

# The role of Carbon in the Evolution of ESG Investing

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## Chapter 1 – Why is there so much confusion about ESG investing?

ESG. SRI. Sustainable Investing. There are many different terms and acronyms used to describe the trend to include Environmental, Social and Governance indicators into investment decisions; they mean different things to different people, and investors all along the value chain. From the largest global managers right down to the end-investors in a pension fund, investors are confused – both in terms of the ESG impact of their money and the effects of ESG on the financial performance of their portfolio.

Even once a common understanding of nomenclature is achieved, there is little consensus on what this means for portfolios; what issues need to be addressed, how investors should go about implementing those into a portfolio, how to report back to an investor, and ultimately what it would mean for the investor's portfolio and risk and return. Broad consensus does exist in Europe in the critical area of Climate Change, which is almost universally recognised as important from both ethical and financial perspectives.

This paper aims to summarise the current state of the market, potential ways forward, and why this matters for market participants to cover three main perspectives;

1. What are the main approaches to ESG investing and how should investors use the plethora of ESG data and ratings available to them?
2. Why is Climate so important for investors of all kinds?
3. How has Low Carbon/Climate investing evolved over time and what new tools are available to develop the next iteration of solutions?

It is not an exaggeration to suggest that ESG is an existential threat to some Asset and Wealth Managers, and it poses huge risks to Asset Owners. Indeed, we have already seen how this can affect companies. In August last year DWS shares fell more than 13% in a day following allegations of greenwashing<sup>1</sup>. In Australia, REST (a large Superannuation pension fund) was successfully sued by one of its members for failing to consider the impact of Climate Change<sup>2</sup>.

As ESG adoption increases, becoming the “new market cap” in passive portfolios and a critical part of active portfolios, these risks will amplify. Failure to act now could risk missing the boat entirely, but a failure to properly embed and report on ESG issues could lead to accusations of greenwashing. However, ESG is also an opportunity. As research continues to explore the impact of ESG indicators on financial returns, there is the possibility for asset managers to deliver superior risk returns, and also to deliver portfolios more in line with investor expectations as society continues to shape opinions. For providers of investment solutions of all

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<sup>1</sup> <https://www.ft.com/content/0eb64160-9e41-44b6-8550-742a6a4b1022>

<sup>2</sup> <https://www.abc.net.au/news/2020-11-02/rest-super-commits-to-net-zero-emissions/12840204>

kinds, making the correct response to ESG and, in particular to Climate Change, may well be the difference between success and failure.

### What do ESG Ratings tell us?

The first step to understanding ESG investing is to recognise the reality that there is more than one approach to considering ESG, and each is valid. For many people ESG investing is about aligning their investments with their values; for instance by holding less of companies that do things they don't like, or holding more of companies that are having a positive impact. For others, it is a fiduciary question – what risks do ESG issues expose in my portfolio? For most, it is increasingly a combination of the two. In addition ESG investing covers a wide range of issues (see table below), and a company can be a leader in one area whilst a laggard in another.

Table.1 Threats and opportunities within the ESG landscape

	Issues/Concerns		Opportunities
<b>Environmental</b>	<ul style="list-style-type: none"> <li>➤ Climate Change</li> <li>➤ Carbon Emissions/ Energy Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>➤ Sustainability</li> <li>➤ Water Conservation</li> <li>➤ Pollution</li> </ul>	<ul style="list-style-type: none"> <li>➤ Clean Tech</li> <li>➤ Renewable Energy</li> <li>➤ Recycling</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>➤ Human Rights</li> <li>➤ Workers' Rights</li> <li>➤ Health &amp; Safety</li> <li>➤ Supply Chain</li> </ul>	<ul style="list-style-type: none"> <li>➤ Management</li> <li>➤ Data Security/Privacy</li> <li>➤ Product Safety</li> </ul>	<ul style="list-style-type: none"> <li>➤ Access to Healthcare</li> <li>➤ Health &amp; Nutrition</li> <li>➤ Access to Finance &amp; Communications</li> </ul>
<b>Governance</b>	<ul style="list-style-type: none"> <li>➤ Board Diversity</li> <li>➤ Executive Compensation</li> <li>➤ Shareholder Rights</li> </ul>	<ul style="list-style-type: none"> <li>➤ Ownership &amp; Control</li> <li>➤ Accounting Standards</li> <li>➤ Business Ethics</li> </ul>	<ul style="list-style-type: none"> <li>➤ Stewardship</li> </ul>

Source: SparkChange

This helps to explain why there is confusion around ESG ratings available in the marketplace. There are two main criticisms. 1) Correlations between different ESG ratings providers are often low, making it hard to know which data to trust and 2) products marketed as ESG may focus on financial metrics or still include stocks from sectors such as Oil & Gas.

According to a 2019 study by the Sloan School at MIT<sup>3</sup>, correlations between six of the leading ESG ratings was 61%. This is in sharp contrast to mainstream credit ratings where correlations between S&P and Moody's were 99%! They identified three main reasons for the differences:

- **Core divergence** occurs when ratings are based on different attributes,

<sup>3</sup> [https://mitsloan.mit.edu/ideas-made-to-matter/why-sustainable-business-needs-better-esg-ratings#:~:text=There's%20ambiguity%20around%20ESG%20ratings,MSCI\)%20was%20on%20average%200.61.](https://mitsloan.mit.edu/ideas-made-to-matter/why-sustainable-business-needs-better-esg-ratings#:~:text=There's%20ambiguity%20around%20ESG%20ratings,MSCI)%20was%20on%20average%200.61.)

- › **Measurement divergence** happens when agencies measure the same attributes, but do so using different raw data, and
- › **Weights divergence** — which emerges when ESG ratings agencies take different views on the relative importance of attributes.

It is certainly fair to consider whether the same criteria should be applied to every stock. Supply side labour rights is a bigger issue for Apple than Alphabet, data privacy is a bigger issue for both than for Chevron, and carbon emissions are more important for Chevron than JPMorgan. This can create an opportunity for managers, as they can consider whether to use the underlying data points in a more detailed way than a headline ESG rating. A rating is, by design, an amalgamation of a company's approach and score on a wide range of ESG issues. It is also fundamental for a manager to thoroughly understand how any ESG data or rating being purchased is constructed, and whether they agree with the approach to building that rating being taken. Like anything else, this is a case of rubbish in, rubbish out. If the methodology is flawed the results will also be flawed, and those results would not be expected to correlate with a superior product. We can illustrate this using an example of a well-known scandal.

In September 2015, the US Environmental Protection Agency announced that Volkswagen were found to have installed devices on eleven million cars designed to cheat on emissions tests. This was a huge global story that had two immediate impacts from an investment perspective: 1) many clients did not want to hold VW stock and 2) the stock price fell sharply. To address the former was very straightforward, although a well-designed process can also be used on less high profile and obvious examples. The second issue of the falling stock price is at first more problematic. VW Stock fell from a price of €162 per share on 18 September to €92 by 2 October. It didn't return to its pre-crisis level for over two years, causing significant drag on any portfolios that held it at or above its index weight. The emissions scandal appeared to be an Environmental issue, but of course as nobody knew it was coming it was not picked up by ESG ratings agencies prior to the EPA announcement.

However, this does not mean there were no ESG indicators that could have helped investors before the scandal broke. Volkswagen was treated very differently by different ESG ratings providers in the period leading up to the EPA announcement. For some, VW were best-in-class for the automobile sector. They were vocal on sustainability issues, seemed to take investor concerns seriously, and it is certainly fair to say that wilful deceit is hard for analysts to pick up. But just as no self-respecting stock analyst would buy list a company based purely on what management tells them, neither should an ESG rating be based solely on company disclosures or the answers to a survey. As a Funds Europe article<sup>4</sup> noted shortly after the scandal broke, there were governance concerns that were identified by both fund manager groups such as Hermes, and ESG ratings providers like MSCI. Both had noted falling governance scores in 2015, caused by concerns such as the lack of board diversity and a concentrated and complex

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<sup>4</sup> <https://www.funds-europe.com/november-2015/esg-investing-the-key-to-volkswagen>

ownership structure. This did not of course mean that they could or would have predicted the scandal or the resulting fall in the share price, but it did illustrate the need to consider corporate governance practices as part of evaluating a stock. It stands to reason that scandals are more likely to occur in companies with weaker cultures, less transparency and poor management oversight. For this reason, research suggests that Governance may have more predictive power in avoiding left tail risks from major ESG breaches. What at first sight may have appeared to be an Environmental scandal at VW may be better understood as an issue of governance.

The issue of what stocks should be in an ESG portfolio is a more basic misunderstanding that can only be resolved through clear marketing and communication. A recent article in Bloomberg<sup>5</sup> took aim at MSCI, the world's largest ESG research company, claiming an 'ESG Mirage' because their ratings are about financial risks of ESG and not the impact a corporation has on the world.

This raises three points;

1. It is exactly how MSCI describe their own ratings, so clients can assess whether this is the right measure for them.
2. Hundreds of underlying data points are available for an asset owner or manager to build their own score if they prefer a different approach. There is no one way to implement ESG beliefs into a portfolio - indeed, an ESG ratings system that simply puts all Oil & Gas producers on a low rating is not really providing an insight worth paying for. Business involvement data is available from a broad range of providers and allows managers to screen out certain sectors or companies based on their exposure to undesired business activities, either on an absolute basis or based on revenue thresholds. This approach is frequently taken by Asset Owners able to implement their own specific rules through mandates or Institutional products, and increasingly by passive managers in the fund and ETF markets.
3. Companies are increasingly required by regulators to consider the ESG related financial risks in a portfolio – since October 2019 UK pension funds have been required to disclose in their Statement of Investment Principles (SIP) how they take account of "financially material considerations" of ESG and Climate Change.

In conclusion, to criticise ESG ratings for their lack of correlation or the stocks held by ESG products is to miss the point. Uniformity of ESG ratings may be theoretically desirable (market-efficiency-wise) as an end goal for investors, but it is at best, decades away. Uniformity would also remove what is an opportunity for today's managers – to differentiate through ESG. Screening out companies or sectors is one part of designing ESG products, but the critical thing is for product

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<sup>5</sup> <https://www.bloomberg.com/2021-what-is-esg-investing-msci-ratings-focus-on-corporate-bottom-line/>

manufacturers to clearly articulate what they are doing and why, and to ensure that matches the needs of the parts of the market they are targeting.

Attitudes are clearly evolving. In December 2019, The Economist bemoaned the 'dismal' science behind ESG ratings, saying "It does not matter what firms are selling, as long as it is done sustainably. Tobacco and alcohol companies feature near the top of many ESG rankings. And many funds marketed on their green credentials invest in Big Oil."<sup>6</sup> By January of this year, the same publication had concluded the opposite, saying "Funds with zero emissions would be virtuous, but those that cut their footprint fast might be even better."<sup>7</sup> This is a recognition that change on the scale required isn't possible without changing the behaviour of the biggest emitters. This last point is a crucial one for addressing the biggest consideration of all for ESG investors – how to address the issue of Climate Change.

### Common screening strategies

For many investors, the first toe in the water for ESG investing is to screen out some stocks or sectors based on a value judgement on what they don't want to hold. Since this is simply a reduction in the investable opportunity set, it will reduce diversification and introduce tracking error in comparison to the parent index or portfolio before those screens. As a result, there needs to be a delicate balance between a client's values and the impact on the risk and return of their investment. The right balance will depend on the client, but broad lessons can be learned from a review of the marketplace in EMEA. The two key variables when considering what the most common exclusions are for investors are geography and channel, although these overlap, so will be considered together

Within channel investing, the largest asset owners increasingly expect complete customisation. Many will have their own exclusion lists of stocks they do not want to invest in, produced from proprietary research or bought in from an ESG research house, and/or detailed screens that will take out stocks based on the businesses they are involved in. This level of bespoke delivery is made possible by the size of the allocations and the ability to deliver them through segregated mandates, but obviously add complexity and cost to support. There is of course some variation in what a typical Asset Owner will require based on geography. For instance, most Middle Eastern sovereigns and pension funds will want to exclude Israel, exclude sectors typically screened in Islamic investment such as alcohol, gambling and adult entertainment and have a more relaxed attitude to exposure to Oil & Gas. However, overall it makes sense to view these as individual clients and tailor their portfolios accordingly.

For slightly smaller Asset Owners accessing pooled product, there are clearer trends emerging. The most common pan-European exclusions are controversial weapons, severe controversies, and increasingly, thermal coal. The first and third of these are relatively static, but the controversies list will vary over time based on

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<sup>6</sup> <https://www.economist.com/finance-and-economics/climate-change-has-made-esg-a-force-in-investing>

<sup>7</sup> <https://www.economist.com/leaders/2022/01/08/the-eus-green-rules-will-do-too-little-to-tackle-climate-change>

breaches of the UN Global Compact and other standards, and the remedial action companies take as a result. After that, the most common but by no means standard exclusions include tobacco and nuclear energy. As we shall explore later, there are bigger differences once you look beyond simple exclusions and look at approaches aiming to integrate ESG considerations into the investment process.

For public products the picture is more complex, and the regional differences are more pronounced. The most advanced markets are the Nordics and the Netherlands, where exclusions are part of mainstream investing and not just a separate option for investors. Most major Nordic Asset Managers have detailed sustainability or responsible investing policies that include screens applied to all portfolios, across both active and passive product and different asset classes. Some have been doing this for a very long time – for example, KLP in Norway have been applying screens to all portfolios since 2002. Even when they run index funds, most Nordic managers run what are referred to as ‘close to’ funds rather than a pure replication of the index, in order to maintain flexibility over what is screened out from the portfolio. This is driven by high levels of end investor awareness, engagement and expectations. Typically, an index will wait until the next rebalance (usually quarterly) to exclude a stock even after a major controversy, but Nordic managers are likely to get calls from clients straight away asking if the stock is in their portfolio. Applying the “close to” concept allows the manager to be more nimble, and address investor concerns straight away, thereby replicating the approach taken in their active products. One final step Nordic managers often take is to also look at integrating positive inclusion criteria and overweight green investments that are addressing the issues we highlighted above. This is not as universal as negative screening as it is not applied to all portfolios, but it is a logical step as ESG becomes more influential in investment decisions.

Adoption in the Netherlands has followed a similar path. NN are one of several managers who post an exclusion list on their website, telling investors which screens (of controversial weapons, controversies, tobacco, thermal coal and oil sands) they apply, and which stocks are excluded as a result. In addition, as with Nordic managers such as SEB, they have further exclusions for more focused ESG product ranges. It is also common to post a list of countries whose sovereign bond issues are not eligible for inclusion. These markets are ahead of the curve, but are an interesting case study for other managers who want to understand how ESG investing may evolve over time.

In the other main markets and the pan-European market, adoption has generally been slower. Excluding controversial weapons is a relatively common position but otherwise adopting ESG positions into all portfolios regardless of an ESG label is less common outside of smaller niche players. But the needle is definitely moving. BlackRock launched a range of market-cap ETFs with a consistent set of ‘house’ screens applied, in addition to their other ranges of higher conviction ESG products. These utilised quite extensive screens, covering Controversial and Nuclear Weapons, Civilian Firearms, Tobacco, Thermal Coal, Oil Sands and Controversies, a list almost as broad as the highest conviction ESG products in the iShares range – their SRI funds. Despite this, they were priced in line with existing

market-cap products rather than as an ESG premium, suggesting they will be positioned as alternatives to a pure market-cap approach.

BlackRock are not the only ones - BNP Paribas also launched their entire ETF market-cap range as ex Controversial Weapons (it should be noted that investing in controversial weapons is illegal in France). The more concentrated, higher conviction products tend to have broader screens that may also cover topics like gambling, alcohol, adult entertainment and in some cases nuclear power or conventional weapons. The pace of adoption, and whether investors will skip a stage and move straight to fully integrated ESG solutions rather than use screened indexes as a stepping-stone isn't clear today. But the direction of travel is – all managers will need to consider ESG issues, and be able to explain to investors why they have taken the approach they have.

## Chapter 2 – Climate Change considered “first among equals”

When MSCI ESG Research recently released their 2022 ESG Trends to Watch<sup>8</sup>, they named Climate Change ‘First among equals’, stating that ‘Climate is eclipsing governance and social issues at the top of the ESG agenda, reflecting both the existential threat of global temperature rise and the race against time to rein it in.’

This reflects the reality of the marketplace across Europe and beyond, where the importance of Climate Change as both a societal issue and a financial risk is broadly accepted. As an example, The Pensions Regulator in the UK followed up on their earlier guidance around ESG with specific requirements around climate change, requiring trustees to assess and report on how they consider the issue from both an impact and financial perspective. See excerpt below:

Excerpt from The Pensions Regulator UK

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### *Summary of governance and reporting of climate-related risks and opportunities*

*You must meet the requirements of the climate regulations, and you must have regard to the DWP’s statutory guidance in doing so.*

*To help us decide whether you have done this, we will be looking for clear evidence that you, as trustees:*

- *are taking proper account of climate change when you are making decisions about your scheme, and that those advising you are helping you to do this*
- *have carried out your analysis in a way that is consistent with the [Taskforce on Climate-Related Financial Disclosures \(TCFD\)](#) recommendations so that savers and others can be confident in it*

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<sup>8</sup> <https://www.msci.com/research-and-insights/2022-esg-trends-to-watch>

- *have seriously considered the risks and opportunities that climate change will bring to your scheme, in its particular circumstances*
- *have decided what to do as a result of this analysis and have set a target to help you achieve that goal*

*We acknowledge that the requirements of the climate change regulations are new and may appear daunting for trustees. However, the requirements are formed around the TCFD framework, and trustees might benefit from working through the governance and reporting requirements in a structured way.*

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It is becoming critical in almost all markets and client channels in Europe to have a clearly defined approach to Climate Change in investment strategies, but there is no consensus on how best to achieve it. Existing solutions can help, but will not deliver change on the scale required on their own.

### Options to address high polluting companies in ESG Portfolios

One option that has been widely adopted within ESG solutions is to screen out companies based upon their activities. This is essential in many markets (for instance, almost all product sold in the Nordics is screened) and this approach is also adopted by many of the world's largest Asset Owners. Others view themselves as universal owners who should hold the entire market, but there is not a 'right' answer as there are pros and cons of both approaches. A purely screening, or business involvement-based approach has its limitations. There is a trade-off for investors between excluding companies or sectors based on values and the risk return profile of the resulting portfolio. Simply excluding broad swathes of the market will lead to an increase in tracking error and higher volatility as diversification is reduced. Perhaps even more importantly, as noted by the EU's Technical Expertise Group in their report on climate benchmarking, simply excluding high impact sectors may not fundamentally address the problem. Refusing to buy Oil & Gas stocks might make an investor feel better about their portfolio, but it does not reduce the number of cars on the road or their reliance on petrol. It also disregards the opportunity to engage with the management of companies as a shareholder to try to influence change. This is important to many large investors who focus on stewardship and argue that they should use the influence their holdings in high polluting companies give them to demand change. On the flip side, proponents of screening will argue that by not investing in those firms, they will thereby increase those firms' cost of capital and hence influence their behaviour. As noted in a recent article on Bloomberg<sup>9</sup>, there is some evidence this is starting to happen, with financing costs of 'dirty' energy becoming more expensive than cleaner alternatives.

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<sup>9</sup> <https://www.bloomberg.com/news/articles/2021-11-09/cost-of-capital-widens-for-fossil-fuel-producers-green-insight>

Of course, many solutions can and do use a combination of both business involvement screening and more detailed ESG data or ratings to screen out or reweight specific stocks. The key for managers is to understand who they are selling to, as what investors are looking for will vary widely by geography and by sector.

It is clear is that screening alone will not solve the wider problem of decarbonising our society however, as recent developments in European energy markets make clear. Many of the world's biggest investors screen out coal from their investments, but when the price of gas spiked as global supply came under pressure in Q4 2021, European utilities still fired up their coal plants as that was the available alternative. To meet our climate change goals as a society, it is essential to change the behaviour of the biggest polluters. But that behaviour needs to actually reduce emissions, not just displace them. As a recent Economist article noted<sup>10</sup>, pressure from investors is causing listed energy firms to sell their most polluting assets to please ESG investors. But those assets are being bought up by private investors who do not feel the same pressure –\$60bn worth in the last 2 years alone. To address this, carbon pricing is required. Chapter 3 examines the role that regulated carbon markets can play in helping to produce real world decarbonisation, whether you are pursuing a screening or engagement approach.

### Chapter 3 - The Evolution of Climate Investing

As detailed above, there is no doubt that the highest profile issue from a sustainability perspective is Climate Change. Around the world, the questions being asked have moved on from whether Climate Change is real (and if so whether it is man-made) to what the impact will be and how governments and societies all around the world should act to mitigate it.

A look back through investment history shows that most new investment concepts are implemented first by the largest Asset Owners, before becoming mainstream and entering retail portfolios. Examples of this over recent decades include Emerging Markets, Small Cap, High Yield and Diversified Growth sectors, all of which are now fundamental parts of portfolio design for all channels. There is no doubt that the #1 issue for those Asset Owners today is ESG, and Climate Change in particular. In this case, that is coupled with a massive push from all levels of society, from government policy such as the Paris Agreement to children taking days off school all over the world to protest about the lack of progress so far. In addition, extreme weather events are clearly occurring more frequently, and increase the visibility of the Climate issue for end investors. This pressure is likely to mean that the pace of adoption is higher than we have seen with new investment concepts in the past, and will transmit quickly from large Asset Owner portfolios to portfolios designed for individual investors. This section will look at what has been

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<sup>10</sup> <https://www.economist.com/leaders/2022/02/12/the-truth-about-dirty-assets>

done to date, and how those solutions are evolving as climate change criteria becomes embedded in investment portfolios of all kinds.

### History of Low Carbon Adoption

Some of the first large allocations into ESG investing in Europe were into low-carbon products, particularly in indexed products and mandates. Index Provider MSCI launched a series of Low Carbon indices as long ago as September 2014<sup>11</sup>, with backing from leading European Asset Owners AP4 (one of the Swedish National Pension funds) and FRR in France, with Amundi licensed to launch public product in both ETF and fund form.

These strategies were also successful in the UK, with adoption being led by the Local Authority sector. In September 2015, the Environment Agency invested its entire global passive equity portfolio into a fund managed by LGIM that tracked the Low Carbon Target index<sup>12</sup>, with half a dozen more Local Authorities investing over the next couple of years. One key dimension to these solutions was that they were not simply exclusion-based but aimed at a risk-controlled reduction in exposure to carbon, measured as both fossil fuel reserves and carbon intensity (which is defined as emissions relative to sales). This allows investors to maintain access to industry sectors including Oil & Gas, with a very small target tracking error of 30bps relative to the market cap parent whilst still delivering 50-80% reductions in carbon exposure.

The appeal of a strategy like this is obvious – it can produce a material decrease in carbon exposure in return for a very small investment bet, but it only addresses one aspect of climate change – historic carbon reserves and emissions.

**Table 2. Case Study – Selected LGIM Product launches**

Fund/Range	Index Provider	First launch date	Current AUM (Jan 2020)	Known Major investors	Carbon Reduction	Other ESG criteria	Other investment criteria
World Low Carbon Target	MSCI	Aug 2015	£4.3bn	Environment Agency, other Local Authorities	Yes, optimised reduction in reserves and carbon intensity	No	No
Future World	FTSE	Feb 2017	£4.1bn	HSBC	Yes	Yes, green revenues	Yes, factor exposures
ACWI Adaptive Capped ESG <sup>13</sup>	MSCI	Jun 2018	£1.2bn	Willis Towers Watson	Yes, Thermal coal exclusion	Yes, optimised approach to increase portfolio ESG score	Yes, increases small cap exposures
Future Fund regional exposures (8 indices)	Solactive	Jun 2018	c£800m		Yes, 'pure' coal exclusion	Yes, optimised approach to increase portfolio ESG score	

Source: SparkChange

<sup>11</sup> <https://www.msci.com/documents/10199/447d3ba7-e215-45c9-8b14-74031a80f4bc>

<sup>12</sup> <https://www.lapinvestments.com/environment-agency-selects-low-carbon-index-for-its-global-passive-equities/>

<sup>13</sup> <https://www.willistowerswatson.com/willis-towers-watson-develops-new-esg-strategy-with-msci>

## Moving on from Low Carbon

Reducing the carbon exposure of a portfolio without significantly reducing diversification is relatively straightforward, and can also be argued to be addressing two key investment risks associated with high carbon profile stocks. The first of these is so-called 'stranded assets' – the risk that not all carbon reserves currently held by companies will ever be able to be profitably extracted as public carbon policy changes in the coming years and decades. This is not just a potential risk to consider for future revenue streams, but is already impacting companies today. A good example can be seen in the declining fortunes of the US coal industry, which were a major issue in the run-up to the 2016 presidential election with the country's largest, second largest and fourth largest private coal producers all going bankrupt in 2015-16. Despite President Trump's focus on the issue this continued throughout his term, with further waves of bankruptcies in 2019 culminating in the bankruptcy of the largest remaining private producer, Murray Energy, in October of that year. This was not caused by supply issues but by a sustained reduction in demand for thermal coal, as countries and investors move towards cleaner sources of fuel. The second risk is that companies with higher carbon intensity will be more exposed to carbon pricing in future, as the coverage of emissions markets grows, the cost of emissions will rise.

However, as investor knowledge and the tools available in ESG investing have become more sophisticated, there has been pressure to move beyond simply reducing carbon exposure to address climate change more broadly in portfolios. Most obviously, this was reflected in the Paris Agreement of December 2015, when countries committed to keeping the impact of global warming below 2 degrees Celsius above the pre-industrial age average. In order to achieve this, a transition to a low carbon economy will need to be managed over the coming decades. This will require society to go beyond simply divesting in thermal coal stocks or investing in alternative energy, and impact the valuation of every company regardless of the industry they operate in.

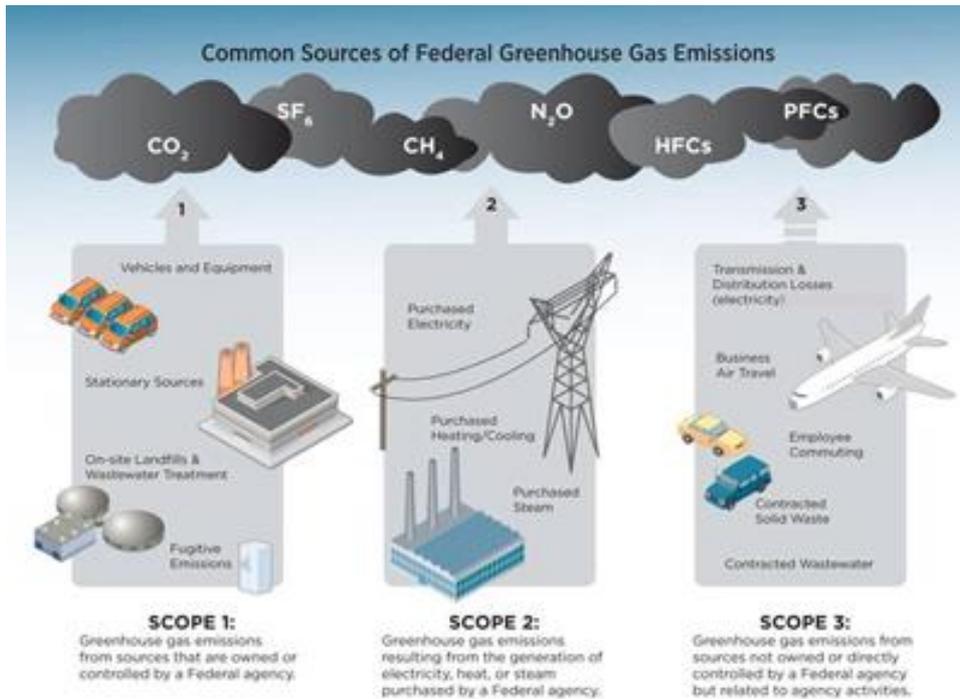
So, what are the broader risks that are not being considered by the historic low carbon approaches? The first obvious one is that simply excluding or underweighting stocks with high carbon profiles ignores the other end of the spectrum – companies that are having a positive impact on carbon emissions. These can include a range of companies in differing industries, from those investing in renewable energy to battery powered cars, from Carbon Capture and Storage (CCS) technologies to reforestation efforts. Using our LGIM example, this was the first evolution with the highly publicised Future World product developed with HSBC and FTSE<sup>14</sup>, which added increased weighting in green companies to existing low carbon approaches.

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<sup>14</sup> <https://www.ipe.com/hsbc-uk-pension-scheme-adopts-climate-tilted-fund-as-dc-default/10016045.article>

A second major issue is that existing methodologies are mainly focused on Scope 1 and Scope 2 emissions (see inset). This is understandable due to the difficulties in measuring Scope 3 emissions, but does not accurately capture the true carbon footprint of a company and its products or services, as it ignores key issues such as product disposal, logistics and employee travel. Properly assessing the full carbon footprint of a business is essential for accurately assessing the risk that future carbon policies pose to that enterprise.

Fig.1 US Environment Protection Agency Illustration of Scope 1, 2 and 3 emissions



Source: US EPA

Thirdly, carbon reserves and carbon intensity are both backward looking measures. They are accurate at a point in time, but do not take into the account how that might change in the future. Energy companies may change their mix by diversifying into renewables. Conglomerates may divest or reduce the investment in certain business lines and increase their exposure to others, and increasingly all companies are publicising their plans to reduce their carbon footprint over time. This is the fourth major risk that needs to be considered – risks from global warming and climate change are not limited to economic risks faced by firms with high emissions. A company with ultra-modern factories with a low carbon footprint are still exposed to the risks of climate change if they are all built on flood plains that could be submerged if water levels continue to rise. These physical risks – such as exposure to extreme weather events, water shortages, or rising sea levels – are not yet incorporated into most climate investment solutions, but with data availability improving all the time there is more opportunity for managers to reflect this in their portfolios going forward.

Judging how to reflect these changes to properly capture climate risks and reflect these inputs into a portfolio is the biggest challenge yet, far more complicated than a low carbon portfolio, but with more potential to improve investor outcomes both in terms of ESG profile and potentially, risk and return.

### EU Climate Benchmarks – Building a Modern Climate Solution

The next stage in the evolution of product design was to address the forward-looking element and start considering how a company's research and development, strategy and existing risks will impact their carbon footprint and exposure to carbon regulation over time. The development of carbon transition scores meant that all companies were considered for the first time, rather than simply excluding the dirtiest or overweighting the cleanest. This was a step forward in creating longer term value from an investment perspective, and relies upon company-level, bottom-up research to create value. Simply relying on survey answers is unlikely to identify the companies best or worst placed to handle a low carbon transition scenario that looks increasingly inevitable.

This was built on further with the publication of the EU's Technical Expert Group on Sustainable Finance ("TEG") report on Climate Benchmarks and Benchmark ESG exposures that was finalised in July 2020<sup>15</sup>. The report led to the creation of a number of benchmarks by major index providers including MSCI, S&P, Solactive and FTSE to align to two different standards; the EU Climate Transition Benchmarks ("CTB") and Paris-Aligned Benchmarks ("PAB"). The aims of both benchmarks were set out by the TEG as follows:

- to allow a significant level of comparability of climate benchmarks methodologies,
- to provide investors with an appropriate tool that is aligned with their investment strategy,
- to increase transparency on investors' impact, specifically with regard to climate change and the energy transition, and:
- to mitigate risk of greenwashing by defining common language amongst benchmark administrators and investors.

In addition, the TEG saw four main purposes for the indices:

- as underlyings for passive investment strategies,
- as Investment Performance Benchmarks for emission related strategies,
- as engagement tools and:
- as a policy benchmark to help guide Strategic Asset Allocation.

The two indices aim to provide a set of criteria for a material reduction in carbon intensity over and above the parent benchmark, and align the portfolio with the measures required to limit global temperature increases to 1.5% degrees above the pre-industrial average, as envisaged in the Paris Agreement.

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<sup>15</sup> [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures_en.pdf)

**Table 3. EU Climate Transition and Paris-Aligned Benchmark criteria**

MINIMUM STANDARDS	DEFINITIONS
Carbon intensity reduction	<ul style="list-style-type: none"> <li>➤ Deliver a significant reduction in overall greenhouse gas (GHG) emissions intensity (30% vs parent index for CTB, 50% for PAB)</li> </ul>
Scope 3 phase-in	<ul style="list-style-type: none"> <li>➤ Scope 3 data can be phased in over 4 years due to data quality constraints</li> </ul>
Do no significant harm principle	<ul style="list-style-type: none"> <li>➤ Exclusion of companies involved in Controversial Weapons and those that have violated global norms. PAB indices have further revenue-based screens for coal, Oil, natural gas or GHG intensive electricity generation</li> </ul>
Green to brown ratio	<ul style="list-style-type: none"> <li>➤ The ratio of 'green to brown' activities should be at least 1:1 for CTB and 4:1 for PAB</li> </ul>
Exposure to High Impact sectors	<ul style="list-style-type: none"> <li>➤ Maintain at least equal weight to high impact sectors relevant to the fight against climate change. These including mining, manufacturing, electricity and gas</li> </ul>
Self-decarbonisation	<ul style="list-style-type: none"> <li>➤ Deliver an average of at least 7% reduction in GHG emissions intensity per annum, in line with the IPCCs 1.5 degree scenario</li> </ul>

Source: EU Climate Benchmarks and Benchmarks' ESG Disclosures

Obviously the more stringent targets in the PAB benchmarks will cause more tracking error when compared to existing benchmarks, so the use cases for the two benchmark systems are likely to differ. The TEG envisaged that the CTB would provide the benchmark for core allocations from institutional investors. The PAB would be a much more ambitious benchmark for aggressive carbon strategies, and designed for investors who want to be at the cutting edge of decarbonising investment portfolios.

The aims of these indices are laudable, but despite being available for a number of years now they are yet to be really broadly adopted. One reason for this might be the difficulty in meeting the criteria; the world is not currently decarbonising quickly enough, making it very hard to meet the targets of the index whilst maintaining the exposures to high polluting sectors that the indices require. The EU Emissions Trading System ("ETS") is the main policy tool of the EU to deliver its legally binding target to reduce emissions by 55% from 1990 levels by 2030 and ultimately to deliver net zero by 2050. This covers many of the highest polluting activities, including power generation, heavy industry, chemicals and some transport and agriculture. This currently reduces the supply of allowances or "permits to pollute" by a little over 2% p.a., so it can be argued to be unrealistic to expect portfolio managers to maintain exposure to these sectors while delivering 7% p.a. reductions in their financed emissions. The market has been crying out for innovative approaches that help manage the transition to this low carbon future.

## The role of Carbon Allowances in Accelerating Decarbonisation

Most of the world's biggest investors are committed to being net zero by some point in the future, most commonly either 2050 or 2045. A number have public commitments to transition activity with shorter term goals as well, for instance under the 2025 Inaugural Target Setting Protocol, 30 members of the UN-convened Net-Zero Asset Owner Alliance have published first interim targets to hit by 2025. But what is clear is that many investors don't know how to bridge the gap between those future aspirations and today's portfolios. If the emissions of major polluters are not coming down fast enough, how can an investor deploy capital today to accelerate decarbonisation? Investing directly in carbon-removal projects is the preferred approach of many major asset owners, but the simple fact is that there are not enough of these opportunities available today to deploy even a fraction of the capital those groups have and want to use to drive change.

One option is to invest in allowances from regulated carbon markets. In these systems governments issue allowances, sometimes known as permits to pollute, and the companies covered by the system must surrender one allowance for every tonne of CO<sub>2</sub> that they emit. The largest and most liquid of these markets is the EU Emissions Trading System. Allowances from this system are recognised as financial instruments under MIFID, and products that give investors access to this market are available across Europe. A full guide as to how these markets operate can be found [here](#).

Crucially, investors withholding allowances from the EU ETS creates environmental impact *during* your holding period, meaning that the allowance can still be sold later. This is in sharp contrast to the voluntary carbon credit market, where as soon as you utilise the environmental benefit of the credit its value becomes zero, meaning investing in voluntary markets is a trade-off between impact and financial returns. It also allows investors to use carbon allowances as an overlay to improve the carbon footprint of a portfolio, as a recent Whitepaper from Solactive "A Stitch in Time Saves Nine – EU Emission Allowances as a Transitory Tool for Net Zero Equity Portfolios"<sup>16</sup> explained.

Investing in Carbon Allowances brings three major benefits:



Investment Returns – as the supply of allowances is reduced in line with the EU's Paris Agreement goals, scarcity increases and prices are forecast to rise. A recent study estimates the current global average regulated carbon price to be a little over \$5 a tonne<sup>17</sup>, but the World Bank forecast that this needs to reach \$75 a tonne by 2030 to be on track for Paris agreement goals. Carbon allowances are also a diversifying asset, as

<sup>16</sup> <https://www.solactive.com/a-stitch-in-time-saves-nine-eu-emission-allowances-as-a-transitory-tool-for-net-zero-equity-portfolios/>

<sup>17</sup> <https://www.realcarbonindex.org/>

correlations are relatively low relative to other major asset classes including Equities, Fixed income, Oil, Gold and Real Estate.



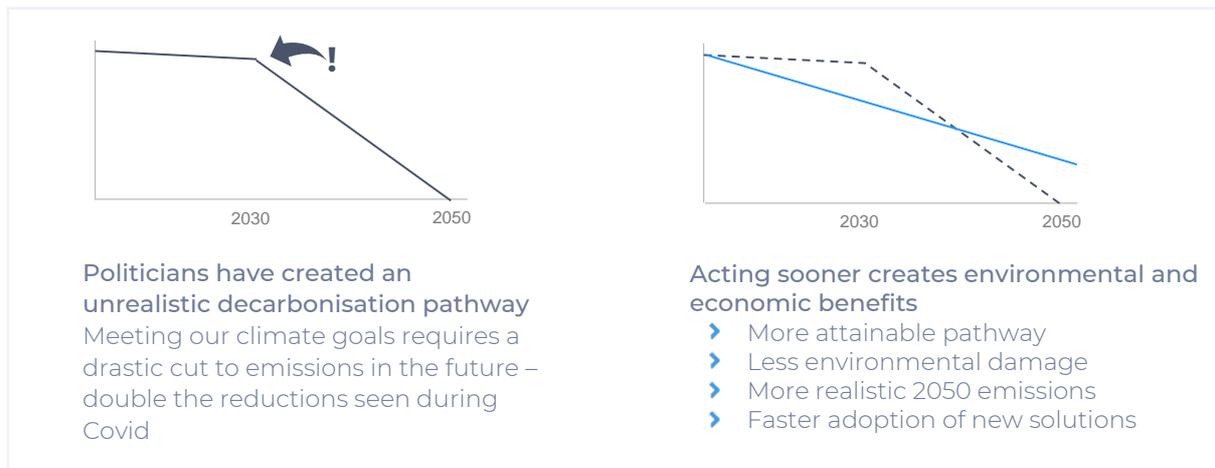
**Hedge Carbon Risks** – broad portfolios are negatively correlated with rising carbon prices, as those rising prices are costs that companies cannot pass on in full to their clients or consumers. An article in the FT last year forecast that if the World Bank global average figure of \$75 a tonne by 2030 was reached, this could reduce equity markets by 20%<sup>18</sup>. Holding Carbon will hedge that exposure, and SparkChange has proprietary tools to help investors to calculate that exposure.



**Generate Impact** – withholding allowances from the market generates benefits from both the temporary delay to emissions (a polluter cannot utilise an allowance while it is held in the SparkChange EUA ETC) but also directly affect future supply of allowances, creating a measurable and permanent reductions in emissions. This is due to a mechanism in the ETS called the Market Stability Reserve, and the impact has been calculated by academic studies from the LSE and ICIS.

Investing in Carbon Markets can play a vital role in getting the world back on track to meet its climate change commitments.

**Fig.4 Rationale for accelerating decarbonisation**



Source: SparkChange

As the graphic above shows, withholding allowances can create a much more realistic pathway, meaning less CO<sub>2</sub> in the atmosphere between now and 2050, a recognition that gross emissions will not reach zero by 2050, and most importantly by accelerating the adoption of new abatement technologies that will allow decarbonisation to increase in pace. As investors delay emissions and constrain supply, prices rise and more new technologies are brought into play as economically viable alternatives to existing emissions. For example, for a

<sup>18</sup> <https://www.ft.com/content/45752266-a711-42f4-bd44-44555024c33f>

steelmaker to significantly decarbonise they need to invest in a green steel plant, but they will only do this if they believe the price of emissions is high enough both now and also in the future to justify that capital expenditure. It is for this reason that the EU has repeatedly welcomed financial investors into the scheme, to provide that steady price signal that will incentivise the major investments needed to create a low carbon transition economy.

This example highlights the crucial role of carbon markets in driving change and the impact financial investors can have in accelerating progress. Critically, this impact aligns with the goals of investors whether they adopt a screening or engagement approach. For screeners, it provides a way to influence the behaviour of the biggest polluters even though you do not hold their stock. For engagement approaches, it provides a clear signal to companies in high impact sectors that the winners will be the ones who act to decarbonise fastest, and therefore are less exposed to rising carbon prices over time.

*To find out more about how you can get exposure to Carbon Allowances, please contact our Sales Team using the details at the end of this paper.*

## Conclusion

ESG Investing remains a complex topic, and not everyone will agree on how it should be integrated into investment strategies. For Asset Owners, it is about striking the right balance between reflecting the values of their underlying stakeholders whilst safeguarding their interests from a fiduciary perspective. For Asset and Wealth Managers, it is about building a coherent range of solutions that are appropriate to the client types and geographies that they wish to target. ESG is a threat to those who do not properly address it, but an opportunity for differentiation for those that do. This means not being able to satisfy all of the people all of the time. There are merits to a screening or engagement approach for instance, but it is difficult to do both.

One area where investor appetite is clear is Climate Change, and all investment strategies will increasingly be required to take a view on how to integrate it. To have a chance of achieving the net zero goals enshrined in the Paris Agreement the world needs to utilise all the tools at its disposal. This will include voluntary carbon markets and carbon removal technologies, but also regulated carbon markets. Carbon allowances from regulated markets such as the EU ETS should be part of every investor's strategic asset allocation thinking. This will allow them to access the returns from a diversifying asset as the cost of emissions to polluters continues to rise as Emissions Allowances become increasingly scarce. It will also address the financial risks from rising carbon prices embedded in their existing portfolios, as broad equity and fixed income portfolios are negatively correlated with rising carbon prices. Crucially, holding carbon allowances will also generate much needed impact to help the world tackle the biggest challenge of our lifetimes, by accelerating decarbonisation to help fight Climate Change.

## About the author



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Phil is Head of Strategic Partnerships at SparkChange. He was previously Head of ETF and Indexed Fund Business, EMEA at MSCI, with a particular focus on growth strategies including ESG. Prior to that he spent 15 years at JP Morgan, latterly as their Head of UK Business Management devising their UK strategy and management communications. He is an expert in ESG Investing, with deep experience of how to integrate ESG factors into the investment process of both active and indexed solutions.

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## About SparkChange

SparkChange is a provider of specialist carbon investment products and data, enabling investors to achieve both financial returns and positive environmental impact. The company was established by experts in environmental products and capital markets technologies to set a new standard in carbon investing. Our mission is to revolutionise access to carbon. More investors with access means a bigger impact on the environment. That doesn't just change a world of investing. It can change the future of our planet.

[www.sparkchange.io](http://www.sparkchange.io)

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