

# Emission reduction in ESG investment schemes

Why integrating emissions reduction into ESG strategies is growing in importance

A white paper by The ESG Report

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# Introduction

Sustainability goals have become critical and strategic for many asset owners and fund managers. Incorporating sustainability into the investment process is turning it into a three-dimensional activity: as well as traditional market risk and return criteria, investors' portfolios are increasingly constructed to meet sustainability goals too.

This is because the impact of climate change on the environment is acknowledged to be a major investment risk. There is a growing consensus across the investment world that climate change is a serious threat to many different forms of economic activity. 'Climate risk is investment risk', says Larry Fink, CEO of BlackRock.

At the heart of sustainability investing is Greenhouse gas (GHG) emission reduction. This White Paper makes the case that a well thought through GHG emission reduction strategy is the key driver to sustainable investing. Allocating to schemes that help develop renewable energy, promote biodiversity and so forth are also important but they are secondary when compared to the need to reduce GHG emissions.



# Background

Greenhouse gas emissions – which are pumped out into the world’s atmosphere as a result of numerous industrial processes - are cited as the principal cause of global warming. GHG reduction is therefore the key to getting on top of climate change.

Many investment industry professionals and asset allocators now understand the need to reduce the levels of carbon dioxide, carbon monoxide, sulphur dioxide and methane. The most important is methane. Whilst CO<sub>2</sub> represents most of the emissions in the atmosphere, methane has more than 80 times the warming power of CO<sub>2</sub> over the first 20 years after it reaches the atmosphere. Methane is fugitive and harder to find, but once found there are a lot of known technologies that can fix methane emissions. Therefore, addressing portfolio methane emissions can positively affect the carbon footprint of portfolio holdings.

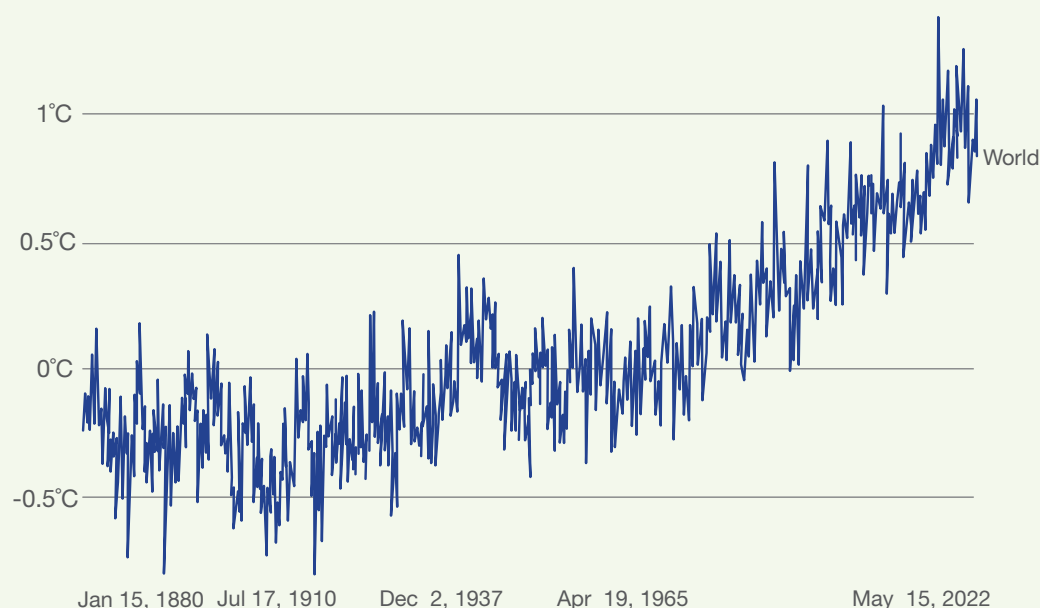
Seeking to decarbonise investment portfolios is progressively going hand in hand with the need to

decarbonise companies. There is a growing focus on finding ways to measure and manage emissions in portfolios. ‘The evidence of climate change-related devastation and damage has mounted. Many regulators now recognise global warming as a systemic financial risk, and investors have increasingly focused on assessing climate-change threats to their assets’, says Vladimir Demine, Head of ESG Research at Morgan Stanley Investment Management.

He adds, ‘An increasing number of asset owners cite the need to address climate change in their portfolios as a leading priority, but they often feel ill-equipped to meet the challenge. In addition to accounting for the physical risks to companies’

## Global warming: monthly temperature anomaly

The combined land-surface air and sea-surface water temperature anomaly is given as the deviation from the 1951-1980 mean.



Source: National Aeronautics and Space Administration (NASA), Goddard Institute for Space Studies (GISS)

# Background

properties, supply chains or employees, they must grapple with how to measure transitional costs, such as policy changes and shifting consumer behaviour, which could also affect market valuations.'

Getting on top of all of this requires both a holistic and a sophisticated understanding of sustainable investing, particularly given some carbon footprints are more obvious than others. For example, it is well understood that the energy generated by coal is obviously emitting high levels of CO<sub>2</sub>, but large office blocks can also have elevated levels of GHG emissions as a result of the power used in heating, cooling and ventilating

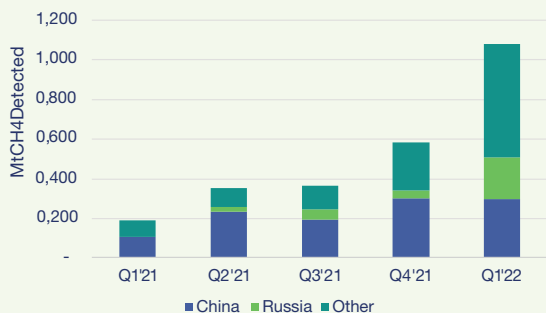
buildings. And even Internet usage has a higher carbon footprint than many might suppose because of the infrastructure that is required to support online activities, especially the very many businesses that are dependent upon it, via the use of energy-intensive data centres and so forth.

GHG emissions are measured in three ways: Scope 1, 2 and 3. Scope 1 emissions are those that are directly generated by a company. Scope 2 emissions are those that are created by the generation of power needed by a company to sell its products. Scope 3 emissions are those created by businesses' entire value chain. (See inset on page 10 for details.)

## New technologies and satellites are key to monitoring industrial carbon-intensity. The graphics below show trends in high-resolution satellite measurement data by GHGSat.

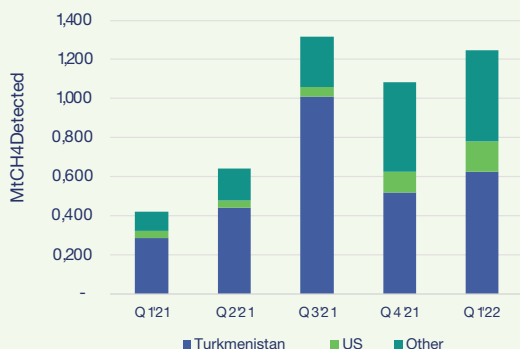
### Coal

China continues to have the largest coal mining emissions.

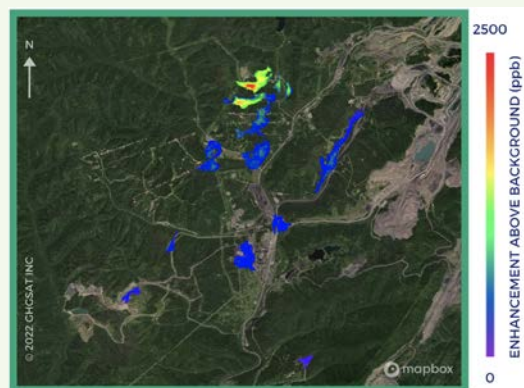


### Oil & Gas

Central Asia remains the biggest emitter.

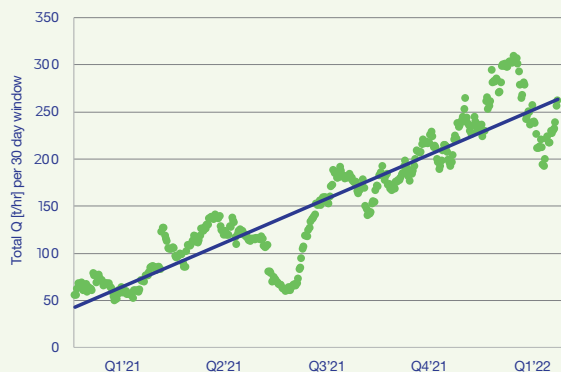


### Satellite CH<sub>4</sub> measurement - Coal Mine Russia



### Highest methane emissions detected to date

Global methane emissions continued to increase in Q1 2022. Tens of thousands of facilities were measured worldwide.



Source: GHG Sat



# Recent industry developments

Over the last decade fund managers have become more interested in getting hold of information on companies' environmental impact. But it is only relatively recently that they have developed a real understanding of sustainability-related risks. As a result, they are now pushing for more detailed climate-related disclosures and are publicly supporting shareholder efforts for increased transparency on climate-related matters.

Earlier this year the well-known private equity manager, Carlyle, pledged to reach net zero in GHG emissions by 2050. As the US law firm Cadwalader noted, the Carlyle announcement is highly significant because the private equity industry has been 'notorious holdouts' against net zero targets. Cadwalader believes that many more PE houses will now jump on the net zero bandwagon and so help to broaden the financial industry's ever-expanding coalition focusing on reducing GHG emission levels.

That coalition already includes almost all the world's major public fund managers. For example, BlackRock, Vanguard and State Street, amongst many others, regularly publish information regarding their climate stewardship activities. BlackRock publicly advocates that companies disclose climate change information by adhering to the TCFD (Task Force on Climate-related Financial Disclosures) framework, and State Street has stated that it will be carbon neutral for Scope 1 and 2 emissions this year. Many fund managers have signed on to the Net-Zero Asset Managers Initiative, whose goal is to convince the companies that they invest in to achieve net-zero greenhouse gas emissions by 2050.

Last year 733 investors representing over \$52 trillion in assets under management signed the 2021 Global Investor Statement to Governments on the Climate Crisis, which urged governments to work with institutional investors to 'raise ambition and accelerate action to tackle the climate crisis' by, among other things, 'reducing global net carbon dioxide emissions by 45% from 2010 levels by 2030.'

733 investors representing over \$52 trillion in assets under management signed the 2021 Global Investor Statement

The signatories include many of the world's largest fund managers, for example: State Street Global Advisors, PIMCO, Amundi, Legal & General Investment Management, Franklin Templeton Investments, UBS Asset Management, Aegon NX, Insight Investment, AXA Investment Managers, DWS Group, Schroders, Sumitomo Mitsui Trust Asset Management, Aberdeen Standard Investments, AllianceBernstein, Fidelity International, Aviva, BNP Paribas Asset Management, MFS



## Recent industry developments

Investment Management, and Allianz Global Investors.

The signatories said that ‘more investors than ever before are embedding net zero goals and strategies into their portfolio decisions, engaging companies to cut their emissions and calling on policymakers to deliver robust climate action’ and that investors are ‘urgently seeking to decrease their exposure to climate risk as a core fiduciary duty and benefit from the opportunities associated with the transition to a net-zero emissions economy.’

The Statement asked governments to take action to support a net-zero transition, including ‘implementing mandatory climate risk disclosure requirements aligned with the Financial Stability Board’s TCFD recommendations, ensuring comprehensive disclosures that are consistent, comparable, and decision-useful.’

Traditionally, calls such as those made in the Global Investor Statement have had relatively little impact on policy makers. This has meant that the industry has had to work with inconsistencies in disclosure information. For example, companies have been using different methodologies and metrics to measure GHG emissions with little guidance from regulators. Because sustainability-related disclosures made at the fund level necessarily depend on issuer disclosure, the lack of standardised and consistent disclosures has posed real problems for fund managers.

However, there are now changes afoot. The SEC has recently issued guidance concerning sustainability disclosures for asset managers,



the EU is in the process of rolling out the SFDR (Sustainable Finance Disclosure Regulation) and the UK has passed the Pension Schemes Act of 2021, with climate-related disclosure requirements. (See GHG emissions regulation & governance section below for more.)

‘Nonetheless, there is still a long way to go before there is any real consistency on disclosure. The differing approaches taken by regulators in the US, EU and UK mean that it will be a while before that comes about. The industry may continue to be without a clear, accurate and consistent reporting standardisation, at fund level, for some time to come. The onus may therefore still be on asset owners and fund managers to resolve the problem themselves.

# Asset owners & sustainability

Evidence from recent research studies shows that asset owners are increasingly including sustainable investment goals in their allocation plans.

For example EY's Climate Change and Sustainability Services fifth global institutional investor survey, in 2020, found that 91% of respondents indicated that non-financial performance played a pivotal role in investment decision-making frequently or occasionally over the past 12 months.

And Morgan Stanley's 2021 asset owner survey found that 80% of those surveyed, actively integrated sustainable investing into their plans. This was 10% up from Morgan Stanley's last such survey two years before. The report polled 110 asset owners, including financial institutions, insurers and pensions in North America, Europe and Asia Pacific. Eight in ten respondents believe that companies with strong ESG practices may make better long-

At least 71% of the world's largest pension funds are incorporating ESG practices into their investment activities

term investments. The majority (57%) envision a time when they will allocate solely to investment managers with a formal ESG approach.

'The majority of investors surveyed believe that companies with ESG-aligned practices can be better long-term investments but continue to need better reporting and data to evaluate holdings on those criteria,' said Ted Eliopoulos, Vice Chairman at Morgan Stanley Investment Management.



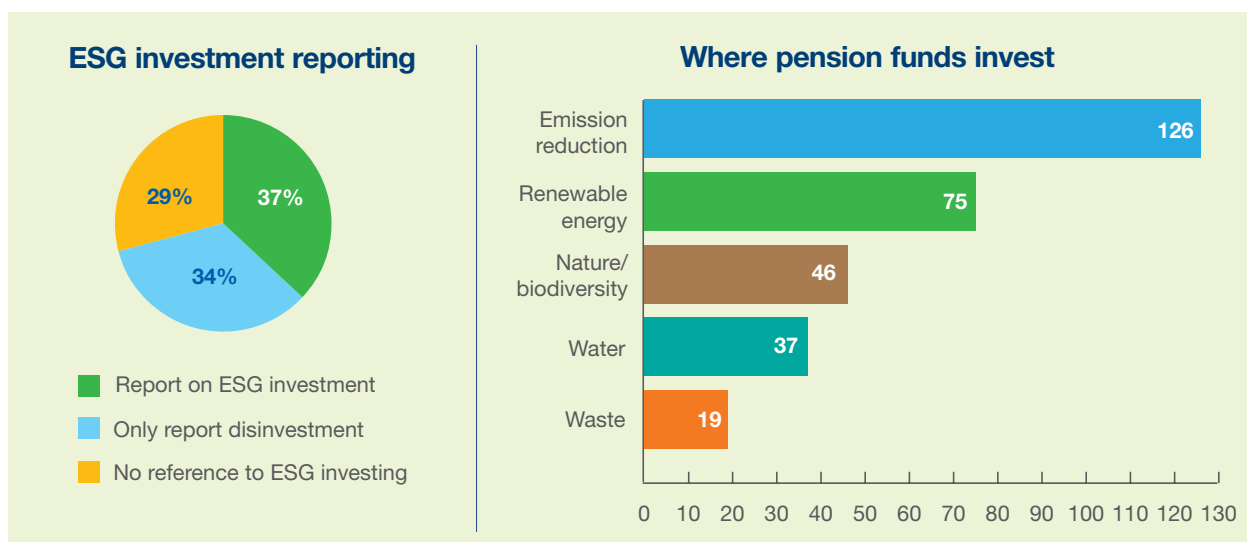


## Asset owners & sustainability

The ESG Report has analysed the sustainable investment plans of 350 of the world's largest pension funds. 128 pension funds, or 37% to those analysed, with combined assets of \$13 trillion, report on where their ESG allocations are going. A further 34% just report on what they are divesting from - without saying what they are investing in. And then there are 29% who make no reference to ESG at all. The

ESG Report's research therefore shows that at least 71% of the world's largest pension funds are incorporating ESG practices into their investment activities.

The overwhelming majority of allocations made by institutions to ESG are going into the strategies that fall under the environmental pillar, particularly GHG emission reduction schemes:



Many of the pension funds analysed have just made divestment announcements (34%). Divestment is popular with pension funds for two reasons. First of all, it takes heavy carbon emitters out of the portfolios. This improves their portfolios' ESG scores. Secondly, it is good for PR. ESG-conscious plan beneficiaries can see that action to do something about sustainability has been taken.

But there can be problems just relying on divesting as an ESG strategy. It might temporarily drive down the stock price of a company in a polluting industry. But the

chances are that it will only be temporary at best. The likelihood is that someone else will come along and invest in that company instead.

At most it might find that its cost of capital has temporarily increased. That has done nothing for sustainability at all. And once an investor divests from a company it obviously loses its ability to influence the management of that enterprise.

As a result, Norway's \$1.3 trillion Government Pension Fund Global has decided against automatically exiting coal and oil companies.

## Asset owners & sustainability

Climate change risk, it has concluded, is best managed by active engagement with these businesses. Similarly, Japan's \$1.36 trillion Government Pension Investment Fund (GPIF), the world's largest, has called on its managers to engage with companies on climate change rather than divest.

Other than divestment, allocating to renewable energy schemes is also particularly popular with pension funds. But renewable energy investing can often be relatively high risk as it is dependent upon further technological innovations, yet realised, to have a mass impact.

For example, batteries and hydrogen power, where a lot of attention has been focused in world of renewables, are still some way off making the kind of breakthrough that is needed to be really transformative. Then there is the problem of storage, particularly for wind. The technology is not yet advanced enough to capture and store energy generated by wind. So, wind farms can contribute very little to the electricity grid when the wind isn't blowing. And if it is blowing too strongly they can also have capture problems.

Clean energy companies are performing well on financial markets, with renewable power companies outperforming both listed fossil fuel companies and public equity market indices in recent years, and with much lower volatility. Valuations remain high. But it appears that financial flows from investors are growing more rapidly than actual capital expenditures. This suggests that there is a shortage of high-quality clean energy projects to invest in, at least for the time being.

### GHG measurement: Scope 1, 2 & 3 explained

**Greenhouse gas emissions are measured in three ways: Scope 1, 2 and 3.**

**Scope 1** emissions are those that are directly generated by the company, such as an airline emitting exhaust fumes, or the emissions from coal or natural gas power plant, steel furnaces and so forth

**Scope 2** emissions are those created by the generation of power to keep a company going. They are emissions which are embedded in a company's electricity consumption and include the measurement of the overall energy intensiveness of the company in question.

**Scope 3** emissions cover all conceivable areas that are part of a company's entire supply chain. They include any indirect sources of emissions that are related to the company's supply chains too, including customer logistics and product use.

Calculating GHG emissions through the chain of investee companies help investors understand and manage the climate change-related risks associated with their investments. If the majority of an investee company's emissions are associated with the entire value chain, then focusing on scope 1 and scope 2 emissions alone will not provide the full picture of the company's risks. If an investor wants to understand the full GHG impact of the investee companies across their full value chain including scope 3 will likely be necessary.

However, it is difficult to track Scope 3 emissions from multiple suppliers and customers, particularly given current methodologies. It is also difficult to get hold of good Scope 3 data.

# GHG emissions: risks & returns

A lot of work has been done recently to further investors' understanding of how GHG emissions affects their portfolios.

This is necessary because, as the Basel Committee's 2021 Banking Supervision Report, 'Climate-related financial risks – measurement methodologies' noted, 'climate-related financial risks have unique features, necessitating granular and forward-looking measurement methodologies'. Doubtless these methodologies will continue to be worked on for some time to come. As a result, different ideas and ways of tackling GHG emissions in portfolios are emerging. Equally, a greater appreciation of the stranded assets problem is becoming apparent.

Dr Bob Swarup, the founder of Camdor Global Advisors, an advisory firm that works with pension funds and other institutional investors on their approach to ESG and related investment activities, says that it is mainly about risk mitigation, with some overlay of the opportunities also created by these significant societal and economic shifts. Focussing on climate risk reduction adds resilience to a

pension fund's portfolio. Pension funds are long term investors, often over a period of decades. As they are looking for value over the long-term, they have to consider all the potential risks and future macro glide-paths, including those from emissions, he adds.

He also makes the point, however, that the risk premium on green bonds, for example, is typically lower than it is from other comparable securities because they are increasingly popular with investors and still have limited supply compared to demand. This lowers the yield on these bonds, creating a double-edged sword of on the one hand, greater acceptance and potential growth, and on the other hand, a more expensive asset class whose dynamics needs to be carefully understood.

Nevertheless, it is now widely accepted across the investment community that excess emissions are a liability for investors and require





## GHG emissions: risks & returns

concerted action. Green risks and metrics are a sub-set of wider macro and portfolio risks, says Bob Swarup.

Investors have come to understand that companies who fail to reduce emissions face competitive disadvantages

Increasingly, investors have come to understand that companies who fail to reduce emissions face competitive disadvantages that can severely affect their valuations. An inverse correlation seems to exist between return on operating capital employed and carbon intensity. Companies with a strong ROOCE (return on operating capital employed) tend to have structurally smaller carbon footprints than those emitting more carbon.

Emission reduction is therefore critical for lowering both environmental and investment risk.

In a recent article Arthur Fonck, Equity Fund Manager at La Française Inflection Point, argued that growing numbers of investors have come around to the view that companies with internal policies which address climate change, and cut their greenhouse gas emissions, are strategically better positioned than those that do not do this. It translates into better financial performance, he says. 'We constructed sector-neutral unbiased model portfolios, from the most carbon efficient, to the most carbon intensive companies, and the back-tested results show that carbon



leaders have historically outperformed carbon laggards, based on both absolute and risk adjusted rates of returns'.

He adds that combining carbon efficiency and carbon transition yields even better returns. He has examined to what extent a change in a company's carbon footprint has been a predictive indicator of financial performance. Using his portfolio construction methodology, he found that companies that are reducing their carbon footprint year-over-year, in addition to being carbon leaders, have outperformed by an annualised 6.3% rate of return and a 1.3 Sharpe ratio over the same period. As a result, La Française's carbon neutral investment strategy aims to identify those companies that are making the effort to transition to a low-carbon economy. It believes they have the best chance of achieving outperformance over the long term.

Hedge funds have also been looking to develop strategies to deal with carbon risk. Jack Inglis,

## GHG emissions: risks & returns

Chief executive of the Alternative Investment Management Association, says that growing numbers of hedge fund managers have been examining how to limit carbon risks and increase the cost of capital for the biggest polluters. 'As with market risk, hedge fund firms can use short selling to protect against carbon risk where they identify this to be a significant driver of future asset values. Short positions on carbon-emitting assets will generate positive returns should carbon risks materialise,' he says.

A company's carbon footprint has been a predictive indicator of financial performance

Another matter to bear in mind, with regard to risk and return, is the question of stranded assets. Assets become stranded when demand for oil and gas falls, making some of these assets unprofitable as they drop below the break-even price. Asset stranding has the potential to destabilise markets. According to the publication Nature Climate Change stranded fossil-fuel assets means major losses for investors.

Nature Climate Change writes the following on this topic: 'The distribution of ownership of transition risk associated with stranded fossil-fuel asset remains poorly understood. We calculate that global stranded assets as present value of future lost profits in the upstream oil and gas sector exceed \$1 trillion under plausible changes in expectations about the effects of climate policy. We trace the equity risk ownership from 43,439 oil and gas production assets through a global equity network of 1.8 million companies to their ultimate owners. Most of the market



risk falls on private investors, overwhelmingly in OECD countries, including substantial exposure through pension funds and financial markets. The ownership distribution reveals an international net transfer of more than 15% of global stranded asset risk to OECD-based investors. Rich country stakeholders therefore have a major stake in how the transition in oil and gas production is managed, as ongoing supporters of the fossil-fuel economy and potentially exposed owners of stranded assets.' It adds that listed fund managers also own \$165 billion in stranded assets.

Nature Climate Change goes on to say that whilst the overwhelming majority of unused oil and gas reserves, that make up these potentially stranded assets, are in the Middle East they are owned by investors in companies that are based in OECD countries. This is therefore a big risk to investors in the world's oil and gas companies.

# GHG emissions: regulation & governance

Bob Swarup says that regulations like the TCFD (Task Force on Climate-related Financial Disclosures) have helped move sustainability up the priority list for investors by adding additional pressure. TCFD requires investors to be well-informed on environmental matters, he adds.



(The TCFD was created in 2015 by the Financial Stability Board whose role is to promote international financial stability. The TCFD's focus is reporting on the impact an organisation has on the global climate.)

## Case study: the Wellcome Trust

The Wellcome Trust, a foundation that dates back to 1936, is a pioneer in ESG investing. It has done a lot of work on climate change analysis, over a long period of time. In many respects it sets the standard in terms of how institutional investors should approach sustainability.

Wellcome reports that its equity investments already have a comparatively low carbon footprint, at less than a third of the relevant global benchmark. This is because it has relatively little exposure to the most carbon-intensive businesses. Then it goes to state the following:

'We want to do everything we can to drive down the carbon emissions in our portfolio. To help us keep on track, we publish annually an assessment of the proportion of our portfolio by value with a company-declared net zero target, the proportion with a science-based net zero commitment and the proportion with a near-term science-based target.

As of December 2021, 23% of our portfolio by value has a company-declared net zero target and 17% of the portfolio has a near-term science-based net zero target. These figures are up from 21% and 13% respectively in December 2020. 10% of the portfolio has a science-based net zero commitment as of December 2021, based on the Science-Based Targets Initiative's new requirements for this standard.

### What these targets mean

- A company-declared target is where a company has stated that it believes it is on a net zero trajectory. Whilst this should imply it will reach net zero emissions by 2050, there are a range of standards around how this might be measured or achieved.



## GHG emissions: regulation & governance

In addition to the TCFD the SEC in the US has issued informal guidance concerning sustainability disclosures for asset managers, identifying best practices for fund disclosures and observations concerning disclosure deficiencies.

And the EU has gone further than this. It has taken action to standardise and improve the ways in which asset managers' disclosures describe climate-related risks. The first stage of the EU's Sustainable Finance Disclosure Regulation (SFDR) came into effect last year. The goal of the SFDR is to improve transparency concerning sustainability risks by requiring various disclosures, for asset management firms and financial services institutions, including banks, insurance companies, pension funds, investment firms and financial advisers that operate, sell products or manage funds in the EU.

Last year the United Kingdom also passed the Pension Schemes Act of 2021, which requires funds with assets under managements of more than £5 bn to assess and disclose climate-related impacts and risks.

The Pension Schemes Act and the SFDR are indicative of the action that governments around the world are taking to require enhanced climate-related risk action.



### Case study: *continued*

- A science-based target is a company-declared target that has been verified by the Science-Based Targets Initiative. A company's target will only be verified if it is in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.

Because our focus is on driving emissions reduction, we will not usually favour the use of carbon offsetting as a means of targeting net zero. Where these offsets must be used at the individual company level, we will look at the quality and efficacy of these offsets.

#### **Engagement: setting our expectations**

We will work with the managers of each asset we own to put them on, or encourage them along, the path to decarbonisation. We've created what we call an 'engagement ladder' to benchmark where we think each asset in our portfolio is on this journey. The aim of our engagement will be to continually encourage each company or manager to move up the ladder to achieve carbon neutrality.

We will prioritise the areas in which we think we can make the biggest difference. Initially, we believe this will be in private equity, where we've found that conversations about decarbonisation tend to be at an earlier stage than in public equity markets.

While our preference is to encourage companies to decarbonise we have also been clear that companies that do not engage positively on environmental concerns do not represent good investments and do not have a place in our portfolio in the long term. As well as driving real-world change, our strategy will help us minimise the exposure of our portfolio to businesses that face climate change risk.

# GHG emissions: regulation & governance

As has been pointed out by various industry players, one of the challenges that the regulation has presented is the lack of education on emissions at board level. This is an important governance matter: there is a growing view that climate-related issues should be subject to the same level of board oversight as other financially material topics. But to do that, boards will need a greater understanding of these details than they often appear to have at the moment.

There is a growing view that climate-related issues should be subject to the same level of board oversight as other financially material topics

Allied to this matter is the lack of audit of emissions data by qualified, independent third parties. Whilst in some jurisdictions the data collection process is required to be audited, the emissions data itself has remained unvalidated.

## Case study: *continued*

### **Evolving our strategy**

One of the key challenges in our plan to encourage the businesses we invest in to decarbonise is a lack of quality, standard metrics. We are encouraging all the businesses we invest in to follow the recommendations set out by the Task Force on Climate-related Financial Disclosures, which is the global standard for climate-related disclosure.

We are a member of the Institutional Investors Group on Climate Change, which helps institutional investors, such as us, to engage with businesses on decarbonisation and develop emissions reporting standards. We believe that our strategy will evolve over time, as data and industry practice develops.

We have set a deadline of 2050 for our portfolio to be net zero which we know is achievable, because it's important to us that we do not make promises we cannot deliver. However, we will keep this under review and hope to bring this date forward as the path towards decarbonisation becomes clearer across all parts of society.'



# Conclusion

The bulk of the investment industry – ranging from mainstream fund houses through to private equity and hedge fund managers – have made climate change considerations a standard part of what they do. The investment industry is playing its part in seeking to transition the world to a more sustainable future.

Much progress has been made in the last few years, but everyone would acknowledge that there is more that needs to be done. Doubtless there will be various further changes to investment practices in the years to come to boost sustainability. For example, the industry is now talking about a Climate VaR. It is designed to provide a forward-looking and return-based valuation assessment to measure climate related risks and opportunities in an investment portfolio. Climate VaR is a quantitative model offering analysis on how climate change can affect company valuations.

Climate VaR is an example of the innovation that the fund industry is well known for. It is a welcome development, but it is dependent upon the quality of the data that is put into the model – and, as Bob Swarup says, the data quality on emissions still needs to improve a great deal if we are to truly understand the risks and avoid the perils of garbage in, garbage out. Asset owners and fund managers would be wise not to rely on regulators to save the day, irrespective of the steps that they are now taking to improve matters.

Nonetheless, the investment industry's knowledge and understanding of climate change has come on leaps and bounds over the last few years. As already stated, it has made investing a three-dimensional activity: sustainability goals are considered alongside traditional risk and return criteria.



In order to avoid a climate catastrophe it is essential that the industry continues to focus on, and develop yet further, sustainability goals in its investment processes. Time is short.

And as the industry's knowledge, intelligence and understanding on matters related to sustainability investing grows so this aspect of the risk-return trade-off will almost certainly grow in importance. There is significant innovation in the investment industry already, and this is set to grow apace in the future.



## **This research was commissioned by GHGSat.**

GHGSat is the global leader in remote sensing of greenhouse gas emissions for industrial sectors. To drive climate impact, GHGSat delivers accurate emission data of carbon-intensive energy assets worldwide. With comprehensive GHG data, investors and asset managers can:

- Evaluate individual companies and sectoral performance against decarbonization trajectories
- Compare direct emissions measurements with company disclosures
- Manage environmental, financial and governance risk.

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### **To learn more, please visit:**

[www.ghgsat.com](http://www.ghgsat.com)

Contact Karena Vaughan,  
Sales Director ESG and Spatial Finance  
[kvaughan@ghgsat.com](mailto:kvaughan@ghgsat.com)



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