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# Governance and Climate Change: A Success Story in Mobilizing Investor Support for Corporate Responses to Climate Change

by Mats Andersson, AP4, Patrick Bolton, Columbia University, and Frédéric Samama, Amundi and SWF RI

**E**ffective action in limiting the extent and effects of climate change will have to include changes in business and massive investment by the private sector in making the energy transition from fossil fuels to clean energy and the development of a low-carbon economy.<sup>1</sup> Until fairly recently, the main approach to getting business to respond to climate change has been through top-down efforts to regulate emissions and enact various forms of “carbon pricing.” The advantage of this approach is conceptual clarity and sound economic logic. The basic idea is that, by reaching an international agreement on emissions quotas and carbon pricing that aims to make businesses “internalize” the costs associated with greenhouse gas (GHG) emissions, and fairly allocate GHG abatement costs across countries, governments will set the environmental protection rules for companies in their respective countries, and markets will adjust to the new regulations and carbon prices. And this, of course, is the approach to economic policy in general: the political process and government administration set the rules, and businesses respond by managing their operations as best they can under the rules imposed on them by government.

Nevertheless, as the intergovernmental agreement process following the signing of the Kyoto Protocol in 1997 has amply demonstrated, this classical approach to economic policy does not work when applied to a global “public goods” problem like climate change mitigation. Given the notorious difficulty of reaching international trade agreements even among a small subset of countries, it should not have been too surprising that there would be little progress toward a global climate change agreement among 196 countries. Indeed, by the time the negotiations around the Paris climate agreement of 2015 were starting, the coalition of willing nations had shrunk to a few dozen countries, mostly in Europe. Given this context, it is remarkable that COP21 in Paris managed to bring essentially all nations back into the climate change mitigation process.

This achievement can be attributed to a complete change of tack in bringing about a climate change agreement. Instead of a top-down approach, in which most economic actors passively respond to regulations imposed on them, the Paris agreement is built on a bottom-up approach centered around Intended Nationally Determined Contributions (INDCs), and a process that includes all economic actors, not just governments. This new approach was nicely summed up in the following comment by David Pitt-Watson in his introduction to a conference at Columbia University in March 2015:<sup>2</sup> “When it comes to climate change we are all players, we are not spectators.”

The new bottom-up approach is inevitably less coherent, but it is certainly more broad-based. And it is far more realistic, taking better account of the limits of government action in an increasingly complex world. It invites complementary action and leadership from civil society and the business community. Indeed, it may well prove to be a “game changer,” with potentially far-reaching implications for corporate governance that we explore in this article. Today’s proponents of the integration of ESG factors into financial analysis, by raising investor awareness about the financial risks associated with climate change, promoting the use of appropriate risk management tools to hedge climate-related risks, and coordinating investor engagement with companies, can play an important role in encouraging climate change mitigation action and so help overcome some of the limits of government leadership.

Admittedly, this could all be mere wishful thinking. We attempt to dispel this impression by providing in this article an account of concrete, though as yet modest, successes already achieved around one private sector climate change mitigation initiative—an initiative that has led to the founding of the “Portfolio Decarbonization Coalition” under the auspices of the United Nations.<sup>3</sup> The PDC, as the coalition has become

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1. In Secretary of State John Kerry’s more eloquent words about climate change mitigation: “The governments aren’t going to do it—we’re providing the invitation, and

the structure, but it’s the private sector that’s going to lead the way.” (See *Secretary of State John Kerry bounces around the U.N. and signs the Paris Climate Agreement* by Andrew Marantz, *The New Yorker Magazine*, May 9, 2016 issue).

2. David Pitt-Watson is the Chair of the United Nations Environmental Program Finance Initiative (UNEP-FI).

3. <http://unepfi.org/pdc/>.

known, is in some ways the most important of several private sector initiatives that are changing the ecosystem in which corporations operate and that may have important corporate governance implications. We see in the success of this initiative an illustration of the potential strength of creative collaborations among non-government actors to bring about change. During the Paris Climate Conference, the PDC announced it had secured \$600 billion of commitments for decarbonized investments—and thus nearly 20% of a total of some \$3.2 trillion of global assets under management by coalition members.

### Raising Investor Awareness

One immediate challenge in persuading investors to engage with corporations on climate change is to raise investors' awareness of the risks they are exposed to with respect to climate change and carbon pricing.<sup>4</sup> Despite the wide media coverage of climate change, such risks are seen as mostly distant concerns, nothing to worry about for the next decades. It thus naturally follows that the one class of investors likely to be most responsive to climate change risk is long-term investors, asset owners who are committed to holding long positions in the stock market for decades to come. With this observation in mind, at a conference convening a large group of sovereign wealth and pension managers at Columbia University in 2010, we proposed the idea that such funds undertake deliberate and systematic efforts to account for climate and carbon risk in their portfolio management.<sup>5</sup> And in one more specific, and seemingly obvious, suggestion, we encouraged the reserve funds of oil and gas exporting countries to consider underweighting energy stocks as a hedge against carbon risk.

As you will have guessed, this pitch to manage portfolios with an eye to carbon risk was greeted with mainly skepticism. At the time, even the suggestion that sovereign wealth funds could make a positive contribution to society by anticipating and managing climate-related risks was viewed with suspicion. Such funds tended to be seen instead as tools of foreign policy for their governments, if not cookie jars for corrupt leaders. Indeed, many observers dismissed them as potentially disruptive investment vehicles that should be prevented from freely investing in publicly traded companies around the world. But times have changed, and the idea that long-term investors need to be aware of carbon risk is now almost mainstream.

To be sure, some long-term investors at that 2010 Columbia conference were receptive to these ideas. In fact, there were enough of them that, with the support of the Rocke-

efeller Foundation, we were able to continue the discussion at a high-level meeting in Bellagio in the spring of 2011. A key challenge from the start was: How do you make carbon risk a material concern for investors *at the level of an individual company*? This risk is obviously related to the company's GHG emissions, both direct and indirect, but how can investors find out whether a company they have, or are considering, an investment in has a material carbon risk related to its GHG emissions?

Part of the answer is the data on publicly traded companies' GHG emissions that are disclosed by companies and provided by a number of organizations such as CDP,<sup>6</sup> Trucost, the South Pole Group, and MSCI ESG Research. But access to this data is only the beginning, for to be able to make portfolio allocation decisions based on this data a substantial amount of further financial analysis and engineering is required, perhaps too much to be worthwhile for an individual investor. This is why additional tools, or "apps," are wanted to guide investors aware of climate change-related risks toward concrete investment solutions.

### Tools for Investors

At the Bellagio meeting in 2011, the idea of stock indexes designed to have low exposure to carbon risk was proposed for the first time as a tool for long-term, passive, institutional investors without the in-house capabilities to sift through the carbon exposures of each individual stock in their investment opportunity set. If an index provider could find a way to construct it, a decarbonized index with lower exposure to carbon risk would provide a useful hedging tool for long-term passive investors.

Following this meeting, AP4, the fourth largest Swedish National Pension Fund, decided to explore this lead further and discovered that Standard and Poor's together with Trucost, a leading data provider on corporate carbon emissions, had developed a U.S. Carbon Efficient Index based on the S&P 500. AP4 quickly decided to shift all its U.S. equity holdings to this S&P U.S. Carbon efficient Index and, in so doing, it became the first institutional investor to invest on a significant scale in a decarbonized index. At the same time, AP4 and Amundi began a collaboration with MSCI to develop decarbonized indexes based on the main market indexes offered by MSCI.

The availability of decarbonized indexes provides investors aware of "transition risks" with an important tool to get to first base in implementing a hedging strategy. Indeed, the decarbonized indexes offered by S&P and MSCI have some very attractive features: First of all, they reduce the carbon

4. See Carney (2015) for a widely quoted speech on climate-related risks, which include "transition risks" or "carbon risks," "liability risks," and "physical risks." Mainstream investors are generally concerned only with transition risks, referring to the "financial risks which could result from the process of adjustment towards a lower-carbon economy."

5. See Bolton, Samama, and Stiglitz (2011).

6. Formerly called the Carbon Disclosure Project.

exposure of the reference index by over 50%; but at the same time, they maintain the sectoral balance of the reference index to the point that the tracking error with the reference index never exceeds 0.7%. In effect, they offer investors what might be described as a “free option on carbon.” As long as carbon emissions are not “priced”—that is, reflected in stock prices in such a way as to provide investors higher returns as compensation for higher risks—the decarbonized index is designed to produce the same returns as the benchmark index. But if and when carbon begins to be priced—and the relative stock prices of large carbon emitters falls to reflect such risks—the decarbonized index is expected to outperform the reference index.<sup>7</sup>

But the reality, of course, is that simply launching a family of decarbonized indexes is no guarantee that long-term passive investors will invest in them. In fact, the major three index providers offer thousands of different indexes, with the vast majority of them essentially largely ignored by the investor community. To raise investor awareness about carbon risk, it would also be necessary to raise awareness of the existence of decarbonized indexes and their attractive features.

This is where the leadership of AP4 and Amundi played a critical role. AP4 was the first major pension fund to invest on a significant scale in decarbonized indexes. Amundi, the largest European asset management firm, was the first major asset manager to recognize how effective these solutions could be, and to develop marketing material underscoring that the main obstacles holding back hedging of carbon risk would be overcome by these decarbonized indexes. First, because of their low tracking error, decarbonized indexes would protect investors against the time horizon risk—namely, the possibility that the market performance of carbon emitters as a class would continue for long periods of time—with respect to the introduction of climate change mitigation policies. This feature of the indexes is critically important, given that such time horizon uncertainty was one of the main obstacles investors were facing. Second, because they were passive, liquid, investment solutions, investment in such indexes offered a scalable vehicle that could provide significant portfolio reallocation away from high-carbon stocks. Third, institutional investors could resort to decarbonized indexes to invest in a climate-responsible way that would be consistent with their fiduciary duties towards their clients, since the rationale for the portfolio tilting would only be based on the increasing probability of future recognition by market investors of carbon risks they had previously largely overlooked.

Another important break for decarbonized indexes was offered by FRR, the largest French pension fund, which charged Amundi with transforming the decarbonized index prototypes it had designed and turning them into mass market products, with a commitment to invest a significant

fraction of its assets in these indexes. This led to an innovative collaboration between an asset owner (FRR), an asset manager (Amundi), and an index provider (MSCI), which together—and in record time—refined the design of a family of decarbonized indexes around the concept of a free option on carbon and a focus on a low tracking error.

As Gillian Tett describes the general process of financial innovation in *Fool's Gold* (2010), it is a long and tortuous road from the creation of a new financial product or idea—in her case, credit default swaps—to its adoption by investors and to the creation of a market for the product. Beyond the financial innovation itself, it also requires the emergence of a new ecosystem involving many different actors who develop expertise and familiarity with the new financial concept. In the case of decarbonized indexes and reallocation of capital motivated by carbon risk analysis, the first such products were met with indifference, and analysis of the materiality of carbon risk had little resonance. It took not only an innovative collaboration among different actors to promote decarbonized indexes and the integration of carbon risk analysis to reallocate capital, but also the backing of the official sector through the creation in September 2014 of the Portfolio Decarbonization Coalition, which came about under the leadership of the UNEP-FI. The mission of the PDC was to promote awareness of carbon risk among investors and the comparison of best practices.

### An Eco-system Approach

A key opportunity to leverage the collaboration between AP4, FRR, Amundi, and MSCI into a larger association presented itself when the UN, under the impetus of Secretary General Ban Ki-moon, initiated a call for one financial sector initiative on climate change mitigation to be showcased at the UN Climate Summit in New York in September 2014. A proposal backed in particular by the governments of France and China—two countries whose support was critical for the success of the forthcoming climate agreement in Paris—was submitted by AP4, Amundi, and CDP in the summer of 2014. That proposal was selected by the UN, and led eventually to the creation of the PDC under the governance of UNEP-FI. Upon its launch at the UN climate summit in New York, the PDC immediately set for itself the ambitious goal of allocating at least \$100 billion of assets under management to decarbonized portfolios by the COP21 in November 2015—this at a time when it had only around \$20 billion of assets in such portfolios. At the same time, the PDC committed to disclose the carbon footprint of at least \$500 billion of the AUM of its coalition members.<sup>8</sup>

As had been anticipated, the platform provided by UNEP-FI and the creation of the PDC substantially raised the profile of a number of financial sector initiatives on climate change mitigation and contributed to deepening

7. These are discussed in detail in Andersson, Bolton and Samama (2016).

8. See <http://unepfi.org/pdc/>.

the eco-system around portfolio decarbonization. Building on this momentum, we put together three major meetings with asset owners and leading negotiators of the coming Paris COP21 climate accord in the spring and fall of 2015.<sup>9</sup> By fostering a dialogue among institutional investors, academics, and policy makers, each of these meetings furthered the emergence of an ecosystem that was essential to the development of a corporate governance dialogue on climate change and carbon risk.<sup>10</sup> These initiatives also brought the recognition of the socially responsible investor community.<sup>11</sup>

The well-known proverb “what gets measured gets managed” is a natural rallying cry of the PDC. The measurement of GHG emissions for which companies are responsible is a prerequisite for any investor actions on carbon risk. And, the measurement of changes in a company’s GHG carbon impact is necessary for any meaningful engagement actions by investors. The fact that accurate measurements of GHG emissions of a larger and larger fraction of publicly traded companies are now available also increasingly allows investors to make relative comparisons and gauge where their companies rank in terms of their carbon intensity relative to peers.

But producing these carbon-emissions data and related carbon risk analysis does not come without investment and costs. The leading data providers, such as CDP and Trucost, started on a shoe-string, and to become sustainable high-quality data providers they eventually need to have a sufficiently large demand base for their data and other services. Here again, the creation of an eco-system that relies on these data and pays to generate it is essential.

As a founding member of the Portfolio Decarbonization Coalition, CDP, of course, played a key role in expanding this eco-system. By the time of COP21 in December 2015, it had reached a critical mass by all objective measures. Not only did the number of institutional investors that are signatory members of CDP grow from 35 to 822 since its creation 15 years ago, but the PDC also recently announced that its membership, which now includes mainstream names such as ABP, Allianz, CDC, ERAFP, Environment Agency Pension Fund, FRR, KLP, and Storebrand,<sup>12</sup> had grown within a year

to represent over \$3.2 trillion in assets under management and had already committed \$600 billion of align with a low carbon economy.<sup>13</sup>

The PDC got a further boost from the new French law that requires all French asset managers and pension funds to disclose the exposure to climate-related risks of the assets in their portfolios.<sup>14</sup> Such reporting may well become a duty for all asset managers, as carbon risk increasingly comes to be seen as a material financial risk for investors. Similarly, better reporting on climate change risks is likely to become a new battleground for corporate governance, as the recent investigation of Exxon-Mobil by the Attorney General of New York has signaled.<sup>15</sup>

All in all, most of the pieces have now fallen in place to allow investors to undertake meaningful corporate governance actions on climate change. Awareness of carbon risk exposure of individual companies is greater than ever, since it has become easier and easier to measure GHG emissions tied with a company’s operations. Objective performance metrics on GHG emissions can now be set by boards and verified by shareholders.<sup>16</sup> Equally important, the decarbonized indexes that now exist can be used as performance benchmarks for compensation. Asset managers’ compensation can now be tied to return outperformance relative to a decarbonized index, just as CEO compensation can be tied to performance relative to a decarbonized market index. Finally, engagement can now be tied more easily to incentives—for example, an asset manager might be rewarded on the basis of whether engagement results in the inclusion (or non-exclusion) of a stock in a decarbonized index.

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9. One meeting co-organized with UNEP-FI at Columbia University on March 9, 2015, a workshop in Bellagio with the Rockefeller Foundation in April 2015, and a meeting at the Medici Villa in Rome in May 2015.

10. At the same time we completed our research paper, “Hedging Climate Risk” now forthcoming in *Financial Analysts Journal*.

11. Mats Andersson was awarded the 2014 Personality of the Year distinction of *Environmental Finance*, and the 2014 Outstanding Industry Contributor prize of *Investment & Pensions Europe Magazine*.

12. The list is available at <http://unepfi.org/pdc/members/>.

13. PDC represented the financial sector at the Action Day. See <http://newsroom.unfccc.int/lpaa/lpaa/massive-mobilization-by-non-state-stakeholders-summarized-at-cop21/>.

The PDC ambassador’s speech is available at <http://unfccc6.meta-fusion.com/cop21/events/2015-12-05-15-00-action-day-transform-transforming-our-production-systems/keynote-mats-andersson-ceo-ap4>.

14. Article 173 of *Projet de loi relative à la transition énergétique pour la croissance verte*: “The information relative to the consideration of environmental objectives includes: the exposure to climate-related risks, including the GHG emissions associated with assets owned, and the contribution to the international goal of limiting global warming and to the achievement of the objectives of the energy and ecological transition.”

15. “Exxon Mobil Investigated for Possible Climate Change Lies by New York Attorney General,” Justin Gillis and Clifford Kraussnov, *New York Times*, November 5, 2015.

16. Who are increasingly engaging with companies on climate change, as illustrated by the ‘Aiming for A’ coalition representing institutional investors that engage carbon intensive companies to “measure and manage their carbon emissions and move to a low carbon economy.”

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