

# Unlocking Hidden Value in Carbon-Intensive Companies

INSIGHTS

In the race toward net zero, the 'cost of carbon' may continue to affect company valuations. Understanding this potential impact is critical to identifying those businesses that are best-positioned for long-term outperformance.



**Clive Burstow**  
Head of Global Resources



**Marios Halloumis, CFA**  
Director of ESG Integration &  
Active Ownership



## Carbon Costs are Here—and Increasing in Scope

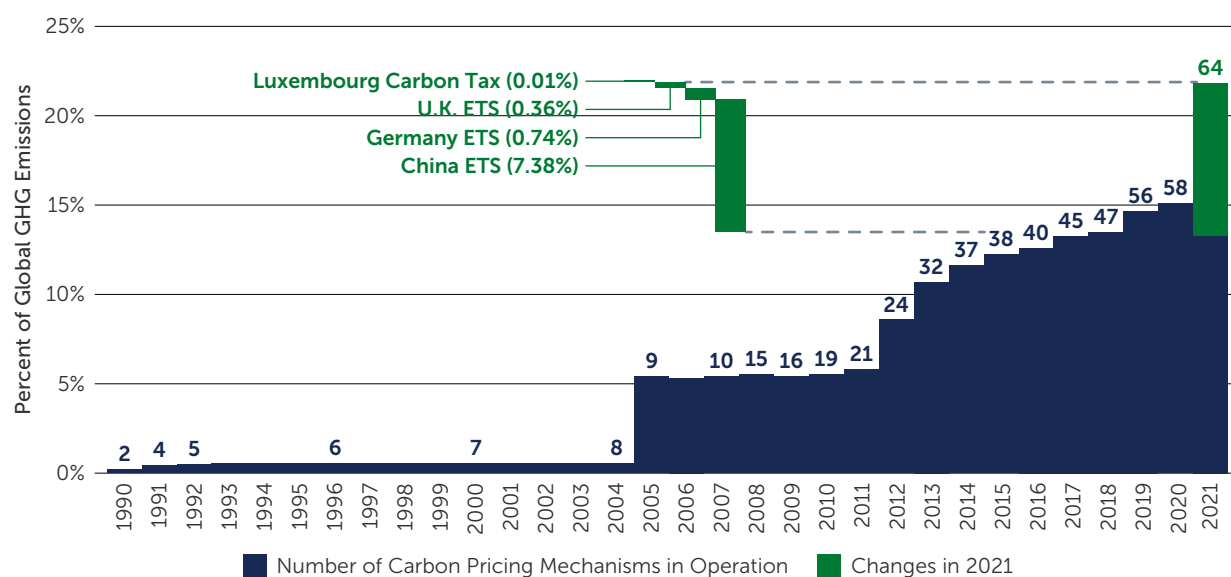
### POLICY TOOLS

The increasingly urgent climate crisis is well-acknowledged around the globe—and while solving it presents a complex challenge, one crucial component of the solution is to drastically reduce greenhouse gas (GHG) emissions. Efforts to do so are widespread, with many countries setting reduction goals. Meeting these goals, in large part, depends on the ability of companies to significantly lower their own carbon emissions. To encourage this, governments around the world have proposed or implemented policy tools, including **carbon emissions trading systems (ETS)** and other **carbon taxes**. These tools assign costs to carbon emissions, essentially making companies pay for the GHGs they emit.

Worldwide, nearly 25% of GHG emissions are now covered by such pricing mechanisms (**Figure 1**).<sup>1</sup> Perhaps most notably, China launched its ETS in 2020, which, when fully operational, will likely eclipse the European Union ETS, the world’s first and largest major carbon market. Many jurisdictions have also voiced their intentions to further their reduction efforts going forward. The EU, for example, has proposed a Carbon Border Adjustment Mechanism (CBAM) as part of its “Fit for 55” package. This policy aims to put a carbon price on imports of certain products, with the intention of leveling the playing field against jurisdictions where policies aimed to fight climate change are less ambitious than those of the EU.

Against this backdrop, it’s clear that carbon costs are here and increasing in scope. For high carbon-emitting companies, in particular—such as those in the materials, energy, automotive, airlines, shipping and utilities sectors—these policy tools will likely become a significant cost burden in the years ahead, which could impact companies’ profitability.

**Figure 1: Nearly 25% of Global GHG Emissions Are Covered by Carbon Taxes and ETS**



Source: Share of annual global GHG emissions for 1990–2015 is based on data from the Emission Database for Global Atmospheric Research (EDGAR) version 5.0 including biofuels emissions. From 2015 onward, the share of global GHG emissions is based on 2015 emissions from EDGAR. As of 2021.

1. Source: World Bank’s “State and Trends of Carbon Pricing 2021” report.

## NEW TECHNOLOGY

In addition to grappling with new policy tools, many companies—as they seek to lower their carbon emissions—are also facing the high costs associated with implementing new, cleaner technologies. For example, steel manufacturing is viewed as a carbon-intensive process, accounting for 7% of the world’s CO<sub>2</sub> emissions.<sup>2</sup> As such, there is tremendous pressure for the industry to reduce its emissions significantly by the end of the decade. While technology exists that could significantly aid in these efforts—the industry could transition, for example, from energy-intensive blast furnaces to renewable-powered electric arc furnaces—the up-front costs of doing so are almost prohibitively high. And herein lies the dilemma: **at the same time steel companies are being pressured to lower their carbon emissions and, in some cases, facing high costs to do so, they are being asked to provide the large amounts of steel necessary to build the renewable energy infrastructure** that is critical to achieving net zero by 2050. Indeed, renewable power generation is heavily steel-intensive—as an example, an offshore wind farm generating the same amount of power as an onshore fossil fuel plan needs an average of five to six times more steel.<sup>3</sup>

The same predicament exists in a number of other emission-intensive industries, including agriculture, oil & gas, automotive, airlines, shipping and chemicals. All of these industries are important to the health of our daily lives and the global economy, and will remain paramount in the race to net zero. At the same time, however, these industries face significant challenges in reducing not only their own Scope 1 and 2 emissions, but also their customers’ emissions and, in doing so, their own Scope 3 emissions.<sup>4</sup>

## Unlocking Hidden Value...

The good news is that many companies are embracing the challenges associated with reducing carbon emissions in innovative ways. This in turn is presenting opportunities for investors to engage with companies that are taking steps toward positive change, and to help them address the challenges and costs associated with decarbonizing. In fact, over a medium to long-term time horizon, we believe companies that embrace this challenge will trade at a higher price-to-earnings multiple than those that have been less proactive. Said another way, we believe there is more value potential in an energy company that is transitioning its cash flow from its conventional oil and gas business into building a clean, renewable power business than in one that is continuing to pump oil and gas out of the ground without considering the long-term viability of its business model.

Additionally, if a company can physically reduce the amount of carbon it produces—while accessing renewable power and therefore reducing its Scope 1 and 2 emissions—it should be able to release more capital, not only to return to investors, but also to invest in long-term growth projects. In helping to mitigate the impact of climate change and aid in countries’ efforts to reach their net zero targets, we believe these positive steps will also, ultimately, attract investor interest and contribute to outperformance over a five-year investment period, and even beyond.

2. Source: World Resources Institute; Our World in Data. As of December 15, 2021.

3. Source: Arcelor Mittal. As of December 2020.

4. Source: [www.carbontrust.com](http://www.carbontrust.com). Scope 1 covers direct emissions from owned or controlled sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company. Scope 3 includes all other indirect emissions that occur in a company’s value chain.

## ... By Understanding the True ‘Cost’ of Carbon

Of course, key to unlocking this value potential, and uncovering those businesses that are best-positioned to deliver long-term outperformance, is understanding the rising economic impact of carbon emissions, as well as the effects that carbon costs will have on company valuations. As mentioned, the scope of regulations has increased significantly in recent years and is on a trajectory to continue doing so—and as regulators increasingly internalize projected environmental costs, there is a very real potential for carbon costs to impact a company’s financial returns. However, the process of capturing the potential impact of carbon costs is complicated, for a number of reasons.

### DATA CHALLENGES

Given that carbon costs are actual realized cash costs that companies may face, the preferred approach to quantifying the costs would be to explicitly model them within a company’s earnings and cash flow models. However, the level of corporate non-financial disclosure has not yet developed sufficiently enough to allow for such modeling. For example, in the EU ETS, the carbon credits a company needs to surrender are determined from the bottom-up for each distinct process in each individual business unit. Such granularity is simply not disclosed today, with the majority

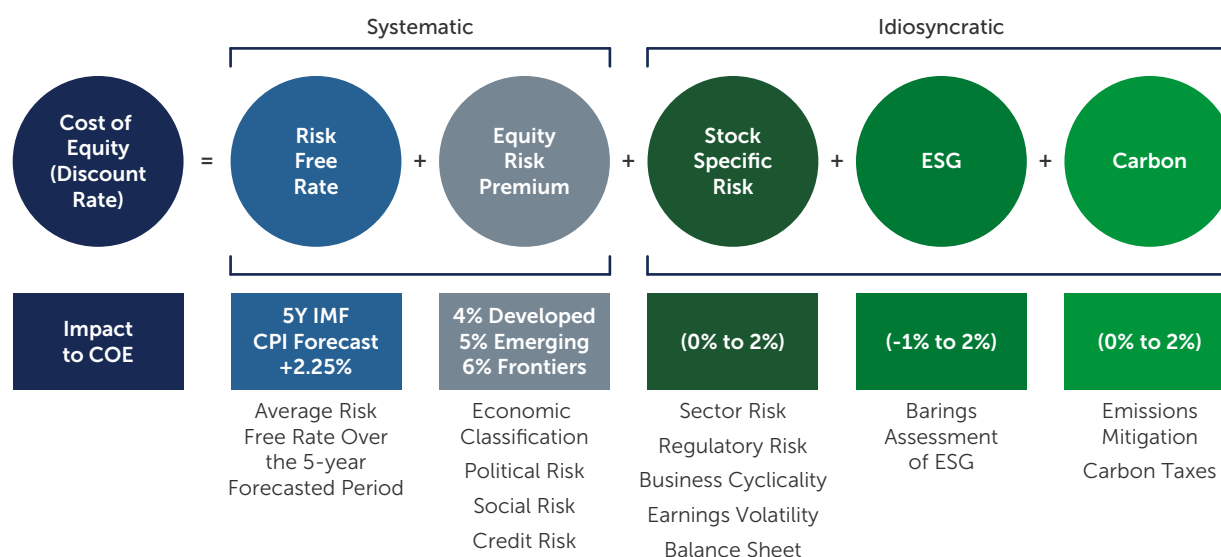
of companies opting to report carbon emissions at the aggregate level instead. Compounding the data challenges, there is still much uncertainty around the precise carbon taxation structure companies will face in the future. The proposed EU55 bill, for instance, still has to be passed by all 27 member states, suggesting that what is finalized into law may look very different than what is being reviewed today.

As a result of these limitations, we believe it is necessary, in some cases, to look at alternative ways to capture carbon costs in the valuation of companies.

### A DISTINCT AND INNOVATIVE APPROACH

At Barings, across our global equities platform, we have created a process for integrating carbon costs indirectly, through our cost of equity (CoE) model. The CoE is the required rate of return (or discount rate) that our equities investment professionals use when assigning valuations to companies. This proprietary model already incorporates ESG risks facing companies, assigning a lower CoE to companies with better and improving ESG practices, and a higher CoE to companies with poor and deteriorating practices. When considering how best to account for carbon costs, we deemed that the addition of a specific carbon ESG factor would be a natural extension, and enhancement, of our original approach of modelling E, S and G risks (**Figure 2**).

Figure 2: Decomposition of Barings Cost of Equity



Source: Barings. As of July 2022.

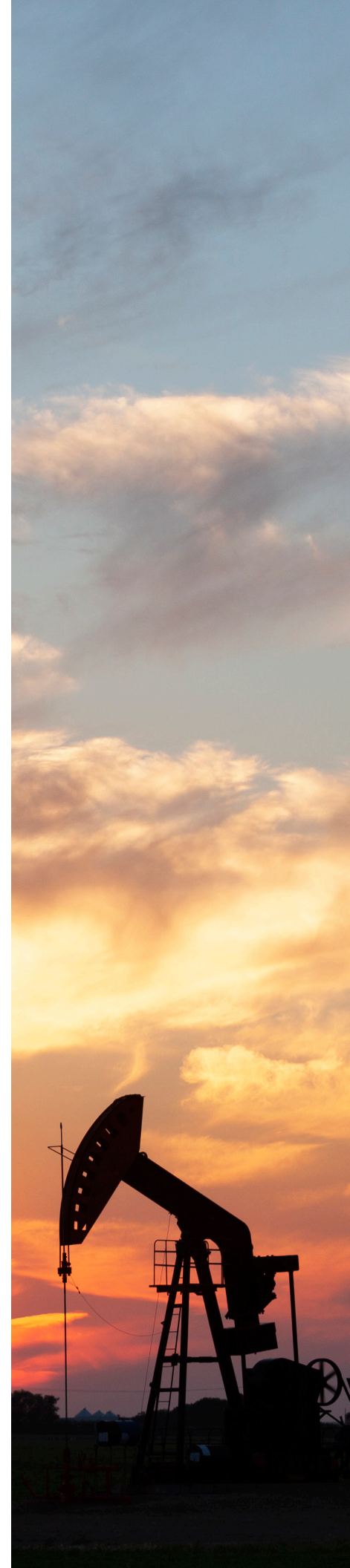
In order to better determine, and attempt to quantify, what this addition to CoE should be, our analysts rely on a set of questions—from what local or cross-border carbon adjustment mechanisms a company is facing, to how (or whether) management incentives are aligned with carbon reduction targets (**Figure 3**). Where the company is subject to carbon adjustment mechanisms, the analyst will evaluate the company’s decarbonization commitments across six considerations, and rate them with unfavorable, not improving, improving or exemplary. Given current disclosures, some of these considerations will be challenging to assess. However, they can be used as the basis for engagement with companies, where we see the need for better disclosure or a change of behavior by the company.

Each consideration is equally weighted, and the sum of the six ratings enables our analysts to add an adjustment from carbon costs of 0% to 2% to the CoE of the company under consideration. While not a perfect (or permanent) solution, we believe that this carbon CoE adjustment provides a crucial starting point for understanding how carbon costs will affect companies—particularly until there is more comprehensive data disclosure related to GHG emissions costs and decarbonization efforts. As disclosures improve going forward, we do see a path toward these costs being explicitly modelled in financial forecasts, with companies incurring a cost of carbon in their profit and loss statements just as they would any other cost of doing business. At that point, the carbon CoE adjustment, at least for some companies, will not need to be applied.

**Figure 3: Barings’ Carbon Cost Template**

Key Topics	Rating	Data/Issues to Consider
Current CO2e Emissions	Yes	Is this company subject to carbon adjustment mechanisms, either cross-border or local? For example, CBAM, E.U. ETS, China ETS, Russia ETS, U.S. ETS etc., or does the company currently incur or is it likely to incur CO2e costs over the next five years?  Sectors likely to be most impacted include: electricity and heat generation, oil refineries, steel works, production of iron, aluminum, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids, bulk organic chemicals, commercial aviation, and maritime.
	Exemplary	A. The company has a 'net zero' carbon target and is in line with national targets in the jurisdiction where the company operates
Decarbonization Commitments	Unfavorable	B. There are intermediate targets clearly communicated over a 5- and 10-year horizon
	Improving	C. Tangible projects are in place related to climate change mitigation with current and proven technology
	Unfavorable	D. Management incentives are aligned with carbon reduction targets
	Not improving	E. The targets have been certified by an outside organization
	Improving	F. Use of offsets is insignificant
Carbon Cost Impact	1.11%	

Source: Barings. As of July 2022. For illustrative purposes only.



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### **Key Takeaway**

The urgent need to reduce carbon emissions and the increasing scope of regulations aimed at doing so will undoubtedly create challenges and costs for companies going forward, particularly those in carbon-intensive sectors. Against this backdrop, businesses that are proactively reducing their carbon production should outperform in the long term.

However, given complications such as data constraints, it is difficult to capture carbon costs in company valuations. For this reason, until there is more comprehensive data disclosure from companies, we have developed a method to incorporate the costs of carbon into our proprietary CoE model. In helping us to dig deeper into the potential impact that carbon costs will have on a company going forward, we believe this approach puts us in a position to identify the businesses that are poised for strong, long-term outperformance.



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