodiversity impact while building renewables.

## Structural growth from decarbonisation

As the world's largest offshore wind developer and asset owner, Orsted's growth will be fuelled by the build-out of renewables. The company has an 18% share of the market, and its competitive advantages are a function of its experience; scale; balance-sheet strength; and in-house capabilities. Returns have improved since 2015, with an average return-on-average-capital employed from 2016-2020 of 13.9%.

## Engagement progress

In 2020, we had engaged with Orsted on its relatively high employee turnover. In 2021, we engaged with management regarding non-audit-related fees and the authorisation of a share repurchase programme.

## 2022 engagement goals

- Monitor SBTi progress.
- Improve board gender diversity.
- Reduce employee turnover.
- Engagement on Principal Adverse Impacts data.

**US\$50.0bn**

Market capitalisation

**US\$52.6bn**

Enterprise valuation

**55.0%**

1-year sales growth per share

**6.2%**

5-year sales growth per share

**14.1%**

1-year RoE

**21.3%**

5-year average RoE

# Rockwell Automation

## Environmental thesis

Rockwell Automation is a global leader in industrial automation and digital transformation. Its hardware and software solutions support energy and resource efficiency, as well as time-to-market in the industrial sector.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	125,600	19	129,297	19	108,100	17
Scope 3					2,334,497	369
Carbon avoided					2,707,459	428

The company has been reporting its Scope 1 & 2 emissions data for several years and on both fronts carbon intensity reduced by c.12% from FY2019 to FY2020 due to energy-conservation initiatives. The company does not report Scope 3 emissions, but it is currently classifying Scope 3 emissions and impacts.

## Net-zero targets

Rockwell plans to achieve Scope 1 & 2 carbon neutrality by 2030 by reducing energy demand at its sites, reducing emissions from its global vehicle fleet, and exploring investments in renewable energy.

## Structural growth from decarbonisation

The company is well positioned to benefit from ongoing investments in smarter, greener factories and is a classic example of a company that has successfully created a competitive moat: its expertise across industries, focus on being an outcome-oriented problem-solving partner to clients, its distribution muscle and strong partnerships have strengthened its leadership position.

Rockwell has a track record of delivering a high return on capital employed, of more than 25%. We think best in-class margins, increasing revenue share from higher-margin structural growth opportunities and capital discipline – will likely continue to support the higher return profile of the company.

## Engagement progress

Engagement is at an early stage given that we initiated our position in Q4 2021. However, we have started engaging on Scope 3 emissions and carbon avoided reporting, which will be an important step towards adopting science-based emissions-reduction targets.

## 2022 engagement goals

- Sourcing renewable energy for the company’s own consumption.
- Progress on reporting Scope 3 emissions and carbon avoided.
- Gaining clarity on corporate-governance decisions and recommending best practice.
- Improving board gender diversity.
- Engagement on Principal Adverse Impacts data.

**US\$23.2bn**  
Market capitalisation

**US\$27.4bn**  
Enterprise valuation

**10.4%**  
1-year sales growth per share

**5.0%**  
5-year sales growth per share

**79.4%**  
1-year RoE

**70.3%**  
5-year average RoE



# Schneider Electric

## Environmental thesis

Schneider Electric provides energy-management and industrial-automation solutions. This supports the transition towards a more electric, decentralised, decarbonised and digitised world.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	555,266	18	436,376	14	287,356	10
Scope 3	71,666,747	2,359	73,538,946	2,419	66,144,376	2,303
Carbon avoided	51,000,000	1,679	89,000,000	2,927	134,000,000	4,665

Schneider reports Scope 1, 2 & 3 (all 15 categories) as well as carbon avoided. Emissions intensity decreased across the board and carbon avoided increased.

## Net-zero targets

Schneider has climate targets for 2025, 2030, 2040 and 2050 and is on track to become carbon neutral in its operations by 2025. It also expects to meet its validated 1.5°C science-based target by 2030, which includes plans to reduce Scope 3 emissions by 35%. It aims to achieve carbon neutrality in its end-to-end value chain by 2040, so all products will be fully carbon neutral.

## Structural growth from decarbonisation

Schneider helps other businesses become more digital, circular, electric and renewable. We believe the firm is well positioned in two growth areas: energy management and industrial automation. With a significant installed base across the world, Schneider is also focusing on growing its software and service businesses.

The company's portfolio puts it in a strong position relative to peers and we believe the EcoStruxure platform will help it to maintain and grow its market leadership. The company has expanded its margins over the past few years and has recently shown strong pricing power.

## Engagement progress

We are encouraged that Schneider is on track with its science-based target and to see a fall in Scope 3 emissions. We discussed culture with the business and engaged with the lead independent director on governance. We will continue to monitor the CEO/chairman transition and long-term incentive plan.

## 2022 engagement goals

- Monitor progress regarding the science-based target and emissions.
- Engagement on Principal Adverse Impacts data.

**US\$67.4bn**

Market capitalisation

**US\$81.0bn**

Enterprise valuation

**14.3%**

1-year sales growth per share

**3.6%**

5-year sales growth per share

**14.2%**

1-year RoE

**11.6%**

5-year average RoE



# TE Connectivity

## Environmental thesis

TE Connectivity is a leader in connectivity and sensor solutions across a broad range of applications. In particular, its technologies have application in the electric vehicle space.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	771,864	55	568,352	42	558,285	46
Scope 3	10,977,477	785	9,362,026	696	4,304,797	354
Carbon avoided	73,500	5	121,400	9	275,542	23

Scope 1 & 2 intensity increased by 9% in 2020 from the previous year due to a decline in sales, but absolute Scope 1 & 2 emissions fell by 2% in the period. We were pleased to see TE connectivity report Scope 3 emissions for the first time for FY2020.

## Net-zero targets

TE Connectivity has re-iterated its ambition to reduce its emissions by >35% by 2030 (Scope 1 & 2 emissions from a FY2020 baseline). We are encouraging the company to adopt science-based net-zero targets.

## Structural growth from decarbonisation

As an electronic components manufacturer, TE helps its customers produce smaller, lighter and more energy-efficient products. It is the sole provider for many applications, which allows it to maintain pricing power and m

management expects medium-term organic revenue growth of 4-6%, driven by structural factors. In 2021, TE Connectivity generated a return on equity of c.23% and a return on invested capital of c.16%, on the back of exposure to secular growth areas, a strong order book and disciplined execution. It has generated consistently high returns (high teens/low 20s), driven by healthy margins and a capital-light business model.

## Engagement progress

We were encouraged to see TE Connectivity report Scope 3 emissions for the first time for FY2020. We will continue to engage with the company on full Scope 3 disclosure and setting science-based targets. We also engaged on auditor tenure.

## 2022 engagement goals

- Report company-wide carbon avoided.
- Scope 3 emissions reporting.
- Adopt science-based targets.
- Disclose detailed labour-management and supply-chain practices.
- Engagement on Principal Adverse Impacts data.

**US\$36.5bn**

Market capitalisation

**US\$40.0bn**

Enterprise valuation

**23.3%**

1-year sales growth per share

**7.8%**

5-year sales growth per share

**22.6%**

1-year RoE

**16.2%**

5-year average RoE

# Trane Technologies

## Environmental thesis

Trane is the leader in the heating, ventilation and air conditioning sector where it helps commercial customers optimise energy efficiency. In its emerging heating business line, Trane is well placed for the transition from oil & gas boilers to heat pumps, electric heating and district heating.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	535,351	34	446,338	34	348,770	28
Scope 3	291,433,338	18,600	238,541,185	18,243	242,354,105	19,459
Carbon avoided	7,700,000	491	7,700,000	589	7,700,000	618

Trane achieved an 18% reduction in Scope 1 & 2 emissions intensity. We expect Scope 3 emissions intensity to fall in future years, with the company scaling up solutions that will enable the Gigaton Challenge to be achieved.

## Net-zero targets

Trane has committed to science-based targets: (1) to reduce absolute Scope 1 & 2 emissions by 50% by 2030 vs. a 2019 baseline; and (2) to reduce Scope 3 by 48% per product sold from 'use of sold products' by 2030 vs. a 2019 baseline.

## Structural growth from decarbonisation

Growth is underpinned by the need to address the 15% of global emissions generated by the heating and cooling of buildings. The company's high-quality solutions set it apart from peers and support its strong gross margins, which have been between 32-34% since 2014. Government policies and international regulation will also support growth.

## Engagement progress

We have focused on progress in the Gigaton Challenge, science-based targets and improving gender diversity in leadership.

## 2022 engagement goals

- Monitoring progress on the Gigaton Challenge.
- Monitoring targets for gender diversity in leadership.
- Monitoring progress towards science-based targets.
- Engagement on Principal Adverse Impacts data.

**US\$30.4bn**

Market capitalisation

**US\$34.1bn**

Enterprise valuation

**13.9%**

1-year sales growth per share

**2.3%**

5-year sales growth per share

**22.5%**

1-year RoE

**18.5%**

5-year average RoE

# Vestas

## Environmental thesis

Vestas is the world's largest supplier of wind-energy technology and has one of the most ambitious carbon-reduction programmes of any company in the world.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	101,050	8	109,027	8	73,127	4
Scope 3	6,357,294	531	6,890,923	507	9,794,000	579
Carbon avoided	275,000,000	22,975	322,000,000	23,679	493,000,000	29,138

Scope 1 was broadly stable in absolute terms, but a reduction in Scope 2 resulted in Scope 1 & 2 emissions intensity declining by 46%. This was driven by a rise in renewable electricity consumption, from 82% in 2019 to 100% in 2020. Scope 3 emissions intensity increased by 14%. 92% of Vestas' Scope 3 emissions are from 'purchased goods and services', with the majority relating to raw materials such as steel. We expect this intensity figure to improve over time.

## Net-zero targets

Vestas has committed to a 55% reduction in absolute Scope 1 & 2 by 2025 against a 2019 baseline. The company also has science-based targets: (1) a 100% reduction in absolute Scope 1 & 2 by 2030 against a 2019 baseline; and (2) a 45% reduction in Scope 3 per Mwh by 2030 against a 2019 baseline.

## Structural growth from decarbonisation

Wind and solar are now the cheapest sources of renewable energy in most of the world. Stable and high demand for onshore wind, coupled with improving economics of offshore wind projects, means companies like this should see extended periods of high growth. Aside from scale, which provides strong operating leverage, purchasing power, and cashflow generation, Vestas produces superior products for the same price.

## Engagement progress

We are engaging on the percentage of women in leadership positions, and on science-based targets. We also engaged on the process of changing auditor, on a cyber-attack that occurred, and lastly, past lightning strikes and the damage to blades, which may require additional provisions.

## 2022 engagement goals

- Monitoring progress on the science-based target.
- Monitoring gender-diversity targets.
- Improving health and safety in manufacturing.
- Engagement on Principal Adverse Impacts data.

**US\$21.3bn**

Market capitalisation

**US\$21.8bn**

Enterprise valuation

**2.6%**

1-year sales growth per share

**10.6%**

5-year sales growth per share

**3.6%**

1-year RoE

**19.1%**

5-year average RoE



# Waste Management Inc.

## Environmental thesis

Waste Management is the largest waste-collection and processing company in the US. Through its extensive landfill network, the company permanently sequesters carbon and other greenhouse gases. It employs methane-capture technology on 90% of its landfill sites, using the gas to make automotive fuel and to generate electricity.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	16,518,235	1,108	15,862,973	1,026	16,319,371	1,072
Scope 3	11,175,200	749	3,211,665	208	3,502,992	230
Carbon avoided	53,900,000	3,614	52,900,00	3,423	52,720,000	3,464

The company's Scope 1 & 2 intensity rose in FY2020 despite it collecting fewer tons of waste. This was driven by higher levels of landfill gas and inclusion of Advanced Disposal Services' landfills, following the acquisition in 2020. There will also be an impact on Scope 3 from the ADS acquisition.

## Net-zero targets

As noted last year, Waste Management has committed to a science-based target, but it is yet to be approved. However, the company has already set emissions-related targets, such as running 70% of its fleet on alternative fuels (Scope 1) and using 100% renewable energy at controlled sites (Scope 2) by 2025.

## Structural growth from decarbonisation

The company is exposed to multiple structural growth drivers, including rising volumes of waste in US households and businesses. The scarcity of landfill sites and growing regulatory burden on new sites provides pricing power over time. In addition, continual technology investment means it processes waste more profitably than its peers. As a result, the firm has delivered a return on equity of 12-34% in the last two decades, except for one year. Returns have increased as the US waste industry has consolidated.

## Engagement progress

We continue to engage with Waste Management on board tenure, diversity, sustainability targets for management, and methane capture and measurement.

## 2022 engagement goals

- Board tenure and diversity.
- Sustainability targets for management.
- Methane capture and measurement.
- Engagement on Principal Adverse Impacts data.

**US\$63.5bn**

Market capitalisation

**US\$76.9bn**

Enterprise valuation

**18.6%**

1-year sales growth per share

**6.8%**

5-year sales growth per share

**24.9%**

1-year RoE

**27.3%**

5-year average RoE





# Wuxi Lead Intelligent

## Environmental thesis

Wuxi Lead Intelligent Equipment designs, manufactures and sells battery production equipment and services to leading electric-vehicle battery manufacturers in China, one of the world's largest electric-vehicle markets.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	68,287	116	11,387	17	9,283	11
Scope 3	572,257	972	3,038,431	4,480	1,039,228	1,223
Carbon avoided	258,000	438	519,909	767	676,871	796

Wuxi Lead reported to CDP for the first time in 2021 (FY2020) as a result of our engagements. Scope 1 & 2 combined absolute emissions declined. We have switched to MSCI as our Scope 3 provider, which resulted in significant changes in sector average Scope 3 intensities.

## Net-zero targets

Wuxi Lead has not committed to a science-based target. This may take time as the company has just started reporting carbon data.

## Structural growth from decarbonisation

We believe the electric-vehicle market is one of the most exciting structural-growth opportunities in the transition to a low-carbon economy. The company is a market leader in battery equipment, and so is well placed to take advantage of this growth. It works closely with international customers such as Northvolt, while Chinese battery manufacturer CATL acquired c.7% of its shares in 2020 and agreed to guarantee it 50% market share in front-end lithium-battery equipment orders by 2023. In FY2021, Wuxi Lead generated a 21% return on equity and a 15% return on invested capital on a stable gross margin profile year-on-year.

## Engagement progress

The company released its first sustainability report in April 2021. The engagement target of CDP reporting was also achieved in 2021. We have also discussed board diversity and effective corporate governance with Wuxi Lead but recognise it takes time for emerging market companies to converge to governance best practice.

## 2022 engagement goals

- Board tenure and diversity.
- Sustainability targets for management.
- Methane capture and measurement.
- Engagement on Principal Adverse Impacts data.

**US\$14.8bn**

Market capitalisation

**US\$14.8bn**

Enterprise valuation

**64.1%**

1-year sales growth per share

**52.0%**

5-year sales growth per share

**21.0%**

1-year RoE

**21.8%**

5-year average RoE



# Xinyi Solar Holdings

## Environmental thesis

Xinyi Solar is the world's largest producer of solar glass with a roughly 30% market share.

## Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	1,593,977	1,628	1,957,214	1,686	2,522,913	1,589
Scope 3	915,590	935	5,335,730	4,596	780,571	492
Carbon avoided	2,070,000	2,115	2,170,000	1,869	2,320,000	1,461

	2019 (2020 Disclosure)	2020 (2021 Disclosure)	2021 (2022 Disclosure)
	Absolute (MWh/yr)	Absolute (MWh/yr)	Absolute (MWh/yr)
Renewable generation	2,600,000	2,770,000	3,695,500

Xinyi Solar reported to CDP for the first time in 2020 (FY2019) following our engagements on this Issue. The company self-reported 2.3m tons of carbon avoided in FY2020, based solely on its solar-power projects.

## Net-zero targets

The company has not committed to a science-based target but has a production-based target to reduce Scope 1 & 2 emissions per ton by 13% by 2023 vs. 2018. We have engaged with the company on net zero.

## Structural growth from decarbonisation

Xinyi Solar's main product, solar glass, is a critical component in solar panels. The solar-glass market has consolidated over time, and Xinyi Solar remains the global leader based on capacity, production share, technology and costs. It enjoys a high gross profit margin and return on capital relative to its second-tier peers. It can also take advantage of its technological experience and scale effects at its Malaysian factory.

## Engagement progress

In 2021, Xinyi Solar took steps towards more ambitious carbon targets, submitting its second CDP report and upgrading its emissions-reduction target. The company intends setting clearer emissions targets longer-term.

## 2022 engagement goals

- Monitor carbon emissions targets.
- Work towards Scope 3 reporting.
- Monitor progress on board diversity.
- Engagement on Principal Adverse Impacts data.

**US\$13.7bn**  
Market capitalisation

**US\$14.6bn**  
Enterprise valuation

**21.4%**  
1-year sales growth per share

**15.5%**  
5-year sales growth per share

**17.3%**  
1-year RoE

**21.2%**  
5-year average RoE

## Zhejiang Sanhua Intelligent Controls

### Environmental thesis

Zhejiang Sanhua Intelligent Controls supplies automotive heat-management systems and HVAC (heating, ventilation and air conditioning) components. The company also makes specialised components such as EXVs (electronic expansion valves), which help HVAC original equipment manufacturers achieve energy efficiency.

### Environmental data progression

Carbon data	FY2018 (2020 reporting)		FY2019 (2021 reporting)		FY2020 (2022 reporting)	
	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)	Absolute (tCO <sub>2</sub> e)	Intensity (tCO <sub>2</sub> e/US\$m revenue)
Scope 1 & 2	40,518	25	150,536	92	160,022	91
Scope 3	21,185,161	12,923	66,635,244	40,773	1,941,229	1,105
Carbon avoided	47,900	29	381,453	233	765,531	436

Sanhua reported to CDP for the first time in 2021 (FY2020) following our engagements.

### Net-zero targets

Sanhua has not committed to a science-based target. The company set an energy-consumption target based on production value in 2020 of -3% year-on-year. It will set a longer-term Scope 1 & 2 target as a first step.

### Structural growth from decarbonisation

The electric vehicle and HVAC sectors provide structural-growth opportunities in the transition to a low-carbon economy. Sanhua grew revenue by 32% in 2021, with the bulk of this coming from its auto parts segment – it is a one-stop shop for HVAC and automotive heat-management components. Gross margins have been about 25-30%, with net margins of at least 10%, since 2016. It has generated a return on equity of 10-18% and a return on invested capital of 9-15% since the GFC.

### Engagement progress

In July 2021, Sanhua submitted its CDP questionnaire for the first time, following our engagements. Scope 3 data was not included, with Sanhua noting the complexity of estimating these emissions. We acknowledge these challenges for a first-time reporter.

### 2022 engagement goals

- Scope 3 carbon emissions.
- Carbon-avoided estimate.
- Potential Scope 1 & 2 targets.
- Auditor tenure.
- Engagement on Principal Adverse Impacts data.

**US\$14.7bn**

Market capitalisation

**US\$15.1bn**

Enterprise valuation

**32.6%**

1-year sales growth per share

**15.1%**

5-year sales growth per share

**15.9%**

1-year RoE

**16.1%**

5-year average RoE

# Impact bonds

We assess the following points when considering a green or social sovereign bond (typically detailed in the bond prospectus and associated documents):

- Use of proceeds - the intended destination of the funds is key and here we consider areas highlighted by our internal sustainability analysis. The bond prospectus also details the intended reporting which will accompany the bond on at least an annual basis, including quantitative indicators.
- Project evaluation and selection - details are provided on project eligibility criteria within each green or social underlying category. It includes exclusions, and any process to identify and manage material environmental or social risks of the chosen projects.
- Management of the proceeds - where the assets will be held prior to the placing.
- External reviewers - this 'second party opinion' on the quality of the bond issue and its credentials is similar to a bond rating agency report. These are useful but should not be relied upon entirely.

Our allocations are focused on the former, driven by our asset allocation views and we have accumulate exposure to the following positions:

- Kenya infrastructure bonds
- Colombia
- Inter-American Development Bank bonds
- New Zealand social-housing bonds
- Australia state sustainability bonds
- Australia housing bonds

Each of these positions has a positive impact by addressing a range of social and environmental challenges. In the following pages we set out the details of each bond held, including a measurement of the impact using bond proceeds and impact reports where available.

# Kenya infrastructure bonds

## Issuer owned

Coupon	Maturity	Type
12.257%	January 2037	Conventional bonds

## Overview

Kenya has the potential to be one of Africa's success stories, with a growing young population, a dynamic private sector and a skilled workforce. The economy recovered well following the COVID pandemic with GDP growth of 7.5% in 2021 and inflation remaining within the central bank's 2.5-5% band. Since then however the rapid increase in energy commodity prices relative to Kenya's principal exports has resulted in a significant terms of trade shock. So while the long-term outlook is favourable and the government has a development agenda founded on three pillars (economic, social and political) and centred on the UN's Sustainable Development Goals, there are short terms risks from macro-economic uncertainty.

The IMF is involved, as it has been for some years, and macro policies have been prudent in the face of geopolitical and financial risks from international markets. The government has developed a reform programme to address the economic challenges and reduce debt vulnerabilities through a multi-year fiscal consolidation that is based on increasing tax revenue and carefully controlling expenditures. Steadfast commitment to prudent policies and sustaining consolidation efforts are needed to maintain balance in the macroeconomy and reduce debt vulnerabilities further.

## Impact details

The bonds are government issued and target specific infrastructure projects across transport, energy, water and irrigation. Road infrastructure has been identified as a major constraint to economic and social development. Kenya's power mix is relatively clean and currently includes c.80% renewables including 25% hydroelectricity, with the remainder fossil-fuel based.

While there is no coal power generation in the country, the bonds target increased renewable energy generation.

Water supply, sanitation and sewage projects have been actively supported by the EU, with access to water a key issue in Kenya. The government has made progress on access to water and waste management, especially within city centres, but access to piped water and basic sanitation remains relatively poor across the country.

The infrastructure bonds are not issued under a green bond framework, so while the targeted sectors are known and the annual budget sets out spending in these areas, which is financed by bond issuance, we are not able to report the spending under the bond programme.

# New Zealand social-housing bonds

## Issuer owned

Coupon	Maturity	Type
1.534%	September 2035	Sustainability bonds
3.42%	October 2028	

## Overview

Kāinga Ora was established in October 2019, bringing together previously separate organisations which developed and managed social housing into a single Crown entity. As New Zealand's public housing agency, it is mandated by and operates on behalf of the Crown to provide a key public service (i.e., the provision of social housing to the most vulnerable segments of the New Zealand population) and enable, facilitate and deliver housing and urban development projects.

We expect the expansion of social and affordable housing will remain a key priority for the New Zealand government. The government's goals are outlined in the Public Housing Plan 2021-2024, where the stated aim is to enlarge the stock of state and transitional housing properties by about 12,500 homes. As the largest residential landlord Kāinga Ora houses about 186,000 people across 68,000 properties. The portfolio is valued at US\$39.2 billion, making it one of the government's largest assets. The bonds are rated AA- in line with the New Zealand government. Over 90% of Kāinga Ora's income is sourced directly or indirectly, through rent and benefits subsidies, from the Crown.

## Impact details

New Zealand generally scores well on the Social Progress Index which we use as a measurement of inclusive development and growth. However the affordability of housing is highlighted as a key issue. The proportion of the population which is homeless or 'severely housing deprived' is among the highest across OECD nations.

Kāinga Ora invests in social-housing projects both through new-build and retrofitting and support programmes, with a view that increased housing stability leads to better health and education outcomes. The average building age is 45 years, so projects such as full insulation and accessibility improvements can enhance home efficiency and comfort.

The quality of sustainability reporting is high, with the company's impact across social, natural and human capital clearly outlined. The embodied carbon of buildings is a key climate-related issue and Kāinga Ora has initiatives to divert waste from landfill, and relocate rather than demolish homes. Over 2021 a further 10,947 people were housed, 271 homes were retrofitted and 493 new homes were delivered with the highest environmental build rating.



# Australia – National Housing Finance Investment Corporation (NHFIC)

## Issuer owned

Coupon	Maturity	Type
1.74%	July 2031	Social and Sustainability bonds
1.41%	June 2032	
2.34%	June 2036	

## Overview

The National Housing Finance and Investment Corporation (NHFIC) is a government agency which provides low-cost, longer tenor loans to registered Community Housing Providers (CHPs) to support the growth and provision of social and affordable housing. Additionally it provides loans and grants to support critical housing infrastructure.

NHFIC has issued six social and sustainability bonds since it was established in 2018, raising a total of A\$2.0 billion. The bonds are rated AAA in line with the government which also provides a guarantee.

## Impact details

NHFIC reports both primary and second-order impact benefits from its activities. The primary impacts principally relate to the greater availability of capital at reduced rates to the CHPs. In the last reporting period for the year ended 2021, eight CHPs were provided with development finance to support the acquisition and construction of new dwellings.

This finance has extended the tenor of borrowing by 10-15 years to better match the life of the housing assets of CHPs. It is estimated that the reduced financing cost for the CHPs is c.A\$161 million over the life of the loans. Over the year ending 2021 NHFIC supported over 4,900 dwellings including 2,100 newly acquired or constructed dwellings to support housing supply.

# Australia state green bonds - New South Wales

## Issuer owned

Coupon	Maturity	Type
3%	November 2028	Green bonds
1.25%	November 2030	

## Overview

New South Wales (NSW) is Australia's most populous and wealthiest state, with a diverse economy driven by the finance, business services, pharmaceutical and manufacturing sectors. Much of the economic activity is centred around Sydney, which alone accounts for a quarter of Australia's GDP.

In line with the sovereign, the bonds are rated AAA and priced similarly to the sovereign bonds, with a small yield premium for taking on state risk.

## Impact details

The bulk of the proceeds of these green bonds were invested in clean transportation and five new water-management assets across the state of NSW. As home to the largest city in Australia with a growing population, NSW has invested in a solar-powered light railway to better connect the north-west suburbs of Sydney with the central business district; there is a similar scheme in the second city of NSW, Newcastle.

Over the past decade, the main water basin in NSW, the Murray-Darling Basin, has continued to experience water stress from agricultural demands and severe weather. These bonds funded water-management projects that have helped agriculture and industry manage water more efficiently. By way of example, new water-recycling plants recover 100% of biosolids from sewage to make the water safe to use in crop irrigation.

# Australia state green bonds - Queensland

## Issuer owned

Coupon	Maturity	Type
1.0%	March 2031	Green bonds
2.5%	March 2029	

## Overview

Home to 5 million people, Queensland is a state in the northeast of Australia. Queensland's green bonds were issued with the explicit aim of helping the state's economy decarbonise and transition to a low-carbon future. Currently, Queensland's electricity system remains heavily reliant on coal, and its critical agricultural and mining sectors are significant emitters of greenhouse gases. Queensland has a younger population than the Australian average and, with the Olympics recently awarded to Brisbane in 2032, the state looks set for a decade of further strong growth.

Queensland has now issued four green bonds, raising a total of A\$7 billion. They are certified by the Climate Bonds Standard Board on behalf of the Climate Bonds Initiative.

The bonds are rated AA+ by S&P, slightly below that of Australia as a whole due to the state running a budget deficit.

## Impact details

All proceeds from Queensland Treasury Corporation's Green Bonds issued as at 30 April 2022 have been fully allocated against a selection of eligible projects. Low-carbon transport and water infrastructure projects have been the primary beneficiaries of the proceeds.

# Inter-American Development Bank (IADB)

## Issuer owned

Coupon	Maturity	Type
3.2%	August 2042	Development bonds
4.375%	January 2044	

## Overview

The IADB is owned by 48 countries: 26 Latin American and Caribbean countries and 22 non-borrowing countries. Major shareholders are: US (30%), Brazil (11.35%), Argentina (11.35%), Mexico (7.3%), Japan (5%), Canada (9.4%), Venezuela (3.4%), Colombia and Peru (1.5% each).

The purpose of the IADB is to achieve development in a sustainable, climate-friendly way. Through financial and technical support for countries working to reduce poverty and inequality, IADB helps improve health and education, and advance infrastructure.

The IADB prioritises social inclusion and equality, productivity and innovation, and regional economic integration. In doing so, it addresses the cross-cutting issues of gender equality and diversity, climate change and environmental sustainability, institutional capacity and the rule of law.

## Impact details

At COP26, IADB committed to align 100% of its new operations with Paris goals by January 2023 and to deliver US\$24 billion of green and climate finance over the next four years.

IADB screens all projects for potential environmental and social risks, and applies the disaster and climate-change risk assessment methodology to all sovereign guaranteed loans to identify physical climate-change risks. Relevant environmental and socially orientated clauses are included in loan agreements.

An annual sustainability report is published with a number of key performance indicators and details on alignment with the Sustainable Development Goals. IADB also publishes the Development Effectiveness Overview (DEO) annually which measures progress relative to target and has key performance indicators on the results and effectiveness of projects. Examples of the organisation's impact over the past year include: 16.7m beneficiaries of poverty reduction programmes, 330,000 children receiving early childhood development services, 35m beneficiaries of health services and 16m students benefiting from education projects.

# Colombia green bond

## Issuer owned

Coupon	Maturity	Type
7.0%	March 2031	Green bonds

## Overview

This is Colombia's first green bond issue. It is seen as a tool to channel resources to green initiatives that promote sustainable economic growth, and encourage the participation of other Colombian issuers in the green bond market through the establishment of a benchmark issue.

The government of Colombia has formalised the agenda of the National Development Plan (NDP) – called 'Pact for Colombia, Pact for Equity 2018-2022' – which includes the Pact for Sustainability and makes visible the commitment of the Colombian government regarding economic actions and the conservation of the environment.

This Pact identifies four pillars:

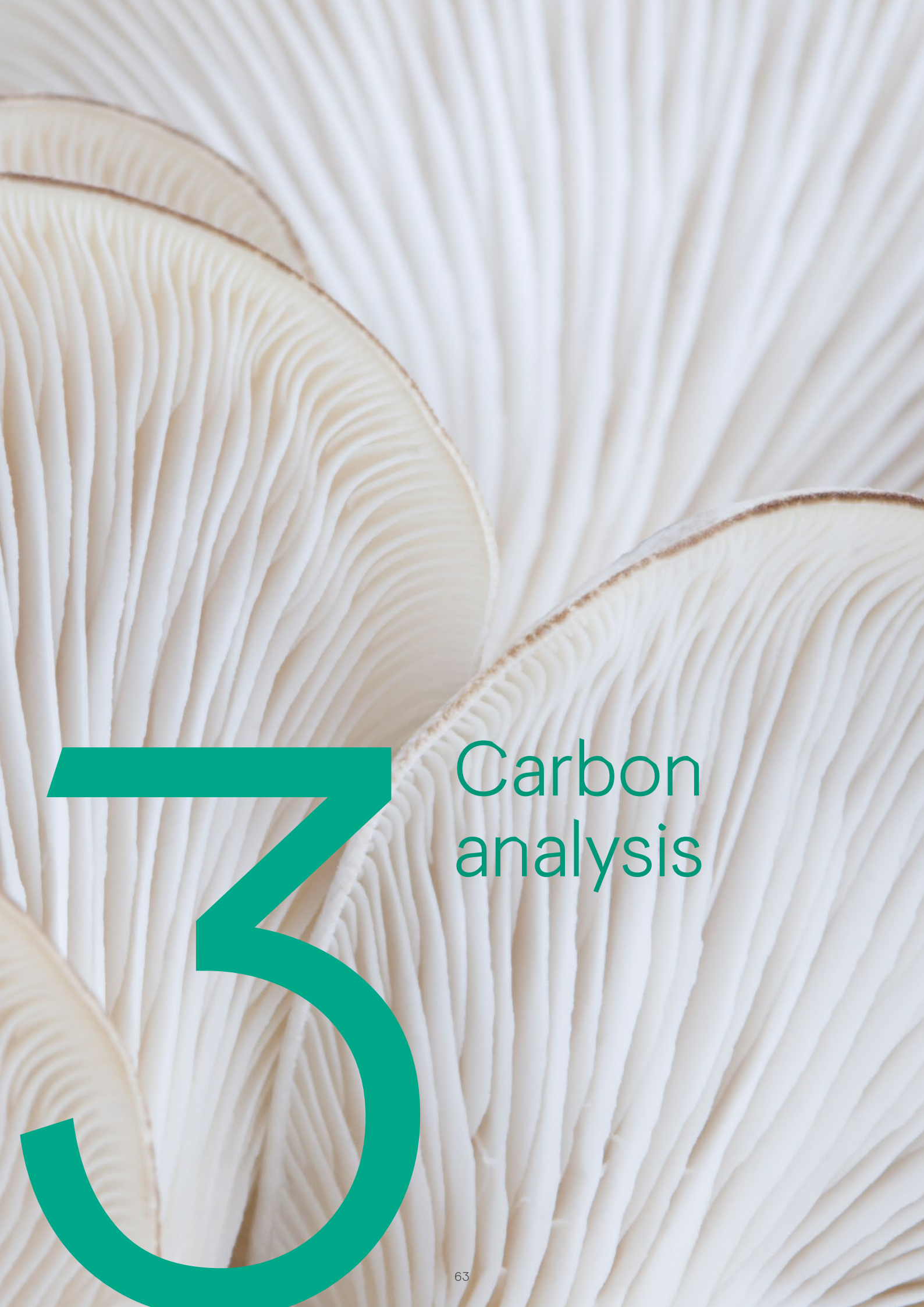
- Implement economic strategies and instruments so that productive sectors are more sustainable and competitive and reduce environmental impacts
- Convert biodiversity and natural capital into strategic assets, controlling deforestation, conserving ecosystems and preventing their degradation, based on territorial control and the generation of new sustainable economic opportunities at the local level
- Promote education relevant to disaster risk management and climate change adaptation, with the aim being to guide development planning and encourage financial protection against disasters.
- Strengthen environmental institutions and research, promoting social transformation that values biodiversity through environmental education and effective management of socio-environmental conflicts

## Impact details

In our assessment, the green bond framework is robust, in line with ICMA's Green Bond principles and addresses clear needs for the country as highlighted in our country level research. Proceeds are focused on essential areas across the Sustainable Development Goals. This includes:

- Renewable energy (ex hydro) and GHG emission reduction initiatives
- Protecting ecosystems, reforestation and sustainable forest management
- Low-emission public transportation
- Sustainable water management

This bond was the first emerging market local currency issuance of its type and was well received by the market. At the time of writing the first annual report has yet to be published so we do not yet have the specific allocation of proceeds.



# Carbon analysis





In this section, we explore the emissions profile of the Global Multi-Asset Sustainable Growth portfolio, and discuss how we assess the performance of our investments from a carbon perspective and set appropriate targets.

The section is structured as follows:

- Understanding carbon ‘Scope’
- Analysis of the highest-carbon emitting companies

# Understanding carbon ‘Scope’

We see the level of Scope 1 & 2 emissions as a good proxy for how carbon-efficiently a company is managing its business; the upstream part of Scope 3 proxies the carbon-efficiency of a company’s supply chain; and the downstream part is representative of the carbon-efficiency of a company’s products.

**Scope 1** Direct

This relates to the direct emissions from owned or controlled sources, for example fuel burned on-site and company-owned vehicles.

**Scope 2** Indirect

This relates to the indirect emissions from the generation of purchased energy, steam, heating and cooling for the company’s own use.

**Scope 3** Indirect

There are 15 categories of Scope 3 emissions, comprising eight that relate to the supply chain and seven that relate to the emissions of the products once they are sold/used (see below).

## 15 Scope 3 categories

### Upstream

Purchased goods & services	Capital goods	Fuel & energy related activities	Upstream transportation & distribution
Waste generated in operations	Business travel	Employee commuting	Upstream leased assets

### Downstream

Downstream transportation & distribution	Processing of sold products	Use of sold products	End-of-life treatment of sold products
Downstream leased assets	Franchises	Investments	

More companies are reporting detailed carbon footprint data; not just direct emissions (Scope 1 carbon) and indirect emissions from purchased energy (Scope 2 carbon), but indirect emissions from the companies’ supply chains and products and services once they are sold (Scope 3 carbon). We believe it is vital that companies begin to quantify carbon risk not just in their own businesses but in their supply chains, which will then allow investors to build climate-resilient portfolios. The vast majority of carbon emissions for most companies are within Scope 3, but calculations for Scope 3 are inherently complex and most companies currently report Scope 1 & 2 only.

# Analysis of top 5 emitters

## Midea Group

As a household consumer goods company, Midea's manufacturing process is energy intensive. This is particularly as operations are domiciled in China and therefore reliant on a relatively high-carbon electricity grid. The company has started reporting Scope 1 & 2 data and implemented initiatives to reduce energy intensity; for instance 20% of power used in the manufacturing process is now attributable to solar. It has also been working to install manufacturing Internet of Things connectivity across its processes to enable transparent, visual and controllable energy efficiency.

While Scope 3 emissions are not reported, Midea is aware that its total emissions footprint will result from the lifetime use of the appliances that it produces. Home appliances are the second-largest source of household energy consumption, generating up to 30% of residents' carbon emissions.

Midea has committed to reducing emissions right across the lifecycle of its products. It produces over 2 million units of air-conditioners equipped with its green technologies, which can help save a total of 416 million kWh of electricity and reduce 414,700 tons of GHG and 12,400 tons of sulphur dioxide annually. In October 2022 Midea registered and published the world's first Environmental Product Declaration for air conditioning products on the International EPD System, an ISO recognised system. This lifecycle assessment helps to provide consumers with transparent product-related environmental information.

## TSMC

Founded in 1987, TSMC is the world's largest independent fabricator of silicon wafers for semi-conductors. We see TSMC's structural growth supported by the surging demand for enhanced computing power, growing semi-conductor content in autonomous and electric vehicles, and an increasing focus on energy consumption in consumer and industrial applications.

The power consumption of the manufacturing equipment that TSMC employs to make semiconductors accounts for over 50% of the company's energy use. Thus it has set a goal to increase the energy efficiency of the equipment used in its production processes by 20% by 2030. There is also recognition of the energy that can be saved by the application of TSMC's most advanced chips in products. It is estimated that 217,000 gigawatt-hours of energy is saved through energy efficiency products in 2021, four times the energy consumed during the production. TSMC has set a net-zero target by 2050 through the value chain and aims to be 100% reliant on renewable energy by 2050. In the medium term, it aims to achieve zero growth in carbon emissions by 2025 and start decreasing carbon emissions from there on.

## Silergy

Listed in Taiwan, Silergy is a fabless Chinese analog semiconductor company and the largest power management integrated circuit (PMIC) supplier in China. Its products improve the energy efficiency of electronic end-applications. Energy efficiency upgrades from consumer electronics, 5G and auto electrification could expand the Chinese PMIC addressable market and drive future growth. The company allocates at least 14% of its annual sales to R&D to optimise and develop more energy-efficient chips. Silergy reported Scope 1 emissions of 143,936 metric tonnes of CO<sub>2</sub> in 2020 according to CDP. We will engage with the company to further disclose its carbon emissions and set net-zero targets.

## Antofagasta

Antofagasta is a copper mining company which operates mostly in Chile. In May 2021, it committed to a 30% reduction in absolute Scope 1 & 2 emissions by 2025, using 2020 as a baseline. While its longer-term commitment of net zero by 2050 is more in line with industry, the short- to medium-term ambition exceeds that of other mining peers. A large portion of power sourcing has already converted to renewables (such as the Antucoya and Centinela mines) and more solar-based power purchase agreements are planned for 2023 and 2024. Through its copper production, Antofagasta will support the transition to a low-carbon economy. Copper is used in renewable power generation and the electrification of transportation and industry. The company reports emissions to CDP and has done so since 2010. Its 2022 report includes material Scope 3 categories.

## Alibaba

December 2021 saw the company take a big step forward with respect to its carbon emissions disclosure and Paris-alignment target setting. The company made its first carbon emissions disclosure, and committed to getting its targets validated by the Science Based Targets initiative, setting a calendar year 2020 baseline from which future reductions will be judged.

### Carbon targets:

Decarbonising Alibaba (Scope 1 & 2): by 2030, Alibaba will achieve carbon neutrality in its own operations.

Greening the value chains (Scope 3): Alibaba will collaborate with upstream and downstream value-chain partners to cut emission intensity by 50% by 2030 (with 2020 the base year). Alibaba Cloud provides the key digital infrastructure and will achieve Scope 3 carbon neutrality during the same period.

Enabling low-carbon circular digital ecosystem (Scope 3+): beyond its own operations and direct value chains, Alibaba has pledged to use its digital platforms to encourage broader participation by stakeholders affected by its efforts. Alibaba has set a target to facilitate 1.5 gigatons of GHG emission reduction over the 15 years to 2035 in its digital ecosystem.

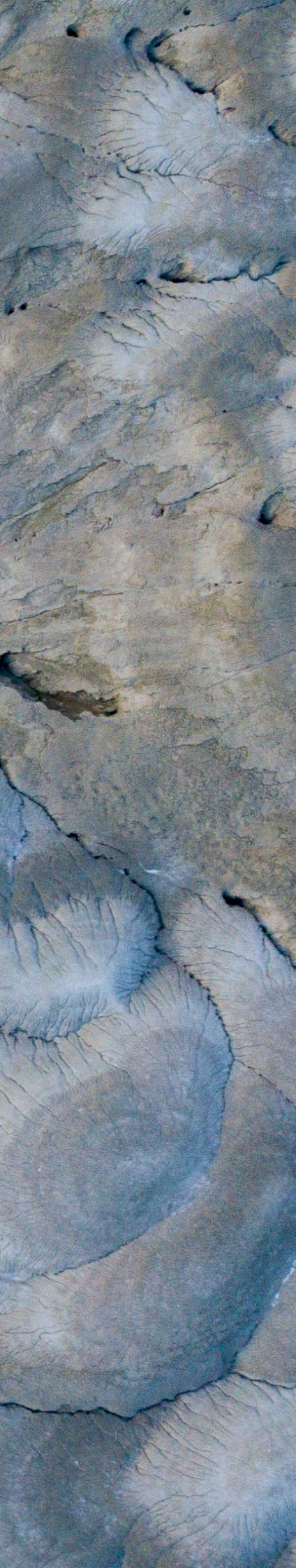
The last commitment is potentially significant given the absolute level of intended emissions abatement and Alibaba's dominant supply chain position, offering the potential for it to be a real supply-chain steward and drive significant positive change.





# Engagement, advocacy and voting





In this section, we present our work on behalf of our clients as active stewards of their capital. The section is structured as follows:

- How we approach engagement and advocacy
- Engagement overview
- Proxy voting



# How we approach engagement and advocacy

We are active (not passive or activist) investors. We believe that effective boards and management teams that are aligned with our long-term objectives should be supported.

Ninety One's global engagement policy is driven by a clear purpose to preserve and grow the real value of the assets entrusted to us by our clients over the long term.

We use one database, accessible to all investment teams, to record all engagement interactions, progress and outcomes.

During the reporting period, we clarified and simplified what we mean by engagement: an engagement is dialogue with purpose with those who can do something about an issue, usually the board and executives.

**We also simplified our engagement categories, introducing the following definitions:**

## Strategic

Strategic engagements focus on critical issues with entities we believe we can influence. These can cover sustainability, business-model and operational issues. We believe these engagements enhance our understanding of sustainability risks and can provide the opportunity to improve outcomes.

## General

General engagements form part of the investment process, focusing on engagement goals that are not prioritised for strategic engagement, including particularly corporate governance.

## Advocacy

We identify a limited number of advocacy projects that matter for our clients and the firm. The Sustainability Committee provides guidance to investment teams on their participation in advocacy, including through collaboration, where this is aligned to their investment priorities.

We may collaborate with other investors as part of an engagement strategy if it can contribute to achieving our engagement objectives. Our membership of regional and global organisations facilitates this.

# Engagement overview

During the reporting period, the Multi-Asset Sustainable Growth team took part in 37 company-specific engagements. Many of the engagements were initiated following matters identified in our fundamental investment and voting analysis. Effective fundamental analysis of sustainability helps to ensure early identification of significant issues and resolutions that need attention at the next AGM. In addition, the assessment of governance and leadership culture is critical to our investment process. Sound governance improves confidence in our earnings forecasts and helps protect client capital.

**Below we outline three examples of company engagements:**

## Iberdrola - lobbying practices

Iberdrola is a global leader in renewable-energy generation and the leading owner of renewable-energy generating capacity in Europe. The company has leading positions in Spain, the UK, Mexico and Brazil. The group has committed to reduce its emission intensity to 50 gCO<sub>2</sub>/kWh globally by 2030, thus achieving an 86% reduction in three decades, in addition to being net zero globally before 2050.

As part of its transition plan to achieve net zero, Iberdrola lobbies governments and stakeholders to encourage a transition to clean renewable energy. This includes lobbying for permits for renewable energy production as well as encouraging governments to eliminate subsidies for oil and gas companies. The analyst team met onsite with Iberdrola this quarter to discuss in further detail its transition plan. We encouraged management to increase transparency and disclosure around their lobbying practices. In response, Iberdrola has committed to making this information public by the end of 2022.

Over Q2 2022, we voted 'against' in Iberdrola's advisory vote on remuneration as we felt it was not particularly well designed. The company uses a broad group of international large-cap companies to benchmark CEO pay, but a different group of European utilities as performance comparators for the purpose of meeting the targets. It argues that European utilities are state-owned enterprises and hence not relevant comparators for pay, which is reasonable. But we believe the peer group for performance should be the same as the peer group for pay. We felt the company should have some of the higher-return companies with better-paid management teams in the comparator group.

## Croda – land savings methodology

Croda is a leading bio-based chemical producer that uses nearly two-thirds biological inputs in its production processes. The company's output, which mainly serves as ingredients for products such as skin creams, vaccines, and biological pesticides, replaces carbon-intensive, fossil-fuel-based alternatives. It enables decarbonisation in industries such as personal care and crop protection. In addition, some of its products offer efficacy advantages; for instance, its adjuvants decrease the amount of active ingredients required in a pharmaceutical product to deliver the same health outcome.

Over Q2 2022, we had an onsite meeting with Croda, visiting one of its development plants in Spain. We engaged on biodiversity and more specifically how its products are contributing to land savings. We met with Dave Cherry, managing director of the Crop Protection business who leads the Land Positive Commitment, and spent time discussing Croda's methodology for calculating land savings generated from the use of its bio-stimulants, adjuvants and seed coatings. We engaged on the need for Croda to provide more information around these calculations. Lastly, we discussed Croda's goal to develop a science-based target for the company's impact on nature with a desire to become nature positive. It is still early, but this would be the first science-based target of its kind.

## KLA – carbon data disclosure

KLA Tencor is a leading semiconductor equipment manufacturing and design company. We met with the company several times over the last year including meetings with its Global ESG Lead, Jeff Cannon.

As part of our engagement with the company, we encouraged management to improve carbon data disclosure, set clear carbon-reduction targets and recognise materiality. We shared what we consider to be best-in-class in target setting and disclosure. Further we have directed the company towards carbon avoided estimation and explained that this lends itself to its business model given its focus on yield maximisation and waste minimisation. 'Carbon avoided' or 'Scope 4' is a metric which examines whether a company's products or services are better in terms of their carbon footprint than the alternative. In general, carbon avoided is initially calculated using global averages as baseline emissions estimates. Ideally, over time all our impact equity companies will report carbon avoided as an integral part of their financial reporting. Carbon avoided is not as well-known a concept as Scope 1, 2 & 3 emissions, but following engagement with our impact equity holdings, many have recognised the importance in quantifying the positive impact from their products or services.

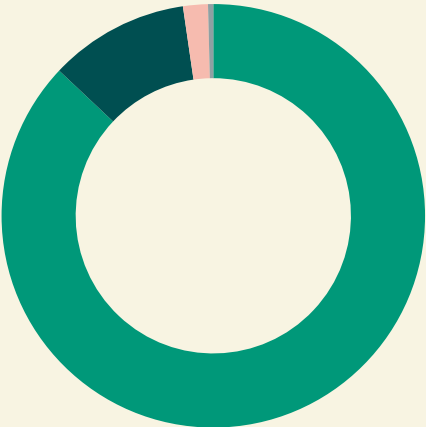
The company is now thinking about Scope 1-4 emissions and is moving towards better disclosure and targets. We have also encouraged the company to adopt science-based targets with transparency behind the targets and assumptions and are pushing KLA towards recognising emissions and waste as material issues. KLA will release its Global Impact Report later this year and we will meet with the company after its publication.

# Proxy voting

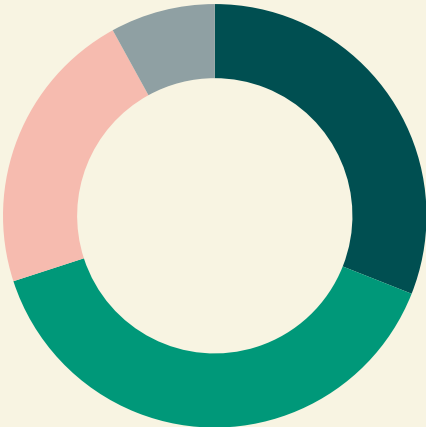
## Global Multi-Asset Sustainable Growth strategy voting activity

Specific to the Global Multi-Asset Sustainable Growth strategy, we voted at 77 shareholder meetings across 26 markets and on 905 resolutions during the 12-month period to 30 June 2022. At 36 of these meetings (47%), we cast a dissenting vote ('against', 'abstain' or 'withhold') on one or more resolutions. On a resolution-by-resolution basis, we voted 'for' on 87% of the votes cast, and dissented on the remaining 13% of votes cast. Our voting activity on the strategy is broken down into more detail in the following charts.

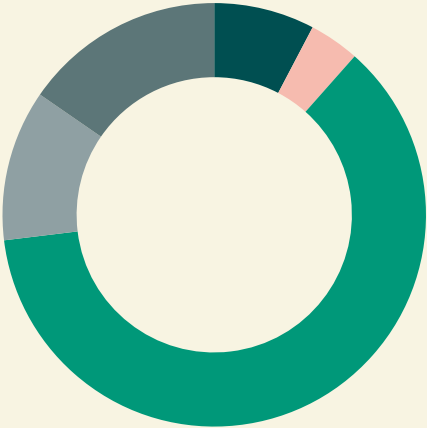
Votes cast on a per resolution basis



Votes cast per region



Votes against by topic



# Appendix

The tables below set out the individual portfolio holdings for Global Multi-Asset Sustainable Growth as at 30 June 2022. We have broken the holdings down by asset class, split between Internal sustainability and Impact holdings.

## Internal sustainability

Security name	GICs sector
<b>Equity</b>	
A-Living Smart City Services	Real Estate
Accenture	Information Technology
AIA Group	Financials
Alibaba Group Holding	Consumer Discretionary
Alphabet Inc	Communication Services
Antofagasta	Materials
ASML	Information Technology
Bandhan Bank	Financials
Bank Rakyat Indonesia Persero	Financials
Barratt Developments	Consumer Discretionary
BBGI Global Infrastructure	Financials
China East Education Holdings	Consumer Discretionary
China Yuhua Education Corp.	Consumer Discretionary
Comcast Corp.	Communication Services
East Money Information Co.	Financials
Essent Group	Financials
Experian	Industrials
HDFC Bank	Financials
HICL Infrastructure	Financials
Home Depot Inc	Consumer Discretionary
Intact Financial Corp	Financials
Intuit Inc	Information Technology
JD.Com Inc	Consumer Discretionary
KLA Corp.	Information Technology
Medtronic	Health Care
Microsoft Corp.	Information Technology
Midea Group Co.	Consumer Discretionary

Security name	GICs sector
Nmi Holdings Inc	Financials
Novo Nordisk	Health Care
Orsted	Utilities
Partners Group Holding	Financials
Ping An Insurance Group	Financials
Primary Health Properties	Real Estate
Roche Holding	Health Care
S&P Global Inc	Financials
Samsung Electronics Co	Information Technology
Silergy Corp.	Information Technology
Sony Group Corp.	Consumer Discretionary
Taiwan Semiconductor Manufacturing	Information Technology
Tencent Holdings	Communication Services
Tencent Music Entertainment	Communication Services
Thermo Fisher Scientific Inc	Health Care
Tritax Big Box Reit	Real Estate
Unitedhealth Group Inc	Health Care
Vestas Wind Systems	Industrials
Vonovia Se Common Stock	Real Estate

### Security name

#### Fixed Income

Chile government  
Colombia government  
New Zealand government  
Peru government  
South Korea government



## Positive impact

Security name	GICs sector
<b>Equity</b>	
Ansys Inc	Information Technology
Aptiv	Consumer Discretionary
Autodesk Inc	Information Technology
Beyond Meat Inc	Consumer Staples
Brambles	Industrials
Croda International	Materials
Iberdrola	Utilities
Infineon Technologies	Information Technology
Nextera Energy Inc	Utilities
Novozymes	Materials
Rockwell Automation Inc	Industrials
Schneider Electric	Industrials
TE Connectivity	Information Technology
Trane Technologies	Industrials
Waste Management Inc	Industrials
Wuxi Lead Intelligent Equipment	Industrials
Xinyi Solar Holdings	Information Technology
Zhejiang Sanhua Intelligent Co	Industrials

Security name
<b>Fixed Income</b>
Kenya infrastructure bonds
New Zealand social-housing bonds
National Housing Finance and Investment Corporation social and sustainability bonds
Australia state green bonds - New South Wales
Australia state green bonds - Queensland
Inter-American Development Bank development bonds
Colombia green bond

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