

Two Case Studies on the Financing of Forest Conservation

Andrew Baxter
Connor Cash
Josh Lerner
Ratnika Prasad

Working Paper 20-137



Two Case Studies on the Financing of Forest Conservation

Andrew Baxter

Harvard Business School

Connor Cash

Harvard Business School

Josh Lerner

Harvard Business School

Ratnika Prasad

Harvard Business School

Working Paper 20-137

Copyright © 2020 by Andrew Baxter, Connor Cash, Josh Lerner, and Ratnika Prasad.

Working papers are in draft form. This working paper is distributed for purposes of comment and discussion only. It may not be reproduced without permission of the copyright holder. Copies of working papers are available from the author.

Funding for this research was provided in part by Harvard Business School. Lerner has received compensation from advising institutional investors in private capital funds, private capital groups, and governments designing policies relevant to private capital. All errors and omissions are our own.

Two Case Studies on the Financing of Forest Conservation

Andrew Baxter, Connor Cash, Josh Lerner, and Ratnika Prasad¹

June 2020

¹ Baxter, Cash and Prasad are graduates of the Harvard Business School Class of 2020; Lerner a faculty member at HBS. The two case studies (but not the introductory essay) were reviewed and approved by company delegates. Funding for the development of the case studies was provided by the Harvard Business School Division of Research and not by the companies. The cases were developed solely for discussion purposes, and are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management. We thank our advisory group—Pat Coady, David Foster, and Spencer Meyer—for advice on the project. Lerner has received compensation from advising institutional investors in private capital funds, private capital groups, and governments designing policies relevant to private capital. All errors and omissions are our own.

A variety of factors is leading to fresh approaches to the ownership and management of forestland, with an emphasis on the combination of conservation goals and private investments. But the barriers to successfully achieving attractive financial returns and desirable social outcomes can be daunting. This working paper, which features two short case studies that examine the challenges and opportunities associated with forest conservation finance, explores these important issues.

The Opportunity

The conservation movement, since its origins in the 19th century, has primarily relied on public funding and philanthropic contributions to achieve its ends. This approach led to many important achievements, such as the creation of the U.S. national park system through gifts by individuals as John D. Rockefeller and by public appropriations. But over the past two decades, interest has swelled in a third source of capital for these ends: private investment dollars held by pensions, families, and other investors.

The extent of interest in private sources of conservation finance stems from three sources. The first is the inadequacy of the current resources from traditional sources relative to the demand for such projects. For instance, the Global Canopy Programme (2012) estimated that the total annual expenditure on conservation was on the order of \$50 billion, of which over 80% was from government and philanthropic sources. Ecosystem Marketplace (2016) similarly estimated the annual flows of private investment dollars into conservation in the low billions of dollars, with the bulk of these funds going for sustainable food and fiber rather than habitat conservation. These expenditures lagged by more than an order of magnitude the required annual expenditures needed

to preserve the planet's biodiversity, which Credit Suisse, McKinsey & Co and the World Wildlife Fund (2014) estimate to range between \$300 and \$400 billion. Without private investment dollars, this shortfall is likely to persist indefinitely.

A second driver of interest in private capital is the increasing taste of investors for “real” assets. Among institutional investors, Ivy League endowments made initial forays into this arena. Their investments into oil-and-gas, minerals and mining, and timberland in the 1990s first gave these assets visibility. Natural resource investments were seen as an important hedge against commodity price inflation. Moreover, these assets provided diversification from the corporate and government securities that dominate investment portfolios, and fit long-term investors' time-horizons. Interest in these asset classes has in the ensuing years diffused from endowments to other many classes of institutional investors (Preqin, 2020). In the case of timber specifically, the interest in real assets has coincided with the desire of many timber companies to adopt an “asset light” model

A third opportunity is created by the increased interest in impact investing. From a niche investing segment with only \$25 billion in assets under management (AUM) in 2013 (World Economic Forum, 2013), this style of investing has experienced double-digit growth. It developed into a market with an estimated \$502 billion AUM by the end of 2018 (Mudaliar and Dithrich, 2019).

Impact investors look for investment opportunities that produce both social and financial gains. Impact investing, with its focus on privately held assets, is related to but distinct from

Environmental Social and Governance-focused investing, which typically focuses on public securities. This dual or double bottom line mandate is particularly attractive to individuals and institutions seeking market-oriented solutions to societal problems. As a 2018 report by the Global Impact Investing Network (GIIN) notes, they “aspire to create a world in which social and environmental factors are routinely integrated into investment decisions, as the ‘normal’ way of doing things” (Bouri *et al.*, 2018).²

In response to this awareness, we have seen a variety of innovations in forest conservation finance. In addition to timber management organizations (TIMOs) solely focused on financial returns, we have seen the entry of a number of organizations that seek to combine financial returns and conservation benefits (though the bulk of the capital devoted to forest investing remains with more traditional organizations. We have also seen examples of non-profit organizations offering products with such a “double bottom line” orientation.

The Challenges

At the same time, there are some substantial challenges that forest conservation finance has to overcome before it achieves widespread adoption.

The first of these is convincingly establishing that these investments can achieve an attractive returns—however defined—while remaining true to its conservation objectives. Conservation investments in forestland can generate returns in a variety of ways. These include

² It should be noted that others, however, are skeptical about this emerging activity, with one investor comparing impact investing to “a houseboat. It’s not a great house, and not a great boat” (Upbin, 2012).

the sale of conservation restrictions, as well as carbon and a wide variety of other credits (summarized in Whelpton and Ferri, 2017), to selective harvesting and development (see GIIN, 2019 for an overview).

But almost inevitably, a contradiction exists between the conservation objectives and the financial return maximization. As a result, the annual returns targeted by non-profit project sponsors have been very modest (with the vast majority under 5%) and those by for-profit sponsors only somewhat less so (with the bulk between 5% and 10% (Ecosystem Marketplace, 2016). One of the enduring challenges to attractive returns has been the modest pricing of carbon credits in markets such as California's cap-and-trade system, especially when compared to the estimated social costs of carbon release. Were these credits priced closer to the social benchmark, one might anticipate a far greater range of projects could be undertaken. (Jayachandran *et al.*, 2017 provides an illustration from the developing world.)

Underscoring this challenge is the fact that returns even from traditional financially oriented TIMOs have been modest over the 21st century. In particular, the success of the early investments by the endowments in the 1990s led to extensive entry on the part of new investors. This capital had flooded the market, resulting in very few opportunities to invest in timberland at compelling valuations. This underperformance was documented in the NCREIF Timber Property Index.³ After posting double-digit returns annually between 1987 and 1997, returns declined precipitously. For instance, in the decade ending in 2018, annualized index returns were 3.8%, half of that of real estate and far lagging major equity indices.

³ This index is compiled at <https://www.ncreif.org/data-products/timberland/>.

A second challenge has been structuring the investment opportunities in a way that can attract institutional funding. Behind this broad statement lies a diverse set of issues:

- **Framing:** Many conservation finance investment proposals may encounter investors who are skeptical of the risk/return tradeoffs at work. To communicate effectively the opportunity requires knowledge and communication skills that are often not found within conservation organizations. More generally, even in proven asset classes, investment groups find first funds extremely difficult to raise.
- **Sizing:** Many projects may be too small to attract interest from major institutional investors that have many billions of dollars to deploy annually. To the extent that obtaining ratings from the credit agencies is an essential to their interest, the small size of many deals may also be a handicap.
- **Metrics:** Many investors may be concerned that the investments may not generate the promised conservation returns. In some instances, concerns have been expressed that traditional TIMOs, having experienced modest returns, have rebranded themselves as conservation finance organizations. (These kind of “greenwashing” concerns have manifested themselves in other areas of impact investing as well.) Articulating careful processes and metrics can address these concerns, but can be challenging for many organizations to develop.

The Case Studies

We seek to illustrate the issues regarding forest conservation finance with two case studies. One of these focuses on the supply of financial offerings; the other on the demand for these. More

specifically, an a novel green bond product offered by the Conservation Fund geared toward investors who seek financial and conservation returns; the other takes the perspective of Sonen Capital, an impact-oriented fund-of-fund that invests in forest finance as well as in a variety of other green initiatives.

While we do not wish to preempt the readers' reading and reflections on the cases below, three lessons stand out to us:

- The challenges of the risk/return trade-off. The appeal of “doing well while doing good” is undeniable. But in their enthusiasm for harnessing investment capital for socially beneficial purposes, advocates of impact investment sometimes elide over the fact that the pursuit of social benefits may adversely affect financial returns. Forest conservation finance starkly illustrates this more general trade-off: changes in the rate of timber harvesting frequently affects sustainability goals and financial returns in opposite ways. While we are optimistic that will a middle ground of projects with financial and impact characteristics that are attractive to a set of investors, the inherent trade-offs deserve thoughtful discussion and analysis.
- The rewards of scale. One defining characteristic of the investment world is the uneven distribution of capital. And large pools of capital almost by definition must write large checks. Moreover, even the involvement of intermediaries such as rating agencies and investment banks requires a minimum efficient scale. The cases highlight a major challenge for an emerging asset class such as forest conservation finance: creating enough scale to broaden the pool of investment.

- The power of positive examples. The corollary of the second bullet is the exceptional skills required of investment groups that are pioneering these new impact investment classes. Success requires a simultaneous ability to navigate the financial and environmental worlds, to educate as well as to invest, and to resist the “easy way out” that can lead to compromising these goals. This combination of skills are certainly not commonplace. But such pioneers can have enormous positive spillovers in legitimizing an asset class.

Green Bonds: An Innovative Offering by The Conservation Fund

Introduction

The Conservation Fund (TCF) is a non-profit organization founded in 1985, with a mission to protect America's legacy of land and water resources through land acquisition, sustainable community and economic development, and leadership training. In its work, it emphasizes the integration of economic and environmental goals. Within TCF, its Working Forest Fund (WFF) seeks to protect forests of exceptional conservation value from fragmentation and development, emphasizing permanent conservation outcomes and rural economic resilience through a financially sustainable business model.

TCF estimates that over the next 30 years, thirty-seven million acres of privately held forests in the United States will be at high risk of fragmentation and development as they are sold. Of this total, five million acres are considered to be of exceptional conservation value. The public and private organizations that seek to permanently protect these forests are often unable to buy these assets when they become available, due to a lack of immediate access to large amounts of capital, or the ability to form partnerships or syndicates quickly enough to compete with financial buyers. TCF has a long history of supporting public agencies and their conservation ambitions by acting as an interim owner, or to assist in arranging a conservation transaction with multiple parties. However, the urgency and size of the challenge posed by large forest assets coming to the market required capital at a scale beyond anything TCF had dealt with in the past. Over the past nine years, TCF has successfully acquired and protected over 650,000 acres of critical forest land and proven that its model is financially viable. The question was whether it could attract sufficient

additional capital to achieve its longer range objective of conserving those 5 million acres coming up for sale over the next 10 years?

The cost of high quality working forest land varies across the United States, but on average TCF expects to pay about \$1000 per acre. Therefore, each additional one million acres will require \$1 billion of acquisition capital. As a result, and with the strong backing of its board and senior management team, TCF started exploring different funding paths in early 2018 to realize its growth ambitions.

Options for Funding

The Working Forest Fund was initially funded with \$200 million through grants and low interest loans from foundations and state agencies. This initial funding had a blended cost of less than 1% and gave TCF a strong hand to compete at auction when it identified forests that met its strict criteria. Unfortunately, the funding sources behind this capital structure were not deep enough to help TCF realize the full scale of its mission opportunity. In addition to low cost, TCF was looking for funding that would (1) not compromise its ability to manage the forests for conservation by demanding high returns, (2) not impose financial covenants that would restrict TCF, and (3) not require collateral or create issues with its existing lenders. Most importantly, TCF wanted to use the financing as an opportunity to raise its profile in the capital markets and philanthropic community as an innovator and business minded conservation organization.

The unique attributes of each fundraising avenue provided TCF with choices, including how to best access capital over the long term and how to access the widest array of financial

investors to increase demand. The decision to raise capital with a green bond was ultimately chosen after carefully considering the alternatives.

Option 1: Fund Raising via Philanthropic Donors

While raising capital through donations by philanthropic donors had been the dominant way in which TCF had historically raised capital, it could also be one of the most difficult. First, most foundations that are focused on conservation are willing to fund specific projects only in narrow geographic areas. TCF operates across the country and needed a committed pool of capital without being in a position to tell funders exactly where the money would be spent. Secondly, TCF did not have a large staff dedicated to philanthropic fundraising because this degree of new capital had never been required in the past. Finally, the landscape is changing quickly with more funders interested in nature-based solutions to climate change and other mission objectives like protecting rural economies. As a result, TCF would have needed to put new acquisitions on hold for some time if it chose to raise this type of funding first.

Option 2: Raising Private Equity Back End Fund

Another option available to TCF for consideration was to raise private equity from one (or multiple) investors such as pension or sovereign wealth funds. By raising a substantial private equity fund, TCF would have the flexibility to control the pace of capital deployment (these funds typically have eight-to-ten year lives) and would not need to worry about having to go back to the market frequently for funding.

However, there was a major concern due to the mismatched return profile expected from the private equity investor (perhaps an annualized return of 12% or 15%) compared to the return profile from a traditional forestry conservation project. Moreover, regardless of risk and return profile, many of these investors are themselves, or manage, pension funds where they have a fiduciary duty to maximize returns to their beneficiaries. As a non-profit entity, TCF does not make that claim to its funders. It has to operate for the public benefit, and in this case that conservation purpose will usually lead TCF to cut fewer trees and focus more attention on improving the habitat of its forests than trying to make the most money possible for investors.

Option 3: Revolving Credit Facility, Private Placement or Private Syndicated Loan

While private equity investors would expect a market return, those providing debt would have more modest expectations in return for a lower risk investment (i.e. a legal contract to pay interest and return capital at maturity). Another possibility was thus a private debt placement, either to a group of banks (syndicated loan) or insurance companies (private debt placement). A related option would be a revolving credit facility (where the borrower has the ability to draw down or withdraw, repay, and withdraw again). The lower return expectations would avoid some of the problems anticipated with a private equity financing.

On the other hand, all of these options would involve a very narrow marketing process and only a few bank or insurance companies holding the TCF debt. One key goal of the fundraising process for TCF was the market education: ideally, if this offering was successful, it would build visibility for future offerings by both the forest conservation industry broadly as well as TCF itself. A private debt offering marketed to a handful of institutions would not accomplish that goal.

In addition, a private placement, credit facility or syndicated loan would have likely included restrictive covenants due to the illiquidity of the instrument, which would potentially limit the flexibility of the WFF to deploy capital in line with its mission. Even worse, the forests might be required by the lender to be used as collateral, which would set a precedent for other lenders to TCF to demand the same.

Option 4: Program Related Investments

Traditionally, foundations would invest their endowments with an eye to making returns equal to or above the market as a whole, while giving out grants on which they did not expect to receive any return. In recent decades, however, a third course has become more popular: program-related investments (PRIs). In these cases, foundations invest some of their capital (frequently in the form of loans) in organizations or projects that are congruent with their mission. Foundations are also able to count such PRIs against their minimum distribution requirements. Return expectations from PRIs are typically very modest, sometimes as low as zero percent (i.e., return of the principal but nothing more) or just a few percent.

TCF has been a prolific user of PRI loans, especially in the conservation sector. Unfortunately, the number of foundations willing to make PRI loans has been limited (although improving), and like bank or insurance debt, it is targeted to specific projects. As a result, TCF determined that it wouldn't be possible to arrange a significant fraction of the PRI market: despite a few dramatic moves such as the Ford Foundation's decision to commit up to one billion dollars to PRIs, the pool of capital was still quite modest.

Why a Green Bond?

Instead, TCF took a different path. It set out to raise a “Green Bond”: the first ever specifically for the purpose of conserving working forests in America. Green Bonds emerged as a new form of environmental financing in 2008, when the World Bank came together with SEB (Sandinaviska Enskilda Banken AB) to raise funds from fixed income investors as a way to support World Bank lending for eligible projects that seek to mitigate climate change or help affected people adapt to it. Green Bonds refer to debt securities whose proceeds are used to make investments or finance activities in the fields of renewable & alternative energy, energy efficiency, climate resistant infrastructure, low-emission transport, waste management, recycling and pollution control, sustainable water management, and sustainable agriculture & forestry. By 2017, the amount of outstanding Green Bonds had grown rapidly to nearly USD 900 billion (Pawlowski, 2018).

TCF hoped that the proposed offering would be a major step forward in conservation finance. Given that Green Bonds are widely distributed by the underwriter(s) with a prospectus and road show, and sold in small denominations that can be traded in the open market, they closely resemble the process of selling an initial public offering (IPO) of equity. The prospect of an effective “debt IPO” would allow The Conservation Fund to raise awareness of the organization and its mission in the market. This made a public offering more attractive than the option of private placements, even though the fundraising process would take longer. Raising debt in the public markets would give TCF a powerful marketing tool. The bond prospectus would lay out its mission and its business model in full detail, giving investors unprecedented access into the inner workings

of a conservation non-profit. The offering allowed TCF to emphasize the work of its Working Forest Fund, highlighting its economic sustainability as well as its conservation goals. Additionally, a debt offering would provide a simple and repeatable structure to enable the Working Forest Fund to be able to scale meaningfully.

However, TCF and its Working Forest Fund operated with a very low margin. “If the interest rate demanded by investors in the debt IPO turned out to be too high, TCF would be in a humiliating position of having to cancel a transaction and lose the public profile benefit, or accept a deal that was so expensive as to create stress on the organization to pay the interest” explained John Gilbert, TCF’s Chief Financial Officer. Larger interest payments, coupled with tight margins, might have forced the WFF to generate additional economic returns in the short term in a way that conflicted with their mission, i.e., by aggressively logging forests under their management. Gilbert described how they managed this risk:

TCF began a number of conversations with bankers and rating agencies to determine where the pricing for such a unique bond might end up. Based on that feedback, TCF asked its board for permission to hire a major credit rating agency to assign a confidential preliminary credit rating. If TCF could get a sufficiently high credit rating, it would remove a lot of uncertainty on pricing and almost insure an affordable interest rate. And if the rating was too low, TCF could pursue another financing strategy without further cost or public knowledge.

John Gilbert had previously worked at JPMorgan’s investment bank and had managed dozens of debut bond offerings for his clients. As a result, he and the TCF team were able to navigate the rating agency process without hiring an investment bank to advise and support them. Part of the challenge for the TCF team was to assemble all the required financial information (which they had never needed to do previously) and then to explain how TCF and the Working Forest Fund operated. “The absence of comparable issuers and credit rating methodology created

more uncertainty on the outcome. But it also meant that if TCF could make a strong in-person management presentation, the rating agency might put more emphasis on qualitative factors,” Gilbert noted. After two months of hard work, TCF got the needed confidential indication of what its bond offering would be rated, and it was time to hire bankers and prepare the offering materials.

Structuring the offering

One of the advantages of the bond market is that the incredible depth and diversity of investors means that there is usually demand for a wide range of maturities and issue sizes. For TCF, thinking about the structure of the deal meant balancing a number of factors: (1) how much money could it invest in forest projects in a reasonable amount of time (6-18 months), (2) how much interest expense could the organization afford to pay and how much incremental cash flow could be generated with the bond proceeds, (3) how long would TCF need to pay back the debt from the completion of the projects, and (4) what would be the preference of the targeted investors for maturity and minimum deal size. In this case, TCF management quickly honed in on an offering of \$100 million to \$150 million and a ten year maturity, but they kept an open mind to adapt depending on market conditions. The management team had also discussed this hypothetical structure with the rating agency, so there would be some degree of risk that the rating indication could change if TCF issued a larger amount of debt.

TCF’s initial thoughts were also supported by the investment banks it interviewed. Leading up to the actual decision to proceed with the rating and offering, TCF had met with a variety of bankers and built relationships to prepare for the project. As a result, the bankers knew TCF well, understood the credit story, and could make detailed recommendations on the optimal

way to execute the offering. After asking three banks for a formal proposal and conducting final in-person presentations with TCF management, TCF received strong proposals from all three. In many cases, an issuer will hire more than one bank and ask them to work together as a team to place the offering. TCF felt that the relatively small size of its offering and the unique story it wanted to tell would be best handled by one bank who would hold all the accountability for the syndication of the bond. So TCF selected the bank that made the most detailed plan for distribution and the strongest commitment to achieving TCF's broader objectives.

The next step was to organize the bank, lawyers for both TCF and the bank, and the management team to prepare the offering memorandum, often called a prospectus, for the transaction. Internally, as a nonprofit, building an offering document and putting its story and mission into numbers was daunting. TCF had never shared such detailed information publicly before. Moreover, detailing transactions in a way that would stand up to the scrutiny of analysts required members of the organization to become familiar with reporting in the same way as multinational corporate bond issuers. TCF worked hard to ensure that this was done successfully, including providing an independent, second-party opinion from Sustainalytics for additional impact metric clarity to investors. TCF management also saw this as an opportunity for TCF to lead in strengthening disclosure, by continually improving its own transparency as a non-profit, and creating a document that could be shared with all sorts of partners to explain its operations and to attest to the business-minded approach of its strategy.

Placing the Bonds

After an extensive preparation period, TCF and the working team finished the prospectus in August of 2019 and prepared a roadshow presentation and timetable to build demand for the offering. Once all was in place, TCF made a public announcement of its intention to issue securities and the rating agency announced its public rating for the transaction.

On August 21, 2019, Moody's assigned The Conservation Fund's \$150 million bond offering an A3 rating. Supporting the A category rating was the diversity and long-standing nature of the Fund's relationships with government agencies, local conservation trusts, and the private sector. The A rating also reflected the real estate value of the conservation land to which TCF holds title at any given time, because the land is a reliable source of future revenue at any time. TCF's strong governance and management strength also supported the rating, as did the Fund's rigorous review process for land acquisition. At the same time, the strength of the rating was constrained by limited financial resources, the illiquidity of the Fund's portfolio, and the level of the interest expenses in relation to the anticipated revenues generated.

Immediately after Labor Day, TCF announced the roadshow and timetable for the transaction via its bank partner, Goldman Sachs. Over the next two weeks, TCF conducted individual and group meetings with investors, and conference calls. As the marketing progressed, Goldman and TCF discussed investor feedback and pricing indications to determine the lowest interest rate that would attract sufficient orders and a successful syndication of the new bonds.

TCF got a strong reception from impact and ESG oriented fund managers for its innovative conservation model and the ability to see real, on the ground results from how TCF would invest

the proceeds and create both economic and climate benefits. When the final orders were received, investors oversubscribed the \$150 million offering by 2.5 times and TCF was able to price the bonds at a rate of 3.47% on September 19, 2019.

The Future

The successful completion of the Green Bond offering bodes well for the future. The coverage of the Green Bond offering raised TCF's profile across numerous media outlets and among both the financial and philanthropic sectors. This has already resulted in new funding opportunities, partnerships and conservation projects as a result. Moreover, based on the success of the initial bond offer, TCF believes it is well positioned to return to the market, although there are no current plans for another offering.

Additionally, a key aspect of the fundraising process for TCF was the market education that went hand in hand with the broad marketing exercise for both the investors as well as the forest conservation industry. It is possible that other environmental non-profit with sustainable economic models may be able to use the TCF offering as an example of how it could raise capital in order to expand the scope of its impact.

As of November 12, 2019, over \$75 million out of the \$150 million raised has been deployed. This has protected over 128 thousand acres of forest, created or maintained 750 jobs, and sequestered nearly 30 million tons of CO2 equivalent.

Remaining Challenges

TCF's success with issuing this green bond, with its clear and concise use of proceeds and reporting of impact metrics, has created a model for other non-profits that wish to explore raising debt. However, a few key challenges remain for broader use of this type of funding in the non-profit space.

First, the size of most potential offerings can be an impediment for issuers and investors. Investors would ideally like larger deals that will be easier to trade in the secondary market and that may be included in various bond indexes. Currently, that threshold is roughly \$500 million, much more than all but the largest non-profits can manage. At the same time, issuers need flexibility to access capital in smaller size and may not be able to achieve requisite credit ratings due to their size and credit quality.

Raising capital in the capital markets also continues to be a learning experience for forest focused conservation organizations. First and foremost, most players remain uncertain about the type of data related to impact metrics that is critical to provide to investors. The appropriate impact metrics data can be difficult to identify and expensive to collect. At the same time, it is critical in providing evidence to investors about the nature and extent of the impact. One potential way to resolve this issue would be to standardize the nature and extent of impact metrics that must be disclosed to raise private capital.

The TCF team noted that there has been some movement in this direction, such as the work of sovereign wealth funds to set a common series of impact metrics. However, even these steps

raise concerns about the need to balance standardization with scope for innovation, as different types of environmental interventions may yield impact on different metrics.

Second, many non-profits lack familiarity with how to navigate capital markets. Individuals with capital markets experience on the non-profit side have proved critical in moving forest financing forward, as seen in the experiences of The Conservation Fund and The Nature Conservancy. Going forward, it is crucial to think about how to address this experience gap and help non-profits navigate the capital markets more effectively.

In conclusion, the Green Bond by TCF was a major step forward in the future of forest financing. But it also raised a series of questions that need to be effectively addressed, if non-profits are to continue raising private capital to address deforestation. Nonetheless, as the market matures, more players and more innovative forms of financing can be expected to be seen.

Sonen Capital: Impact Investing in Timberland

Andrew Baxter, Connor Cash, Josh Lerner, Ratnika Prasad, and Rick Weyerhaeuser

Introduction

Sonen Capital is an impact investment management firm, whose mission is to provide their clients with competitive financial returns alongside meaningful positive social and environmental impact (Sonen Capital, n.d.-a). For Sonen's managers, being able to achieve impact is part of their portfolio construction: impact affects risk, returns and value expectation. Sonen Capital was co-founded by Raúl Pomares and Stuart Davidson (HBS '84). Pomares worked previously as an investment manager, private banker, and consultant with prominent global financial institutions. He specifically provided expertise across a broad range of impact investment sectors to create an integrated manager research and portfolio construction methodology for investors. Davidson contributed his experience in the private equity markets as both a tech and impact investor as well as an empathy for the needs of the asset owners having served as a trustee and investment committee member in a number of settings. Sonen also draws upon the real assets experience and knowledge of David Hood (HBS' 85), who before joining Sonen oversaw an investment portfolio of \$9B in AUM in real estate, private equity, and natural resources at Stanford Management Company.

Sonen takes a team approach for all its investments – both in the private and public markets. Its Investment Committee is responsible for all buy and sell decisions made on behalf of its clients and funds. Certain members of Sonen's investment team, however, have specific domain expertise which allows them to draw upon unique perspectives in certain sectors in which it invests. For

example, Rick Weyerhaeuser, Director, Senior Natural Resource Strategist, adds over 35 years of conservation and natural resource experience to the team. Sonen leverages Weyerhaeuser’s experience at the Sustainable Resource Fund and the Lyme Timber Company, both private equity firms focused on sustainable investments in working lands and timber, as well as his extensive non-profit background in conservation, in particular, developing sustainable forestry programs (Sonen Capital, n.d.-b).

Sonen’s impact evaluation and measurement methodology are best described using their Impact Investing Spectrum (*Figure A*).

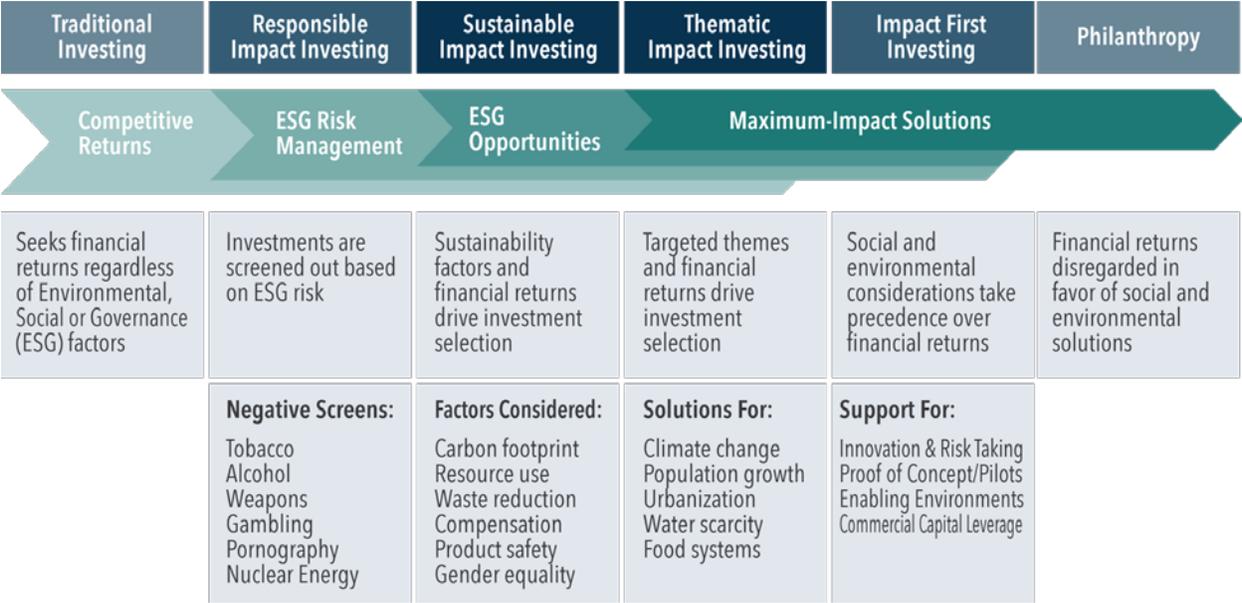


Figure A: Sonen Impact Investing Spectrum (Source: www.sonencapital.com)

Sonen’s primary focus is within the “Sustainable” and “Thematic” areas of this spectrum, where both financial returns and impact are optimized.

Sustainable Impact Investing actively identifies investments across asset classes that exemplify high performance along Environmental, Social, and Governance (ESG) standards and

criteria. These investments can take the form of both equity (typically publicly traded) and debt. Public equity provides exposure to companies that lead in their focus on sustainability, and social and environmental impact, while also featuring superior management that they believe will result in attractive returns. Fixed income investments are chosen for strong financial profiles, in addition to supporting impactful social and environmental work (Sonnet Capital, n.d.-c).

Thematic Impact Investing incorporates highly targeted investments, in which broad social and environmental trends create opportunities for investors - typically through private markets. Included in Sonnet's private market strategies is a real assets portfolio that provides investors with access to managers that directly contribute to large scale environmental impact outcomes. Examples include renewable energy, green real estate, environmental infrastructure, land and water, agriculture, and forestry. Ideally, investing in real assets helps Sonnet's clients diversify their portfolios and hedge inflation risk (Morgan, 2016). Sonnet's investments in sustainable timber fall into this category.

Timberland Investments

Starting in the 1980s, investor pressure, leveraged buyouts, hostile take-overs, mergers and changes in risk management strategies in the U.S. forest products industry resulted in large amounts of forestland and other assets being sold off by major paper and timber firms. Additionally, some forest product companies were motivated to sell in order to avoid attracting unwanted scrutiny surrounding their forest management practices (Binkley, 2007). The resultant flood of forestland for sale created an opportunity for others to buy these assets at reasonable prices.

A new class of investment manager emerged to take advantage of this opportunity. Timber investment management organizations (TIMOs) invested money on behalf of pension funds, endowments and other institutions looking to diversify their portfolios through investment in real assets. Timberland was considered a low-risk asset class with good fundamentals and low correlation with public equities and bonds, low volatility, and inflation-hedging characteristics. The natural biological growth of trees which was unrelated to financial cycles, and the optionality of harvesting when markets warranted were also seen as unique selling points (Weyerhaeuser, 2005).

But the rapid growth in the number of TIMOs and the race to invest new capital in timberland drove up prices. Returns during the period of 1987 to 1999 showed an average annual return of 19.1% (Hourdequin, 2017) as measured by the National Council of Real Estate Investment Fiduciaries' Timberland (NCREIF) Index. While this flood of new money into a static resource helped returns for early investors, including a number of large endowments, results for investors that followed were less attractive. Between the market trough in the first quarter of 2009 and the end of 2016, a period of robust public and private equity returns, the NCREIF Index showed an average annual return of only 4%. These disappointing results, given high initial expectations, caused many investors to reconsider, concluding that forests as an asset class had been oversold. Rick Weyerhaeuser explained the complexity of the situation further, "Most investors couldn't just sell and walk away. They were locked up in TIMO private equity funds and TIMO managers didn't want to sell and realize low returns or losses. It took time for funds to run their course and for markets to adjust to the new realities as new money dried up."

By 2020, however, the asset class seemed to have stabilized to some degree. Investors were still attracted by some of the same fundamentals as in the past, but the peculiarities of forestland investments were more widely understood and more accurately priced. TIMOs are now expected to offer mid to high single digit returns with reasonably steady cash flows and can be a useful tool for optimizing diverse investment portfolios (Hourdequin, 2017). In particular, the expectation of low correlation to equity markets, favorable tax benefits, and inflation protection remained important lures.

The emergence of many more investors with an ESG mandate and an explicit impact investing mission had also changed the market dynamics. Some of these investors were attracted to timber, given the sought-after combination of the promising financial characteristics delineated above, and the strong positive environmental impact of sustainably managed timber operations.

One component in particular intrigued impact investors - improved means to measure the environmental outcomes of sustainable strategies, both in the short term through programs to certify forest management practices and in perpetuity through the sale of conservation easements that would bind future owners. While accurate measurement of financial returns is standard, mission aligned investors were also interested in similar metrics on environmental impacts. They looked to intermediaries like Sonen to measure and articulate the impact of such investments. The potential impact of timberland investing was broad. Among the quantifiable measures that Sonen considered when making these investments was acres under conservation easement, jobs maintained and supported, carbon sequestered, amount of sustainable timber harvested,

preservation of threatened and endangered species, and watershed impacts. As indicated now and well into the future, assessment of these impacts is a critical part of Sonen's work.

Assessment of impact

Identifying the funds that met Sonen's standards on both financial returns and impact was a complex balance. Given the wide variation in how funds themselves defined, assessed, and reported their impact over time, Sonen crafted its own methodology to rigorously define and assess impact. This process had three phases:

Strategy

Identifying the right group of asset managers with the proper focus on impact creation was critical. Sonen tried to differentiate between opportunities where impact was created incidentally or as a byproduct, from those for whom impact was intentional. They focused on managers that specifically pursued an approach where impact was core to their strategy - intentionality. Assessing how clearly the manager could articulate their approach to investing, the type of sustainability they were trying to achieve, and their long-term vision, were critical components of finding investments that fit.

Execution

Beyond vision and mission, Sonen also conducted extensive due diligence to understand the alignment between the stated strategy and the actual actions of the asset management firms that it considered. Alignment between the stated sustainability goals and the portfolio holdings was critical - "Greenwashing" was not allowed. It was a "Red Flag" if a manager made a public commitment to ESG but had investments in its portfolio that clearly violated those same ESG criteria. For example, if a fund included exposure to oil and gas or mining, Sonen would pass despite what claims a manager might make about sustainability. Moreover, Sonen actively sought investments that provided positive impact contributions, as opposed to simply screening out of those that violated their ESG criteria. They considered

the overall impact contributions, not only of the investment itself, but of its effect on the communities and related supply chains which would be impacted.

Fit

A final critical strategic consideration was understanding whether a manager specifically targeted the definition, scope, and type of impact criteria that Sonen sought. Alternatively, if the fund had experienced some sustainability outcomes as a by-product of the regular handling of its investments, rather than by design, and without management and stewardship efforts, this would be taken into consideration. A subtle yet important distinction around “intentionality” throughout the broad reach of an investment is important to Sonen in judging the ability of the managers to continue maintaining a high level of impact going forward.

Moreover, the “additionality” of an investment was also a crucial consideration with regards to assessing the fit with Sonen’s fund. Considering this issue has been important for Sonen when judging whether an investment provided additional impact by providing capital to projects that may otherwise not have been able to access it. As Will Morgan, Head of Impact, put it: “Understanding where we can *deepen* or *widen* impact and whether our investment enhances the appeal of sustainable forestry investments in the larger market is a major question we ask when considering an opportunity”.

Lyme Timber

An example of Sonen executing upon these principles was its investment in The Lyme Timber Company (“Lyme”), a private timberland investment manager that focuses on the acquisition and sustainable management of lands with unique conservation values. At a high level, Sonen had identified sustainable forestry as a potentially attractive market opportunity. In particular, the sale of conservation easements and carbon credits could generate substantial returns of capital early in the transaction. As a

result, these investments were less susceptible to the added risk of timber price fluctuations and cash flows from harvests, an issue that hurt many traditional forestry investments.

When examining each of the three pillars of investment evaluation (Strategy, Execution, and Fit), Lyme appeared to be a strong candidate for Sonen. Strategically, the intentionality of Lyme in focusing on how to create impact has been evident since early in the firm's history and differentiated it from many other TIMOs. In particular, Lyme was one of the first managers to consider the sale of conservation easements as a strategy for many of its investments. On execution, Lyme had historically performed well relative to its peers, both financially and on the impact front. Furthermore, Lyme's detailed level of reporting gave Sonen great comfort in their ability to understand, evaluate, and incorporate impact into their business model for the long-term, and to communicate this to its investors. This track record also supported Lyme's historical ability to put their impact strategy into practice. Finally, Sonen felt that Lyme's historical performance and focus on impact and sustainability would be a good fit for its investors.

Looking Forward

The continued development of carbon markets was another factor that lead Sonen to favor conservation based sustainable forestry as an investment space. At the same time, concerns remain, especially regarding scalability.

Demand side outlook

There are several factors that support a positive outlook for Sonen's future ability to invest in timber. The potential for continued growth of national (and even global) carbon emissions trading systems, alongside the development of voluntary carbon markets, means that there may be a continuing and increasing demand for forest carbon credits both nationally through the California Protocol – CARB (California Air Resources Board) and through the international protocol - REDD+ (Reducing Emissions from Deforestation and Land Degradation) which has come out of the Kyoto and Paris climate change

negotiations. In addition, the formalization of carbon credit markets would be expected to expand the market for conservation easements as well. Investors with experience in evaluating carbon credit transactions will be well-positioned to take advantage of expanding markets for such services.

New entrants

As the market for impact investing continues to develop, a key trend has been the entrance of traditional large-scale private investment funds into the space. In 2018 alone, the number of sustainable funds offered to US investors increased by 49% (a total of 351 funds) (Hale, 2019). The introduction of impact funds organized by large traditional investors, such as KKR's \$1 billion Global Impact Fund and the second Rise Fund offered by TPG Capital, was one manifestation of this interest.

The effect of traditional capital players entering the sustainability space is likely to be positive for several reasons. First, it enhances the credibility of the impact investing sector, suggesting that consistent returns and impact generation can go hand-in-hand. Second, this growing entry of traditional investment funds is likely to focus more on ventures for impact in spaces such as education, healthcare and, increasingly, agriculture. In these sectors, there has been a growth of entrepreneurship using technology to develop new solutions to drive impact in relatively shorter time frames. These new technology ventures create opportunities that traditional investment funds are more familiar with. Moreover, given the longer time frame within which timberland and forestry investments operate and the lower investment return profile, it seems unlikely that traditional private equity investment funds will move significant capital into this space. Rather, it seems likely that private equity investors in forestry will likely be deployers of patient capital - more established institutional investors, flagship impact funds, and other specialized managers such as family offices with long-term time horizons. Hence, the trend of new entries is expected to be differentiated from traditional private equity and should provide needed stability to the space.

Supply side issues - Scalability concerns for international expansion

While the outlook is positive from the demand side, concerns remain on the supply side. One important issue is the scalability of a sustainable forest investment model. In particular, Lyme's model of acquiring forest land and selling conservation easements for an upfront return of capital has had limited success outside of North America, both because of different land tenure structures with fewer private property rights, and because of lack of sufficient conservation funding to purchase easements at scale. There are exceptions: Costa Rica's National Fund for Forest Financing (Fondo Nacional de Financiamiento Foresta) has run a successful government funded program known as Pago por Servicios Ambientales (PSA) since 1996 (Madeira et. al., 2013). But the expansion of this model to other developing markets has been extremely limited and restricted to the public sector.

In the absence of strong legal and regulatory frameworks and philanthropic and public funding, it is not clear that the model of private investment in TIMOs and the sale of conservation easements can expand significantly beyond existing geographies. Additionally, the nature of the forest makes a difference. Most developing country forestry investments are in short rotation monoculture plantations which are less important for conservation than natural forests. There are few examples of truly sustainable forestry in highly biodiverse and ecologically complex tropical forests. Temperate zone, mixed hardwood forests, on the other hand, regenerate naturally, while temperate pine and fir forests can be restored given time and good forestry applications. But, of course, climate issues will complicate all of this in as yet not fully understood ways.

Rick Weyerhaeuser acknowledged the supply and demand challenges saying simply, "There are not a lot of managers like Lyme. Conservation deals are limited by the amount of money available to pay for easements. It would be challenging for a TIMO to put \$1 billion or more in private capital to work using Lyme's model due to the relatively small amount of public and private funding for easement sales." However, carbon deals have strong growth potential given the scale of the climate crisis and the demonstrated demand for carbon credits in both the regulatory and voluntary markets. Investing in natural

solutions appears to be the fastest and most efficient way to address carbon pollution. This growing market may present an opportunity for Sonen to invest further in sustainable timberland.

Will Morgan acknowledged that the ambiguity surrounding what constitutes an impact investment is unlikely to go away soon, given the differences in opinion and perspective. Sonen's response to address the ambiguity around their impact is through disclosure of clear, measurable indicators in their annual impact reports. Through these reports, Sonen provides clear metrics and outputs. Sonen's investors can see that their investments in sustainable timber directly address protecting the ecological health of forests while considering local community interests, and also generating attractive returns.

References

- Binkley, Clark S., 2007, *The rise and fall of the timber investment management organizations: ownership changes in US forestlands*, Pinchot Institute for Conservation, <https://www.pinchot.org/files/Binkley.DistinguishedLecture.2007.pdf>.
- Bouri, Amit, Abhilash Mudaliar, Hannah Schiff, Rachel Bass, and Hannah Dithrich, 2018, *Roadmap for the future of impact investing: Reshaping financial markets*, Global Impact Investing Network, https://thegiin.org/assets/GIIN_Roadmap%20for%20the%20Future%20of%20Impact%20Investing.pdf.
- Credit Suisse, World Wildlife Fund, and McKinsey & Co., 2014, *Conservation finance: Moving beyond donor funding toward an investor-driven approach*, Credit Suisse, <https://www.besnet.world/conservation-finance-moving-beyond-donor-funding-toward-investor-driven-approach>.
- Ecosystem Marketplace, 2016, *State of private investment in conservation 2016: A landscape assessment of an emerging market*, <https://www.forest-trends.org/publications/state-of-private-investment-in-conservation-2016/>.
- Global Canopy Programme, 2012, *The little biodiversity finance book*, 3rd Edition, https://www.besnet.world/sites/default/files//mediafile/LittleBiodiversityFinanceBook_3rd%20edition.pdf.
- Hale, Jon, 2019, *Sustainable funds U.S. landscape report*, Morningstar Research, https://www.morningstar.com/content/dam/marketing/shared/pdfs/Research/Sustainable_Funds_US_Landscape_021920.pdf?utm_source=eloqua&utm_medium=email&utm_campaign=&utm_content=20871.
- Hourdequin, Jim, 2017, *It's not about the trees: Current income, operational execution and fees as drivers of future timberland investment performance in the US*, The Lyme Timber Company, <http://lymetimber.com/wp/wp-content/uploads/2017/09/2017-05-05-Hourdequin-RISI-London-Talk-with-charts.pdf>.
- Jayachandran, Seema, Joost de Laat, Eric F. Lambin, Charlotte Y. Stanton, Robin Audy, and Nancy E. Thomas, 2017, Cash for carbon: A randomized trial of payments for ecosystem services to reduce deforestation, *Science* 357, 267–273.
- Madeira, Erin Myers, Lisa Kelley, Jill Blockhus, David Ganz, Rane Cortez, and Greg Fishbein, 2013, *Sharing the benefits of REDD+*, The Nature Conservancy, https://www.conservationgateway.org/Documents/tnc_benefit%20sharing_web.pdf.
- Morgan, Will and Danielle Ginach, 2016, *Sonen Capital 2015 annual impact report*, Sonen Capital, <http://www.sonencapital.com/wp2015/wp-content/uploads/2016/04/15AIR.pdf>.

Mudaliar, Abhilash, Rachel Bass, Hannah Dithrich, and Noshin Nova, 2019, *2019 annual impact investor survey*, Global Impact Investing Network, https://thegiin.org/assets/GIIN_2019%20Annual%20Impact%20Investor%20Survey_webfile.pdf

Pawłowski, Maciej, 2018, Diversification of the global green bond market, *European Journal of Service Management*, 27(3/2), 331-337.

Preqin, 2020, *2020 Preqin global natural resources report*, London, Preqin.

Sonen Capital, n.d.-a, *Our story*, <http://www.sonencapital.com/about/>.

Sonen Capital, n.d.-b, *Team*, <http://www.sonencapital.com/team/>.

Sonen Capital, n.d.-c, *Impact investing spectrum*, <http://www.sonencapital.com/impact/methodology/>.

Upbin, Bruce, 2012, Impact capital is the new asset class, *Forbes*, September 18, <https://www.forbes.com/sites/bruceupbin/2012/09/18/impact-capital-is-the-new-asset-class/>.

Weyerhaeuser, Rick, 2005, *An introduction to timberland investment*, The Lyme Timber Company, http://osi.convio.net/site/DocServer/Weyehauser_TimberPrimer.pdf?docID=2442.

Whelpton, Leigh and Andrea Ferri, 2017, *Private capital for working lands conservation*, Conservation Finance Network, <https://www.conservationfinancenetwork.org/2017/04/04/report-private-capital-for-working-lands-conservation>.

World Economic Forum, 2013, *From the margins to the mainstream: Assessment of the impact investment sector and opportunities to engage mainstream investors*, World Economic Forum, http://www3.weforum.org/docs/WEF_II_FromMarginsMainstream_Report_2013.pdf.