

IEN Q&A: Addressing Climate Change Through a Private Equity Lens, Making an Impact

“Climate change is an existential threat to the world’s poorest and most vulnerable,” Jim Yong Kim, former president of the World Bank Group, recently said. The World Bank Group is not alone in focusing on a more climate resilient future.

Climate change remains the most significant ESG issue for asset managers, who have more than doubled their investments to nearly \$3 trillion into the space over the last two years, according to the U.S. SIF Foundation's biennial [Report on U.S. Sustainable, Responsible, and Impact Investing Trends](#). Moreover, the report found that private equity and venture capital ESG assets under management more than doubled to \$283 billion with 565 funds.

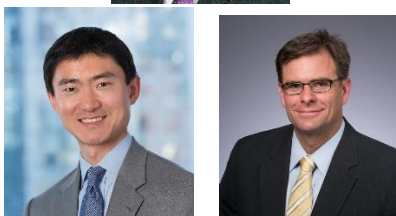
Given these investment trends, **Intentional Endowments Network** (IEN) talked with industry experts to gain insight on opportunities within the private equity climate change arena and, how managers and asset owners are measuring the impact of their investments. The specialists included:



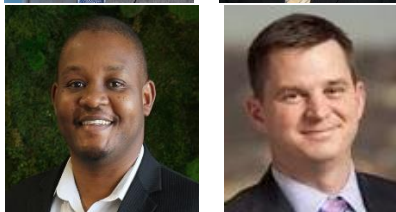
Nancy Pfund and Ira Ehrenpreis, Managing Partners and Co-founders at **DBL Partners**, a double bottom line venture capital management firm pursuing both financial and social returns



Jared Fuller, Head of Private Capital and Real Assets Research team at **Prime Buchholz**, an investment consulting firm



Liqian Ma and Tom Mitchell, Managing Directors at **Cambridge Associates**, a global investment firm



Simba Ndemera, CFO, at the **Sierra Club Foundation** and **Tim O'Donnell**, Senior Vice President, **Fund Evaluation Group**, outsourced CIO, on behalf of the Sierra Club Foundation

Q: HOW CAN ENDOWMENTS – BOTH LARGE AND SMALL – BEST PROVIDE CAPITAL TO ADVANCING CLIMATE SOLUTIONS GIVEN THEIR FIDUCIARY DUTY TO PRESERVE CAPITAL TO SUPPORT THEIR INSTITUTION?

Pfund/Ehrenpreis: The good news here is that there is no trade-off between investing in climate solutions and upholding the fiduciary duty that endowments have. First, after a century of fossil-fuel driven economic growth, we are witnessing a switch to a lower carbon economic growth model, a transition which provides ample opportunity for rebalancing investor portfolios away from a concentration on fossil-correlated investment that is too heavy. Second, as talented entrepreneurs increasingly choose to start companies that help address climate change, we find ourselves in an innovation cycle, where lower carbon business models are replacing incumbents across a wide range of sectors, including energy, transportation, and food and agriculture. Significant investment upside exists to catch the disruption driven by lower carbon models and translate that into an innovation-rich, 21st century investment framework.

Fuller: A decade ago this would have been a more challenging question. There were few investment strategies available to address the risks of climate change, and at the same time the possible risks of climate change were less well articulated. Today's higher ed endowments large and small have many more investment options to choose from. There are actively managed strategies that have track records competitive with global indices that look to invest in companies providing climate solutions. There are also sophisticated screening strategies intended to limit tracking risk against global indices while focusing their exposures on companies with better sustainability records. In private equity and venture capital, managers are finding opportunities in funding solution-based technologies. Climate solutions and related technologies are generally high growth sectors of the economy providing opportunities for endowments to make equity investments—both liquid and illiquid—that seek returns consistent with their goals. The broadening of the sector over the last decade—beyond a narrowly defined set of speculative industries such as alternative energy to include energy efficiency, water usage, automotive technologies, land conservation—supports the important goal of diversification.

Ma/Mitchell: Investing in climate solutions does not have to be in conflict with fulfilling an institution's fiduciary duty. A thoughtful and thesis-driven investment strategy focused on climate solutions can lead to positive outcomes for both the endowment and the environment.

For institutions with allocations to illiquid investments, we have sourced different sector-specialist managers focused on sustainable real assets, growth equity, and venture capital which provide targeted (yet still diversified) exposure to climate solutions and resource efficiency themes. Some institutions with the ability to pursue direct company investments, or co-investments with private fund managers, can be even more intentional and targeted in their approach. Finally, almost all institutions have the option to deploy equity or debt capital into thematic public markets fund managers focused on companies that deliver products and services to aid in the transition to a more sustainable and climate-resilient economy.

As with any investment strategy, we believe the critical factors for success are: prudent portfolio construction, diversification of economic and market risks, keen awareness of relative value, and rigorous manager sourcing and diligence.

IQEN: WHAT ARE SOME OF THE OPPORTUNITIES YOU ARE MOST EXCITED ABOUT FOR VC/PE INVESTMENTS IN CLIMATE SOLUTIONS – BOTH IN TERMS OF THE SCALE OF THE IMPACT AND THE RISK/RETURN PROFILE?

Pfund/Ehrenpreis: Investing in climate solutions in the VC/PE asset class allows for a significant amount of diversification, both in terms of sector and stage. After over a decade of activity in clean transportation and electricity, investments in energy storage, financing and AI-driven energy trading and management software are extending the utility of clean energy assets already put in place by the first movers in this space. Due to significant cost-reduction, clean energy models, from wind and solar to storage and software, are now also increasingly available to the developing world, where more than one billion people still lack access to reliable electricity. This represents a significant investment opportunity with attractive diversification aspects given the broad geographic reach of developing country markets.

As for impact, without bringing clean electricity to regions of the world that are experiencing rapid growth, we will not be able to capitalize on the once-in-a-generation chance to establish a middle class in many of the countries that will dominate 21st century population growth charts, such as Nigeria. Other areas that are poised to deliver climate benefits and attractive returns include food and agriculture, including food waste, the circular economy, and next-gen space tools which allow us to track climate problems at low price points so as to democratize access to data necessary to creating solutions.

Fuller: Private equity investment is as much about the skills of the managers and the strategies they deploy as it is about the market opportunity. The advancement in quality of managers and sophistication of strategies are what most excite me in today's market.

There has been diversification beyond the traditional 10-year private equity fund structures, which indicates a better understanding of the opportunity set and marketplace. In solar, for example, the traditional private equity fund model probably is not effective. Development needs short- to intermediate-term financing and in-place, cash flowing solar projects cannot achieve private equity-like returns, especially net of private equity fees. As a result you see a bifurcation of strategies between shorter-term debt financing funds and longer-term, lower-returning but income-producing strategies. In venture capital, many groups learned a tough lesson with the first wave of narrowly focused clean-tech venture funds that forced capital into renewable technologies only. Today's venture funds investing in climate solutions more often invest across a breadth of solutions—from alternative dietary proteins to vehicle electrification. The strategies focus on the talents of the entrepreneurs leading the companies, more akin to how venture capital has achieved success historically.

Ma/Mitchell: In our [2016 paper](#) on climate risks and opportunities, we identified five investment themes to “play offense” against climate change: renewable infrastructure; energy efficiency; smart grid; water and agricultural efficiency; and clean transportation. These themes continue to be a focus for certain venture capital and private equity managers. On the venture side in particular, we are seeing emerging scalable technologies such as blockchain and machine learning applied to energy generation, grid management, and fleet optimization, for example. We are also seeing the innovations in computational biology and genomics, historically more prevalent in life sciences, increasingly applied to food and agriculture.

Indeed, we are encouraged by the integration and “weaving” of technologies and business models from diverse industries to produce highly commercial and impactful climate solutions. From a risk/return perspective, these opportunities appear to be quite different from the “moonshot” and often capital-intensive solutions we saw over a decade ago, and the pathway to competitive and critical returns is more clear.

Ndemera/O'Donnell: We are encouraged by the growing number of re-ups in earlier PE funds, indicating investors are comfortable enough to continue the relationship with the firm (as well as a clear continued demand for climate related investments). Some larger established firms with household name recognition can provide a level of comfort to investors as they begin investment in climate solutions. We also are seeing smaller mid-market strategies with very compelling characteristics. All of these are market return seeking and play a role in a diversified private capital portfolio.

IFUND: HOW DO YOU MEASURE IMPACT? WHAT ARE THE CRITERIA GOING INTO AN INVESTMENT AND WHAT FACTORS ARE CONSIDERED IN DETERMINING ITS SUCCESS?

Pfund/Ehrenpreis: We need to invest in companies that will scale, offering solutions to people all over the world and quality jobs for today's and tomorrow's workers. We also look to create iconic companies that will redefine what consumers come to admire and respect in their brands and products. For these reasons, going into an investment, we want to be sure that the company has the potential to grow and scale, and that its leaders are committed for the long haul; in essence, we want to be sure that the company has a more traditional venture capital growth opportunity. We also assess the company's potential for significant carbon reduction, job creation, workforce development and diversity, policy engagement and economic impact in the regions and sectors in which they operate. This is the second bottom line review that accompanies the first bottom line analysis we undertake. From here, we develop quantitative and qualitative metrics to track progress across all of these dimensions. The result is a robust, dynamic, and ongoing assessment of the company's business and social profile. Often, these metrics reveal needs or gaps that can be turned into opportunities for DBL to assist its companies accomplish both first and second bottom line goals.

Fuller: There are two parts to this question—the first is how we measure impact when reporting to clients; the second is how we measure and evaluate impact when recommending a new investment. Once a client has made an investment, or in practice several varied investments, we measure impact based on the information available from managers and third parties. We seek to measure impact in as much detail as possible, but we acknowledge some of the limitations. A lot of progress has been made in the field in terms of measuring impact, but this is an area that needs to see continued consolidation and conformity of metrics. As a result, part of our reporting objective has been to compile available information in a digestible, summarized way for clients in their quarterly reporting. An equity strategy can provide data on revenues of underlying companies from climate solutions. A renewable strategy can provide greenhouse gas emissions data. But often what is provided will be on different and qualitative metrics. Industry-wide metrics for impact developed in relation to initiatives such as the UN Sustainable Development Goals, SASB, or B Corp certifications also provide some impact information. We seek to provide all of this as a holistic view on impact.

For evaluating new investments the criteria and factors considered are examined and assessed through the iterative due diligence process. Spending time with managers walking through their strategies, getting to know the drivers of impact and return in their track record are keys to understanding the true impact of the strategy. For more quantitative strategies it can be understanding the details of the methodologies. Not all screening factors produce the same impact results. For private equity-like investments it is walking through historic investments. Client objectives can often be focused, so providing these details to clients for evaluation can also be a step in the process.

Ma/Mitchell: Prior to committing capital, we work with clients to cultivate an impact thesis for each investment and conduct an initial assessment of critical categories such as: intentionality, scalability, measurability, and additionality. We then track each investment against its thesis and work to identify measurable outcomes, a task that has its challenges. Data is still largely manager reported, particularly in private markets, and typically not auditable.

We think about measurable impact within a few dimensions. Most directly (and narrowly), there are the *absolute* quantitative impact metrics associated with each investment, such as tons of carbon emissions abated, gigawatt-hours of clean energy generated, etc. Then there's the *relative* impact – meaning how do these absolute figures compare with our original thesis and base-case for the investment? While it is often difficult to know in advance the expected impact, especially when committing to blind-pool funds, one can still set a baseline for each investment by engaging with each manager and establishing a clear “impact thesis” up front. Finally, there is the *catalytic* impact: by succeeding or demonstrating additional proof points from a particular investment, one can mobilize additional capital to scale a concept and generate insights that benefit a broader community of market participants. We consider all of these impact factors and criteria at various levels depending on the specific asset class and type of investment.

Ndemera/O'Donnell: Impact is measured by generating a return commensurate with the risk assumed in the investment. But the investment must do more than simply remain agnostic to the organization's mission or simply make sure they aren't in violation of mission. An investment must hew toward solution rather than simply avoid a problem. Basic measurements regarding renewable power generation, reduction of carbon footprint, etc are all easily gained and managers

must get accustomed to providing this information as a matter of normal course. Measurement of impact as viewed through the lens of the 17 US SDGs is also a positive step. From a due diligence perspective there is virtually no difference between criteria examined for a solutions based private investment and any other private investment.