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Just Climate: A New Investment Model?

We're grateful that many of the world's most significant institutional investors see the opportunity that climate-led investing represents—for capital markets, for the planet and for people everywhere.

—CLARA BARBY CBE, SENIOR PARTNER
JUST CLIMATE

In early 2016, Al Gore, former US Vice President and Democratic presidential candidate, and David Blood, chairman and senior partner of sustainable investment manager Generation Investment Management (Generation), were invited to dinner by the Executive Secretary of the United Nations (UN) Framework Convention on Climate Change, Christiana Figueres.[1]

When they arrived, Gore and Blood were expecting Figueres's congratulations on twelve years of outstanding investment performance and the important proof Generation had given of the concept of sustainable investing. What they heard was very different. Far from congratulating Generation's leaders, Figueres admonished them for not doing enough. They had entered the business, she reminded them, with the stated goal of moving, together with others, the needle on driving to a more sustainable world, not just making a return for their investors. Had they accomplished this? No, she said, they had not.[2]

[1] https://unfccc.int/about-us/the-executive-secretary/former-executive-secretary-ms-christiana-figueres
[2] David Blood, In interview with the authors, October 4, 2023

Jillian Grennan and Laura D. Tyson prepared this case study with assistance from Case Writer John Masko, as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

That dinner with Figueres would serve as the genesis for a new investment business Generation officially launched five years later: Just Climate. As an expansion of Generation's client offering, Just Climate would invest only in businesses projected to make the highest positive climate impact as well as attractive financial returns, and its fund managers would be compensated using an integrated performance fee that considered both the amount of decarbonization their investments achieved over a specified period and the financial returns they generated for clients.[3]

By leading with an analysis of which solutions had the greatest potential for the highest climate impact, Just Climate would offer a new investment model. Just Climate would specialize in investment opportunities that sustainable investors often missed: those too big for venture capital, too asset-heavy for growth equity, and too nascent for infrastructure investors. Generation knew they were introducing an innovative financial strategy. They did not know whether it would work. Would Just Climate cannibalize Generation's existing investors? What sort of risk-adjusted returns should investors expect for Just Climate's novel investment strategies? And most importantly, could Just Climate generate sufficient financial returns to attract investors?

Climate Change

By the late 2010s, a sizable and growing number of experts considered climate change the definitive environmental challenge confronting the world. Climate change was shorthand for the effects produced by the increasing concentration of greenhouse gases (GHGs) in the Earth's atmosphere on its temperature and weather patterns. GHGs, a group of gases that include methane (CH_4), carbon dioxide (CO_2), and nitrous oxide (N_2O), produce a "greenhouse effect" when present in the atmosphere. Energy from the sun reflected off the Earth's surface, but instead of traveling back into space, was trapped in the atmosphere by GHGs, thus creating a warming effect like that of a greenhouse. A certain amount of GHGs in the atmosphere was both natural and necessary to maintain the Earth's temperature. But since the late 1800s, the carbon-based industrial revolution had rapidly increased the concentration of GHGs, most notably CO_2 to levels that gradually resulted in both higher temperatures and changes in global weather (**Exhibits 1** and **2**).

Reflecting their larger transportation and industrial sectors, wealthier nations typically had larger "carbon footprints" than poorer ones. However, a mitigating trend gradually emerged with the developed nations demonstrating a tapering of emissions concurrent with their decelerating economic and demographic growth. In 2000, North America and Europe accounted for over 40% of world carbon emissions. By 2021, they produced only 25%. At the same time, the world's largest country by population, China, became the world's biggest source of emissions, emitting more than twice as much CO_2 as the U.S. By the early 2020s, China and India combined accounted for roughly 38% of all world emissions.[4]

The long-term effects of climate change were difficult to predict, but the International Panel on Climate Change (IPCC), produced projections about every five years (**Exhibit 3**). In 2021, the panel put forward five scenarios, ranging from a high-carbon path that incorporated only already-in-force government policies to the most optimistic possible carbon abatement scenario. Under current policies, the IPCC predicted that temperatures would rise a catastrophic 4.4 degrees Celsius above nineteenth-century average surface temperatures by 2100, while under the two most optimistic scenarios, temperatures would begin to decline by 2100 and would be 1.4 and 1.8 degrees above the nineteenth-century average by then. Absent radical mitigation, the IPCC report predicted

[3] https://www.generationim.com/our-thinking/news/in-his-own-words-david-blood-on-why-generation-is-launching-just-climate/
[4] https://ourworldindata.org/co2-emissions

increased flooding and the need for low-lying cities to adapt and potentially move inland, food insecurity as agricultural areas became inarable, increasing human displacement, and large losses in biodiversity as land and especially sea became unlivable for more species.[5] These effects would be particularly severe in the relatively poorer Southern Hemisphere of the globe.

By the mid-2010s these dire predictions led most top climate economists to advocate a twin strategy: government interventions to slow and eventually eliminate carbon emissions, coupled with investing in resilience to climate change, a certain amount of which was considered inevitable. Some skeptics of government efforts to slow climate change stressed its benefits—for instance, the fact that while deaths from excessive heat were rising worldwide, deaths from cold were falling at a much faster rate.[6] Critics also argued that the cost in economic productivity of slowing climate change was so great that continuing to improve lives in the developing world through traditional carbon-based methods of electrification, industrialization, and advanced agriculture, combined with climate resilience policies, would cost far less.

By 2015, however, most policymakers had concluded that the economic and social consequences of further warming, coupled with the economically unquantifiable loss to the earth's biodiversity, meant that the world needed to act quickly both to slow climate change and to adapt to a certain inevitable amount of warming and sea level rise. For that reason, in December 2015, 196 countries attending the UN Climate Change Conference (COP21) adopted the Paris Agreement, the first legally binding agreement mandating international cooperation to reduce GHG emissions. The agreement committed to limiting the earth's temperatures to a maximum of 1.5 degrees above pre-industrial levels, a commitment that required human GHG emissions to begin declining by 2025 and to have declined 43% by 2030.[7]

The signers of the Paris Agreement knew that carbon emissions could not be reduced to zero. But they also knew that to achieve their 1.5-degree goal, the earth's concentration of GHGs needed to start declining by midcentury. This meant that they needed to develop technologies to "capture" carbon and remove it from the atmosphere. The commitment to achieve a neutral state in which the amount of carbon emissions is offset by carbon removal through a combination of emissions reductions and carbon capture came to be known as "net zero." By 2021, a list of countries representing more than half of the world's population had committed to net zero at or before 2050 (**Exhibit 4**), as well as a fifth of the world's largest companies.[8]

ESG Investing and Sustainable Investing

The concept of sustainable investing had its roots in the environmental, social, and governance (ESG) investing movement that emerged in the early 2000s. ESG, a concept first articulated in a 2004 United Nations Report called "Who Cares Wins," encouraged businesses to consider ESG metrics in their corporate strategies and investors to consider those factors in creating their portfolios.[9] Unlike religious and other investors motivated by "moral values" in the 1980s and 1990s, ESG investors believed not only that ESG-targeted investing was the right thing to do, but that it would also produce strong risk-adjusted returns in the long term by taking into account the social and environmental consequences of business activities.[10]

[5] https://crsreports.congress.gov/product/pdf/R/R47082#
[6] https://www.wsj.com/articles/climate-change-heat-cold-deaths-medical-journal-health-risk-energy-cost-fossil-fuels-11631741045
[7] https://unfccc.int/process-and-meetings/the-paris-agreement
[8] https://www.forbes.com/sites/dishashetty/2021/03/24/a-fifth-of-worlds-largest-companies-committed-to-net-zero-target/?sh=595c5733662f
[9] https://www.unepfi.org/fileadmin/events/2004/stocks/who_cares_wins_global_compact_2004.pdf
[10] https://www.bailard.com/wp-content/uploads/2020/09/History-Socially-Responsible-Investing-and-ESG-Investing.pdf

It was this simultaneous moral and business case for ESG investing that made the industry take off. Over the 2000s, many existing and new investment funds and advisors encouraged sustainability reporting, developed standard measures for social and climate impact, and invested in the most ESG-conscious companies. With the encouragement of huge investment firms and public officials, ESG-focused investment funds expanded dramatically, rising to about one-third of global assets under management at the end of 2021[11] and predicted by Bloomberg to top $53 trillion within four years.[12]

Despite its meteoric rise, ESG investing had its detractors. From the start, some claimed that ESG investing would not generate returns as high as traditional investing. One 2022 study seemed to support this criticism, finding that 8 of the top 10 actively managed ESG funds in the U.S. had underperformed the S&P 500 in that year.[13] But this was not the case when the performance was compared over several years, during which many ESG funds outperformed the market. A recent meta-study focusing on the 2015-2020 period found a positive relationship between ESG and financial performance in the majority of cases.[14] There were also ESG critics who alleged that the ESG boom had created an incentive for "greenwashing"—for companies to mislead investors or the public on the environmental impact of their activities and products. Most infamous was the 2015 Volkswagen emissions scandal, in which that company installed software in its cars designed to fool emissions testers.[15]

By the late 2010s, criticisms of ESG from those dedicated to climate goals began to multiply. Critics noted that as ESG encouraged the creation of "greenium" products, which only people in wealthier nations could afford, the rest of the world continued to emit more CO_2.[16] Others complained that ESG investors were focusing on low-hanging fruit like electric vehicles (EVs) and energy-efficient retrofitting while ignoring difficult-to-abate high-emitting industries like concrete and steel.

As public opinion began to turn against ESG investing, a group of investors led by Gore and Blood posited a new model of "sustainable investing." As they wrote: "Sustainable investing is about investing in businesses that are driving toward a world with low greenhouse-gas emissions that is also prosperous, equitable, healthy, and safe. It is consistent with the fiduciary duty that investment professionals owe their clients." ESG analysis, they argued, was "a tool to advance sustainable investing; it isn't an outcome in itself."[17]

In response to these concerns and the mounting climate crisis, a growing number of governments, particularly in the wake of the Paris Agreement, began to create public banks to ease the capital constraints faced by private companies trying to scale green solutions. The head of the first dedicated bank of this kind, the U.K.'s Green Investment Bank, would become Just Climate's co-chief investment officer. These public sector ventures, however, struggled on two fronts: first, they had national footprints, which were misaligned with addressing an international climate challenge; and second, they had insufficient capital to accomplish their goals. By the early 2020s, it was clear that the public sector could not move the needle on climate without substantial private support.

[11] https://www.nasdaq.com/articles/the-rise-of-esg-and-the-importance-of-esg-data
[12] https://www.bloomberg.com/professional/blog/esg-assets-may-hit-53-trillion-by-2025-a-third-of-global-aum/
[13] https://www.bloomberg.com/news/articles/2022-12-07/big-esg-funds-are-doing-worse-than-the-s-p-500-green-insight
[14] https://www.nasdaq.com/articles/the-rise-of-esg-and-the-importance-of-esg-data
[15] https://www.forbes.com/sites/georgkell/2022/12/05/from-emissions-cheater-to-climate-leader-vws-journey-from-dieselgate-to-embracing-e-mobility/
[16] https://www.nytimes.com/2021/11/05/business/climate-green-stock-market.html
[17] https://www.wsj.com/articles/sustainable-investing-is-consistent-with-fiduciary-duty-esg-capitalism-emissions-co2-business-costs-growth-tool-market-value-rules-11667879249?mod=article_inline

Generation Investment Management

Generation was one of the earliest dedicated sustainable investment firms, founded in 2004 by seven partners, including Gore and Blood, previously a Goldman Sachs asset manager. As the pair wrote in an op-ed in the *Wall Street Journal,* the thesis of Generation was that by "internalizing" the negative externalities of investing—carbon emissions, other environmental degradation, or social costs—investors could secure better long-term returns for their clients.[18]

The founding partners established Generation as a pure-play sustainable investment firm with a global public equity investment strategy. This meant that they raised money from large institutional investors (e.g., public pension and retirement funds, corporations, or governments) to invest in companies leading the transition to a sustainable economy. Generation's investment managers invested in a range of businesses over the long term.

Over its first ten years in business, Generation launched three investment strategies, attracting wide interest, and raising a total of around $20 billion. In 2008 Generation augmented its public equity focus by launching a private markets strategy, aiming to invest in growth-stage non-public companies leading the transition to a more sustainable economy. By most measures, Generation's first decade was a huge success. The firm followed through on its commitment to invest only in sustainable companies and—despite that limitation—produced above-market returns for its investors.

But in the aftermath of the Paris Agreement in 2015 and their dinner with Figueres, Generation's leaders felt a mounting uneasiness. Despite Generation's success, a profound sense of responsibility and awareness led them to question if there was more that Generation could do to drive positive climate solutions.

There were several roadblocks in Generation's path to making a significant impact to address climate change. The first was scale. $20 billion was enough to position a firm well in the sustainable investment field, but it was not enough to catalyze transformative change. Second was the fact that while Generation had prioritized climate from the start, it had other priorities as well. Its first two private market funds were labeled "Climate Solutions Funds" and invested only in climate-focused businesses. After that, though, Generation had broadened into raising "Sustainable Solutions Funds," which invested in climate-focused businesses but also in other forms of environmental sustainability as well as social sustainability, specifically in the areas of financial inclusion and health. Colin le Duc, Generation co-founder and Just Climate Vice Chair recalled:

> Some of our clients were upset about that. We made the decision to broaden our sustainability lens in recognition of the overlap between people and planet in the businesses we tracked. With the maturation of the investment universe, we saw an increasing number of high-quality investment opportunities which were delivering growth along with a broader range of sustainability outcomes. But we had clients who, very reasonably, insisted that climate is the defining issue of our time and that's where we want to invest.[19]

This critique got to the heart of a problem with impact-based investing. This was the fact that many sustainable investing strategies did not address solutions that could make the biggest impact on climate. Opportunities were often found in asset-light businesses which could accelerate the

[18] https://www.wsj.com/articles/SB122584367114799137
[19] Colin le Duc, in interview with the authors, August 1, 2022

transition to a sustainable economy but could not drastically reduce or remove emissions. le Duc noted that in its private markets Growth Equity strategy, Generation had heavily favored software and technology companies with positive social and environmental outcomes. These firms had low carbon footprints and therefore scored very well on carbon metrics, but they also had a relatively small impact on overall carbon emissions and therefore on decarbonization.

While significant capital was flowing into climate solutions, it was not enough nor was it flowing to all of those places that it needed to. The unfolding climate crisis demanded an increase in the speed and scale of action, and greater flows toward the highest emitting segments of the global economy most behind on their decarbonization trajectories.

A new venture from Generation would enter a crowded field of major competitors. As of 2021, there were a total of 636 climate-focused investment funds worldwide, with a total of $275 billion in AUM.[20] The largest dedicated climate fund was the Brookfield Global Transition Fund (BGTF), a $15 billion venture led by former Bank of Canada and Bank of England Governor Mark Carney. BGTF operated on a PE model and—informed by its parent firm Brookfield's expertise in renewable energy—invested mainly in transitional technologies such as solar power, carbon capture, and large-scale battery storage.[21] Another major competitor was Breakthrough Energy Ventures (BEV), the $2 billion brainchild of Microsoft founder Bill Gates. By 2021, it had launched two funds, dedicated to across-the-board carbon cuts. BEV described its philosophy as: "We know the main sources of today's global greenhouse gas emissions: manufacturing (30 percent), electricity (26 percent), agriculture (21 percent), transportation (16 percent), and buildings (7 percent). We call these the Five Grand Challenges of climate change. To get to zero, we need to tackle all five—and we need to get started right away."[22]

Founding Just Climate

In late 2021, Generation's management decided to establish a dedicated climate-led investing business, called "Just Climate." Just Climate would prioritize targeting attractive risk-adjusted returns by backing the highest-impact climate solutions. When Generation announced the launch in October, it was able to announce a group of marquee early investors, including the Microsoft Climate Innovation Fund, the Ireland Strategic Investment Fund, the IMAS Foundation, Imprint Group of Goldman Sachs, the Harvard Management Company (the investing group responsible for the university's endowment), and the Hall Capital Partners and its clients.[23] Just Climate was the result of several years of debates and planning within Generation, and by 2021, these conversations had coalesced into a comprehensive strategy.

Allocating Capital

Just Climate's leaders knew that they would need to demonstrate that their investments could provide the highest climate impact as well as attractive financial returns. Senior Partner Clara Barby said, "We're not interested in slow incrementalism. We're interested in strategies that are going to decarbonize industries very quickly." This approach, she explained, was founded on the concept of the "time value of carbon," which—like the "time value of money" in financial accounting—postulates that the benefits to the Earth of carbon emissions cuts made sooner are greater than the benefits of cuts made later. It was only by building an "industrial base that's entirely compatible

[20] https://www.morningstar.com/financial-advice/how-can-you-invest-climate-funds
[21] https://www.globenewswire.com/news-release/2022/06/22/2466953/0/en/Brookfield-Raises-Record-15-Billion-For-Inaugural-Global-Transition-Fund.html
[22] https://breakthroughenergy.org/our-approach/grand-challenges/
[23] https://fortune.com/2021/10/27/al-gore-climate-fund-harvard-microsoft-goldman-sachs/

with a net-zero future," Managing Director Evelina Olago explained, that the goals of the Paris Agreement could be fully realized.[24]

Just Climate's leaders decided that their initial best opportunity to have the highest climate impact was to focus on decarbonizing traditional industries that produced the building blocks of advanced economies: steel and concrete, fuels for heating, and transport, to name a few. In these product fields, startups devoted to radical decarbonization existed. But in almost every case, those firms had asset-heavy business models, which required a combination of growth equity and infrastructure-like skills and capital to achieve scale. While most of these companies were solid enough to have already survived the "valley of death," the funding gap that separates great ideas from viable products, they lacked sufficient capital to be deployed at scale.

Co-Chief Investment Officer Shaun Kingsbury cited "Sutton's Law" to explain Just Climate's capital allocations.[25] Just as when notorious bank robber Willie Sutton was asked why he robbed banks, he explained that "because that's where the money is," Kingsbury said: "We invest in these sectors because that's where the emissions are. At the moment, the industries responsible for 50% of carbon emissions are getting 10% of the investment dollars."[26] Barby added that it was vital that Just Climate have flexibility in how it invested in these companies to accompany them on their growth trajectory. Many of the highest-impact climate solutions initially needed company equity to build management capacity and develop their initial projects. But after that phase, companies need follow-on project-level equity to complete their journey to 'bankability' and to attract infrastructure investment.

Compared to company growth equity, project equity was generally a lower-risk, lower-return asset class aimed at financing construction and asset rollouts. It was typically applicable for projects with proven technologies at scale, with a sufficient track record and relatively predictable cash flow profiles. Companies favored project-level funding where possible, to limit recourse and avoid dilution. By having the flexibility to provide project equity as well as company equity, Just Climate could fully support the highest impact climate solutions through their vital growth phase until they became attractive to other types of investors. As an illustration, once their portfolio companies' plants were operational and had an operating track record, Just Climate could look at selling its project equity positions to traditional infrastructure funds, while keeping exposure to the assets through its holdings in the companies. For that reason, Just Climate's investment team reserved the flexibility to make either equity or project-based investments.

Just Climate viewed company growth as an "S-curve," beginning with slow growth until a company reached a critical mass of funding and grew rapidly, before slowing again as it matured. The S-curve served as a strategic instrument for investors, facilitating the identification of potential market misevaluation that occurred when the market assumed linear extrapolations. Just Climate could strategically capitalize on this framework by targeting companies at different stages of the S-curve for decarbonization—those at the early high-growth phase as well as those further along the curve that were undergoing sustaining life cycle transformations.

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[24] Clara Barby and Evelina Olago, in interview with the authors, September 9, 2022
[25] Shaun Kinsbury, in interview with the authors, September 19, 2022
[26] Estimates are aggregated from Energy Transitions Commission (ETC), IEA, CB Insights and the Climate Policy Initiative (CPI). In most categories we believe current annual investments are less than $1bn per sector, with the exception of buildings and infrastructure and certain areas of land use and agriculture, where we use CPI estimates. We divide this by total climate finance of around $632 billion, the estimate from CPI, to arrive at around 10% of total climate finance flows. Emissions data for hard to abate sectors is based on data from the ETC (~10 GtCO2e), IEA's buildings sector estimates (~7 GtCO2e) and the Griscom et al. (2017) nature-based solutions estimates (~11 GtCO2e). We use 57.4 GtCO2e as the denominator (PBL Netherlands Environmental Assessment Agency).

"Just" Climate

Just Climate broke with the standard ESG investing model, which prioritized environmental and social factors equally and considered climate as one among many environmental concerns. Just Climate prioritized climate-led investing. But that did not mean that its leaders disregarded other sustainable investing criteria. When evaluating investments, Barby explained, climate criteria came first, and other ESG criteria were then considered based on the risks and opportunities they create for different business models. For example, where risks of significant negative impacts were identified, this would cause Just Climate to reconsider its investment. Just Climate incorporated analysis of additional social and environmental impacts into its investment process just as any sustainable investor would, impacts such as pollution, biodiversity, land use, respect for human rights, preservation of land ownership and local resources, health impacts, and provision of jobs and livelihood. But these impacts functioned as investment guard rails, while climate impact was the optimizing function.

Barby emphasized, however, that the climate criteria in Just Climate's strategy had a powerful social dimension. As climate solutions that radically reduced or removed greenhouse gas emissions were 'transitioned in' and the legacy carbon-intensive business models were 'transitioned out,' the affected workers and communities could not be ignored. Core to a Just Transition was a process in which workers and communities had understanding and agency over the decisions that affected their daily lives, as part of the shift to net-zero GHG emissions. The 2015 Paris Agreement and COP 27 highlighted the importance of a Just Transition, acknowledging that decarbonization objectives need to be combined with attention to affected people in the shift to a resilient, net-zero economy. The March 2023 IPCC synthesis report also noted the importance of prioritizing equity, climate justice, social justice, inclusion, and just transition processes to enable adaptation and ambitious mitigation actions and climate resilient development.[27] This, Barby explained, was the reason why Just Climate was called "Just" Climate—to contribute to a "just" transition into a carbon-free future.

Building Investing Networks

Just Climate, like Generation, was built around the assumption that no matter how big its funds grew, it could never, on its own, do enough financially to bring about the decarbonization revolution its leaders sought. For that reason, a big part of Just Climate's mission had to do with: a) creating networks of investors who felt comfortable investing in these technologies, and b) using its industry savvy and business connections to help target companies in other ways. Just Climate's leaders referred to this process as "credentialing" an investment target's capitalization table. le Duc provided an example:

> We have invested in a company that's building a green steel plant in Sweden. We are one of many investors in the company, but our presence on the cap table, and our opportunity to bring in other LPs through co-investment, could help make them a more attractive target for other investors. We can also help their business by connecting them with auto companies we know who might be interested in buying their steel. So, we're able to help them out with more than just our investment dollars.[28]

[27] https://www.ipcc.ch/2023/03/20/press-release-ar6-synthesis-report/
[28] Ibid, 5

This "credentialing" part of Just Climate's value proposition meant that the firm was purposeful about the investors it targeted for its funds. Kingsbury explained that Just Climate's targets included corporations that had committed to a net-zero or carbon-negative future (e.g., Microsoft), pension funds interested in ESG products (in the U.S., public pension funds were generally the largest institutional investors in PE), endowments at foundations or educational institutions dedicated to net zero (e.g., Harvard University), sovereign wealth funds from countries seeking to make progress on their Paris commitments (e.g., Ireland), financial institutions (e.g., Goldman Sachs), and insurance firms. The goals of this wide investor net were to establish climate-led investment as a capital allocation imperative, to allow Just Climate to be sufficiently respected in the investment community to attract follow-on investments from other sources, and to have the wide expertise to target and network companies in non-financial ways.

Fund Structure

To achieve its climate goals, Just Climate modified the traditional PE model for the first fund it launched, as part of its Industrial Decarbonization strategy. Typically, LPs commit capital for 10 years, during which fund managers would invest their capital in and enhance the value of target companies before exiting. When they invested in a fund, LPs agreed to a predetermined profit disbursement formula upon fund closure. A certain percentage rate of return would be distributed to the LPs, after which another fixed percentage (known as the "carry") was distributed to the fund's managers. This structure gave the fund managers a vested interest in the fund's performance. Traditionally, however, "performance" meant only financial performance. A traditional private fund (like Generation's own) could use a climate-based standard as a benchmark for approving companies for investment, but it lacked a mechanism for directly incentivizing fund managers to maximize "climate returns." Therefore, Just Climate chose to do things differently.

Just Climate asked investors for a longer runway than most PE firms for this first fund. While 10 years was the industry standard, Just Climate asked for 15. As Kingsbury explained, "We're planning to hold onto our investments for three-to-five years and then to exit, but since this is a new investing area, we need a little bit of a longer grace period in case we misjudge the adoption curve." The Just Climate team believed that given the kind of businesses they backed, financial success and delivery of climate impact went hand in hand. This was reflected in the structure of its long-term incentives.

Just Climate took this a step further, signaling full alignment between financial and impact outcomes in what it called an Integrated Performance Fee: 100% of its financial carry was subject to an "Impact Factor"—essentially, a measure of the manager's success in delivering against the fund's climate targets. In the case of Just Climate, this was measured in tons of GHG abatement[29] over a 10-year period. The ten-year timeframe was chosen given the firm's focus on the time value of carbon, and the need to nearly halve global emissions by 2030 to achieve net-zero commitments.

How a fund's return was distributed between LPs and managers was also entirely driven by how much climate impact the fund ultimately delivered.[30] For example: if Just Climate delivered 70% of its target, 70% of the financial carry it generated would be distributed to the manager and the balance would be returned to the LPs. To put this into practice, Just Climate set up a rigorous climate impact management framework to derive an "Impact Factor": a percentage for which GHG

[29] GHG abatement was defined as the forecasted greenhouse gas emissions measured in metric tons of CO2 equivalent (CO2e) that a specific investment or project was expected to avert, compared to a baseline scenario under a realistic business model.
[30] https://academic.oup.com/rof/advance-article/doi/10.1093/rof/rfad013/7100359

abatement targets formed the denominator, and actual GHG abatement performance formed the numerator. Any changes to these targets required the approval of Just Climate's LP Advisory Group. Before Just Climate invested in a portfolio company, it projected (with the help of the target companies and specialist environmental consultancy firms) the expected 10-year GHG abatement for the company or project. Just Climate underwrote this target in the same way it did an expected financial return; both outcomes were linked to the company or project's base case performance.

Each year of its hold period, Just Climate had a third party assess the actual impact delivered relative to the target underwritten at investment, and review the baseline this impact was managed against, to ensure changes in energy mix over time were captured. The performance of each portfolio company was then consolidated at the fund level. Just Climate compared its projected GHG abatement with the actual achieved abatement at the total portfolio level. Impact performance generated formed the numerator, and the target the denominator: in this way, the Impact Factor was derived. 100% represented full achievement of the target outcome. In the unlikely event the manager outperformed against targets, the maximum impact factor would remain 100%.

While the Integrated Performance Fee focused on the emissions avoided by using a given service or product (referred to as "Scope 4" emissions), managers also tracked emissions created in the process of creating the product (referred to as "Scope 1, 2 and 3" emissions) in their standard ESG monitoring process. Just Climate intended for all its portfolio companies to have a credible and actionable path to a net-zero footprint: while a green steel plant that could produce steel with only 5% of the carbon intensity of conventional steel production had outsized climate impact, this emissions reduction did not change the fact that the company also had to have a net-zero plan for its Scope 1, 2 and 3 emissions.

Building a Talented Team

One of Just Climate's challenges was assembling a team that could accomplish a much wider array of tasks than most asset management firms had to do. Like a standard asset management firm, Just Climate needed standard financial and investing knowhow. Like a Silicon Valley venture capital and private equity firm, it needed the expertise to evaluate the viability of technologies from a scientific and engineering perspective. Like an environmental auditor, it needed the expertise to evaluate target companies' decarbonization potential. And that was just the beginning. In Kingsbury's words:

> We need energy skills, growth capital skills, infrastructure skills, project financing skills on the debt and banking side (we don't want to build these projects with equity alone), engineering skills and operations skills. We need people to look at technologies and tell us what's proven and what isn't. We need experts in low-carbon technologies, and we need people who can measure impact. So, we're recruiting from all different sectors, all different backgrounds. Then we need to help them explain their backgrounds to each other so that they can work together and understand each other.[31]

This was not Kingsbury's first time assembling such a team. A decade earlier at the UK Green Investment Bank, he was tasked with assembling a similar team, albeit on a smaller scale. By mid-2023, Just Climate's staff, divided into investment and infrastructure teams, numbered around 30, just in time for the company to close its first fund.

[31] Ibid, 7

It would be several years until Just Climate's leaders would be able to determine what impact its investments were having on their target companies, and several years after that until they would know what sort of return, they were generating for their investors. Furthermore, they knew that how well Just Climate did at achieving its mission depended heavily on its advocacy of climate-led investing. While Just Climate could muster considerable financial might itself, it was nowhere near enough to move the needle on its own. But if it could create a flywheel, where its own success encouraged other investors to adopt its climate-led model in the long term and created a symbiotic relationship between investment, sustainability, and innovation, it might have a chance.

One thing was already clear: Just Climate created a new investment model—a financial market innovation - with little precedent in its ambition or complexity. Was its approach the right one? Was Just Climate going to make the difference on climate that decades of government and ESG fund efforts had been unable to make? Or would the company's efforts—like those of its progenitor and numerous ESG competitors—remain too small for the challenge?

Case Discussion Questions

1. What is Generation Investment Management's overall mission? What is the goal of Generation's original fund? Does creating Just Climate align with Generation's mission? Can you identify and discuss specific economic, societal, and political factors that may facilitate or hinder Just Climate's efforts in the coming years? What role do financial market innovations and financial market returns play in moving capital at the speed and scale required to move the needle on climate change?

2. Just Climate spawned from Generation, a sustainable investment fund. Can other sustainable investment funds have similar impact if they adopted a more disciplined approach to climate, or are there unique aspects of Just Climate's approach that make it especially effective for decarbonization?

3. Given the interconnected nature of human capital, natural capital, and financial capital, can truly significant progress on climate change be made without addressing the human component and being socially inclusive? How critical is the "Just" aspect—based on the concept of a Just transition—to Just Climate's foundational goals?

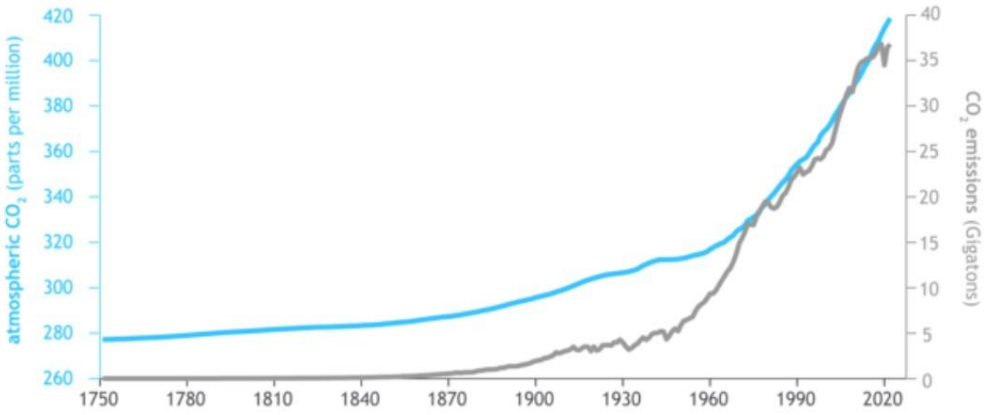
4. The case contrasts risks and returns on project equity and growth equity as companies progress in their development. Can you explain the differences between these two types of equity, their associated risks and returns, and why a company might prefer one over the other at different stages? How does Just Climate's flexibility in providing both types of equity contribute to its investment strategy and support for high-impact climate solutions?

5. Just Climate views company growth as an 'S-curve.' How does this perspective aid in identifying investment opportunities and potential market misvaluations? Can you think of examples where this framework might be particularly useful or, conversely, where it might have limitations? How might this approach align or differ from traditional investment strategies?

6. Does Just Climate's investment strategy provide a long-term competitive advantage, especially relative to the existing competitors like TPG's Climate Fund, Mark Carney's Green Alliance Fund, or Breakthrough Technologies? Why or why not? Are there specific components of Just Climate's strategy that will be easy for others to replicate?

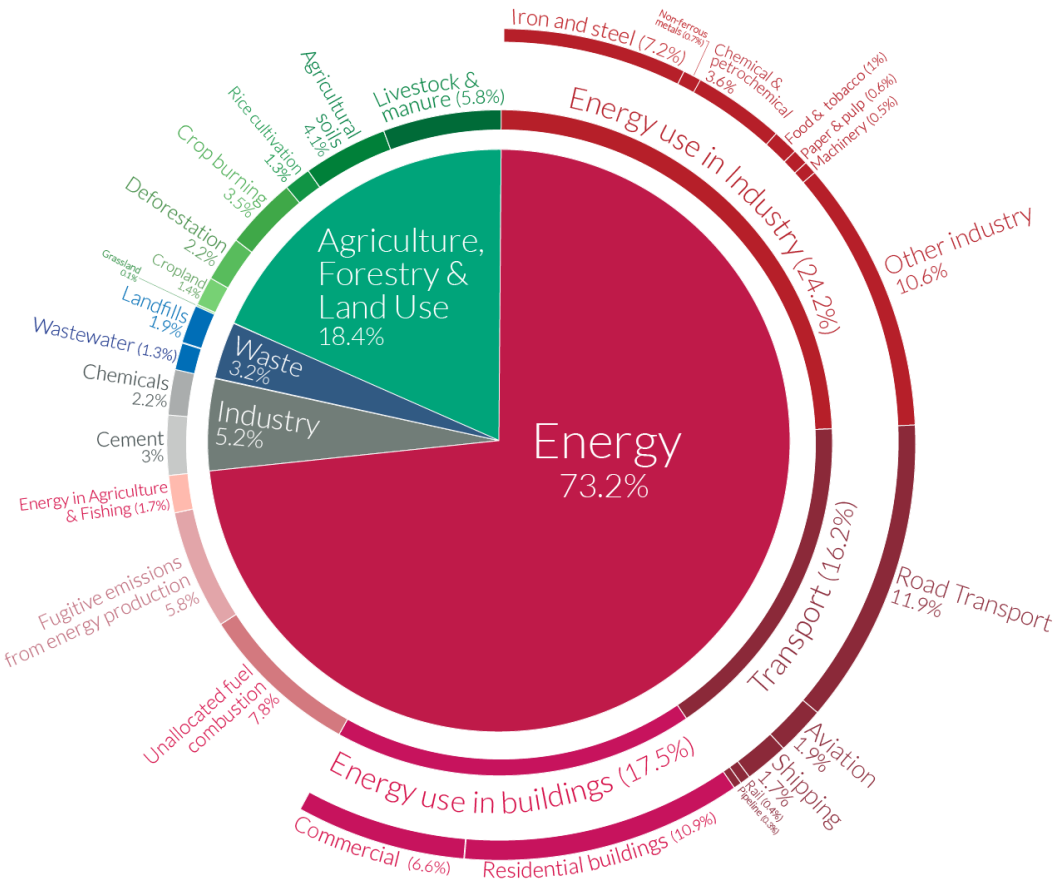
7. To deliver on its decarbonization plans, Just Climate's business model required significant investment in human capital. The talents that have been assembled are eclectic not just from a skills perspective but also from a tolerance for risk perspective. Given the unique blend of skills and risk tolerance in Just Climate's team, what steps would you recommend to foster a culture that encourages efficient collaboration and productivity?

Exhibit 1 CO_2 Concentration in the Earth's Atmosphere, 1750-2020



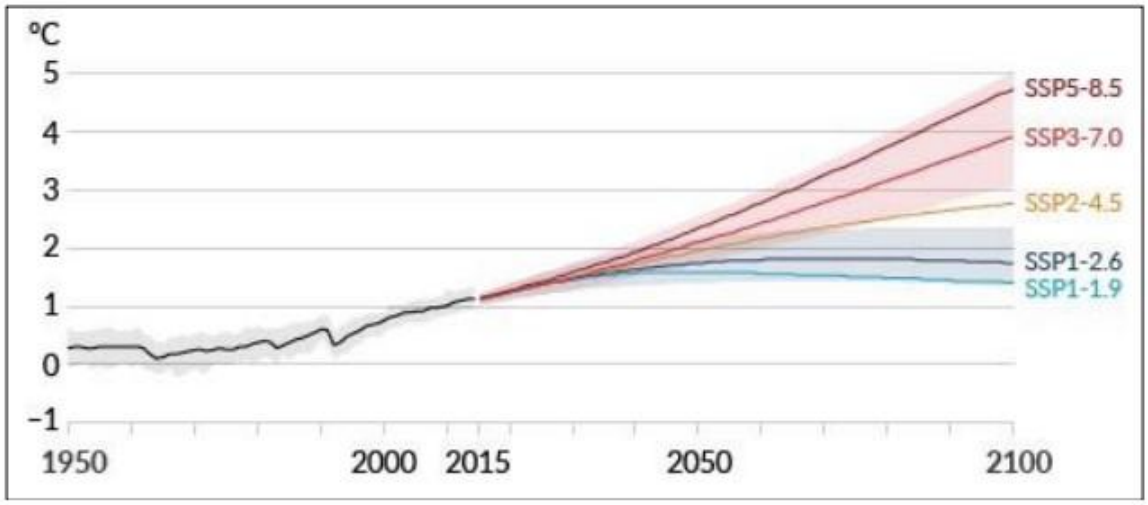
Source: *https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide*

Exhibit 2 CO_2 Concentration in the Earth's Atmosphere, 1750-2020



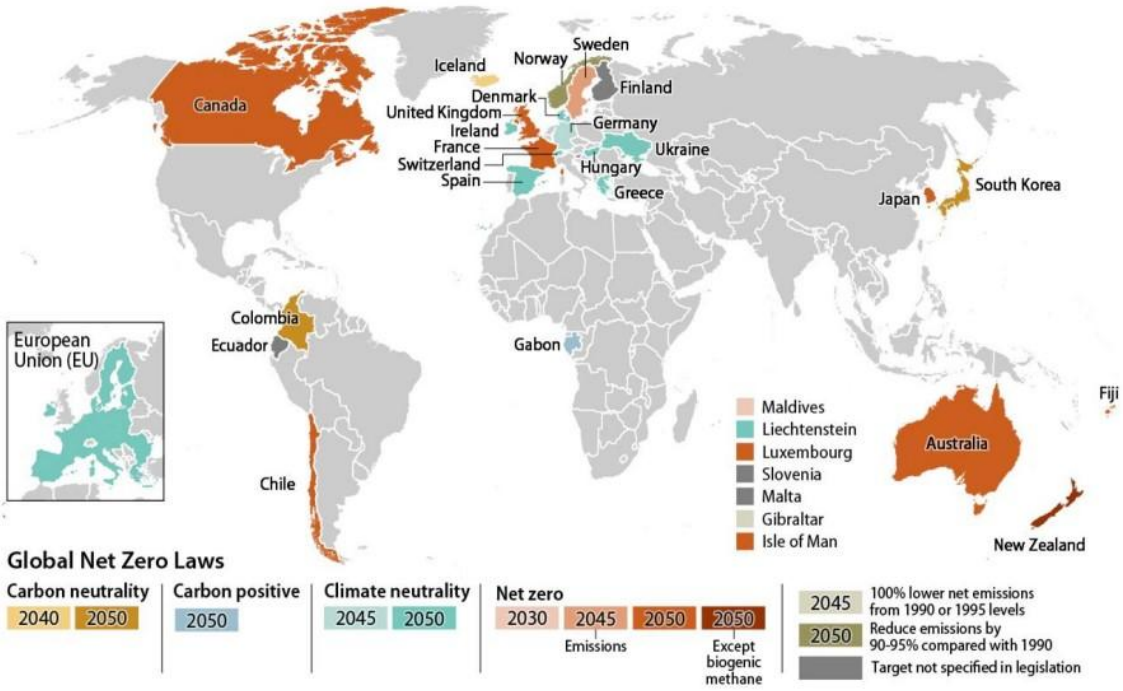
Source: https://ourworldindata.org/ghg-emissions-by-sector

Exhibit 3 Five Scenarios for Earth Surface Temperature Changes Above Late Nineteenth Century Averages, 2021 IPCC Report



Source: https://crsreports.congress.gov/product/pdf/R/R47082#

Exhibit 4 Countries with Net Zero legislation as of July 2023



Source: https://crsreports.congress.gov/product/pdf/R/R46945