

EMEEF

AN IMPACT INVESTMENT CASE STUDY

Edited by Nick Flores



Edwards Mother Earth Foundation

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
INTRODUCTION	4
BACKGROUND	6
THE FIRST THREE YEARS	9-36
YEAR 0	9
YEAR 1	15
YEAR 2	21
YEAR 3	29
CONCLUSION	37
GLOSSARY	41
APPENDIX A Asset Class Segmentation	42
APPENDIX B Time Line	43
APPENDIX C Performance History	44
APPENDIX D Vintage Year Diversification	45

EXECUTIVE SUMMARY

In 2014, the Edwards Mother Earth Foundation (EMEF) decided to invest its entire endowment with the intention of generating measurable environmental benefits and competitive financial returns. Defined as impact investing, the approach enables investors of all kinds – foundations and families, institutions and individuals – to align their assets with their values. Equipped with a \$35 million portfolio, EMEF is a true pioneer in this pursuit. Why? Only a small subset of impact investors has dedicated 100% of their investable assets to the emergent discipline; even fewer have maintained their financial return expectations after committing. It's also worth noting that EMEF's Board has always been comprised entirely of family members and that the foundation is staffed with just one part-time employee.

What further distinguishes EMEF is their willingness to publish this unvarnished case study about their impact investing efforts. After all, the foundation is "dedicated to enhancing the sustainability and diverse quality of life by addressing global climate disruption." And yet, like far too many foundations today, EMEF once had investments in its portfolio that contradicted that mission. EMEF divested from those holdings after hiring a new advisor, but then grappled with the illiquidity features of its new investment opportunities. After resolving that tension, EMEF then codified within its Investment Policy Statement the Board's acceptance of private funds with multiyear lockups. This meant their portfolio would have to maintain elevated exposure to liquid securities at a time when they were marked by historically low yields (Fixed Income) and high valuations (Public Equities).

If that read like a bombardment of financial jargon, rest assured that the volunteers who occupied EMEF's Board and Finance Committee felt the same way when they started their journey in 2014. Nevertheless, they overcame the inertia that doggedly hinders other foundations' exploration, acceptance, and execution of impact investing. In time, EMEF developed a firm under-

standing of arcane portfolio management concepts, financial buzzwords, and impact investing insights.

This case study is a culmination of EMEF's hard-earned lessons. Their hope in sharing this story is that they can further demystify impact investing, thereby encouraging more families and foundations to implement the practice.

While [Heron, Packard, Ford, McKnight](#), and [MacArthur](#) rightfully earn a lot of headlines for their work, EMEF has demonstrated that impact investing is not reserved solely for foundations with several-hundred-million-dollar endowments. And while some other organizations may be comfortable with their impact investments' concessionary returns, EMEF has shown that impact investors need not resign themselves to below-market performance. Indeed, over the past three years, the publicly traded portion of EMEF's portfolio has largely kept pace with its constituent benchmarks, delivering an annualized return of 5.0%. Admittedly, this figure falls short – for now – of the foundation's long-term target return of 8.0%. At the same time, it omits the commendable – though, as-yet, largely unrealized – performance of the portfolio's illiquid investments. When those returns are included in the analysis, EMEF is quite pleased with their portfolio. Of course, it will take many more years for their asset allocation to reach maturity, which is why this case study is still a work in progress.

Meantime, one should not lose sight of the fact that EMEF's investments have helped to generate over three million megawatt hours of renewable energy, abate over two million metric tons of greenhouse gases, and conserve 11,000 hectares of forestland. Those statistics may be a bit nebulous, but they represent real impact at a time when it is needed most. To borrow the words of two heralded impact investors from the aforementioned foundations, "Now, more than ever, philanthropy has to step up and go big."¹ EMEF is proud to have already done so – and implores more foundations to do the same.

¹ <https://impactalpha.com/collaboration-on-catalytic-financing-to-go-big-on-climate-action/>



INTRODUCTION

The Edwards Mother Earth Foundation chose to publish this case study in response to the following four problems.

Problem #1: *The effects of climate change are horrific, widespread, and worsening.*

Around the globe, climate change continues to contribute to one catastrophe after another. In the immediate future, we can be certain the phenomenon will directly exacerbate an extreme weather event – and indirectly intensify food insecurity, political instability, and economic inequality. Indeed, there are few, if any, individuals or issues left unaffected by climate change. And yet, carbon dioxide is now being released into the atmosphere faster than at any time in the last 66 million years.

Problem #2: *Despite the pervasiveness of problem #1, there is insufficient capital combatting climate change.*

Despite the omnipresent calamities associated with climate change, less than two percent of all philanthropic dollars are directed toward the issue.² It is partly for this reason that Marc Gunther, a longtime sustainability journalist, recently penned an article in [The Chronicle of Philanthropy](#) entitled “Foundations Are Losing the Fight Against Climate Change.”³ Worse, the [International Energy Agency](#) reports that investments in renewable power in 2017 declined by 7%.⁴ Consequently, there is insufficient philanthropic and commercial capital being deployed toward climate change mitigation.

Problem #3: *Even though impact investing offers some hope, investor uncertainty hinders widespread implementation of the practice.*

Philanthropists may annually give away 5% of their assets, but a deplorably low number of foundations invest the other 95% of their endowments in alignment with their mission. Impact investing (i.e., the pursuit of financial returns alongside measurable environmental and/or social benefit) is still quite unfamiliar to many foundation trustees, directors, and finance committee mem-

bers – as well as their financial advisors. As fiduciaries, some of these stakeholders are dismissive of the discipline, based on the belief that impact investing must: be philanthropic or concessionary; accept heightened risk; violate their responsibility to maximize financial returns; lack a sufficient number of viable investment managers or strategies; etc. Understandably, these circumstances stymie exploration, acceptance, and execution of impact investing – at precisely the time more capital needs to flow toward climate solutions.

Problem #4: *The impact investment industry needs more transparency to demystify the discipline.*

A limited number of foundations – [Heron](#), [McKnight](#), [MacArthur](#) – have committed substantial resources to investing for impact and publicized their portfolio of investments. However, only the [KL Felicitas Foundation](#) releases an annual report in which they exhaustively detail their portfolio’s financial and impact returns. The unfortunate result? Continued uncertainty around how impact investments perform, followed by ongoing investor inertia.

With pride, EMEF has decided to add its story to the small repository of impact investment case studies. The \$35 million family foundation is “dedicated to enhancing the sustainability and diverse quality of life by addressing global climate disruption.” When they opted to pursue impact investing in 2014, they confronted the same litany of uncertainties outlined in Problem #3. Today, their entire portfolio – 100% of their investable capital – is not only aligned with their mission but is decidedly advancing it.

Like many foundations, EMEF was previously invested only in stocks and bonds. After hiring a new investment advisor, they applied rigorous environmental, social and governance (ESG) screens to support full divestiture from all fossil fuels. They subsequently committed commercial capital toward net-zero energy housing, sustainably harvested timberland, clean energy project finance, solar and wind power generation, sustainable aquaculture, cleantech (early- to growth-stage, as well as sec-

² <https://www.insidephilanthropy.com/home/2015/4/22/where-the-hell-is-all-the-climate-funding.html>

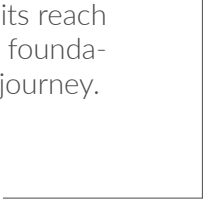
³ <https://www.philanthropy.com/article/Opinion-Foundations-Have/242504>

⁴ <https://www.iea.org/wei2018/>

ondaries), land conservation, and energy efficiency. Critically, they have not abandoned their long-term financial return target of 8.0%.

To be clear: impact investing is not the exclusive domain of foundations with several-hundred million-dollar endowments. Nor is it reserved for families like the Kleissners (the founders of the KL Felicitas Foundation), who have boldly taken a “risk-taking approach” to deliver “hard-to-achieve impact.” This case study shows how one foundation – supported by one part-time employee, an assortment of family volunteers, a stable of impact-focused asset managers, and a leading impact-oriented investment advisor – has assembled a portfolio to deliver significant financial and environmental returns.

In this vein, EMEF’s efforts have been extraordinary. The foundation has invested for impact in every asset class, across a wide range of climate solutions. Despite this deep commitment, EMEF’s reach has limits. The Earth’s climate continues to change at an alarming pace. Much more must be done to thwart the inexorable rise in global greenhouse gas emissions. By releasing this case study, EMEF believes that it can broaden its reach well beyond its endowment by inspiring more foundations to embark on their own impact investing journey.



BACKGROUND

FROM “CHECKBOOK PHILANTHROPIST” TO INQUISITIVE IMPACT INVESTOR

EMEF was incepted with a \$5 million corpus in 1997 by Jane and Robert Edwards. The benefactors loved nature and saw the foundation as a vehicle through which they could continue to promote a healthy Earth. But EMEF was also founded as a family-oriented project, one that Jane and Robert hoped would augment the cohesion of relationships across multiple generations. As the Edwards sold off additional real estate properties in the 2000s, the endowment swelled to over \$30 million. Despite this considerable growth, the foundation has always been staffed by just one part-time employee. And while consultants have been engaged over the years, foundation activities have always been managed on a volunteer basis by those with blood or marital connections back to Jane and Robert. Make no mistake: if a medium-sized family foundation like EMEF can institute a full-fledged impact investing practice, many other families and foundations can implement the practice as well.

A STRATEGIC SHIFT IN GRANTMAKING

By their own admission, EMEF’s early grantmaking process was chaotic. Every Board member came to the foundation’s semi-annual meeting equipped with projects to which they had a personal connection. Beneficiaries may have been global organizations like the [Nature Conservancy](#), or small nonprofits like the local food bank. Complicating matters was the broad mission statement of the foundation: “to preserve Mother Earth.” Like many foundations, EMEF felt it was committing capital to good causes. And yet, there was neither a strategy to guide their grantmaking nor any certainty about whether their efforts were successful. Somewhat predictably, this led to mounting frustration as the endowment – and the expectations related thereto – increased in assets.

Equipped with support from [Foundation Source](#),

EMEF’s grantmaking ultimately evolved from what they called “checkbook philanthropy” to a singular focus on climate change. Specifically, the mission statement today states that “*We are a family foundation dedicated to enhancing the sustainability and diverse quality of life by addressing global climate disruption.*” To be fair, this change was neither smooth nor linear; many of the fits and starts that EMEF experienced have been omitted for the sake of brevity. And while the family has spread well beyond their initial Seattle roots, they still have an affinity for the Pacific Northwest. That said, the emphasis on climate change mitigation helped family members put aside their personal interests in service to a more global focus.

Make no mistake: if a medium-sized family foundation like EMEF can institute a full-fledged impact investing practice, many other families and foundations can implement the practice as well.

TIP-TOEING OUT OF AN INTOLERABLE CONTRADICTION

As recently as March 2015, EMEF’s investment portfolio was comprised exclusively of liquid securities: a Schwab money market fund (i.e., Cash); 30+ individual bonds with varying maturities, along with four bond funds (i.e., Fixed Income); a smattering of international stock funds, and 60+ individual stocks (i.e., Public Equities).⁵ While EMEF had a nominal interest (< 0.1% of their portfolio) in the Invesco WilderHill Clean Energy ETF, the foundation also held approximately 2.0% of its assets in the following corporations: Cenovus Energy Inc (CVE); Chevron Corp (CVX); ConocoPhillips (COP); Encana Corp (ECA); Phillips 66 (PSX); Royal Dutch Shell

⁵ Please see Appendix A for an asset class segmentation.

As EMEF continued to re-think how it would annually give away 5% of its endowment, one Board member started to ask a critical question: what might we do with the other 95% of our assets?

(RDSA); Statoil ASA (STO); and Total SA (TOT).

In other words, EMEF held ownership stakes in a range of corporations directly involved in the extraction, production, transportation, and commercialization of fossil fuels – activities that exacerbate the same problems the foundation seeks to mitigate with its grant dollars. Lest anyone accuse EMEF of cognitive dissonance, let it be known that foundation portfolios are commonly rife with these sort of mission-conflicted investments. Nevertheless, it made at least a few of EMEF's Board members uncomfortable.

As such, one Board member attended a conference arranged by [Confluence Philanthropy](#). This is a membership organization comprised of private, public, and community foundations that work together to accelerate the field of mission-related investing. At that Confluence event in 2013, foundation representatives shared stories of how they had divested from industries that conflicted with their organizations' missions. Additionally, there was a growing number of foundations in attendance that were deploying commercial capital toward private market solutions that could generate measurable environmental benefits. As EMEF continued to re-think how it would annually give away 5% of its endowment, one Board member started to ask a critical question: what might we do with the other 95% of our assets?

The question was enough to stimulate other Board members' imagination about what might be possible; the answers to that question, even if unknown at the time, compelled action.

In response, EMEF's first foray into impact was not even an investment, but rather, a shareholder engagement initiative. (Please see sidebar.) The foundation allowed [As You Sow](#) to utilize their shares in Southern Company, a gas and electric utility, to file a resolution for the 2014 proxy statement. Specifically, the resolution asked Southern Company's management "to prepare a report on policies the company could adopt to

WHAT IS THE BEST AVENUE FOR IMPACT WITHIN PUBLIC EQUITIES?

One poorly understood – and woefully underutilized – tool in the impact investment toolkit is shareholder engagement. By investing in Public Equities in the U.S., foundations are necessarily taking ownership in some of the world's largest corporations. As shareholders, investors can engage in numerous activities to compel better corporate environmental, social, and governance (ESG) practices. Specifically, these practices may relate to a wide range of issues, such as greenhouse gas emissions reporting, labor relations, executive compensation, board demographics, etc.

Also referred to as shareholder advocacy or activism, these engagements commonly start with a dialogue between corporate management and large blocks of shareholders. However, if those conversations don't lead to the desired change, shareholders may then file a resolution (or proposal) to be included on the company's proxy statement. At times, shareholders and management may negotiate an agreement that results in a withdrawal of the resolution (as in the referenced resolution that EMEF filed with Southern Company). If there is no agreement, every shareholder can then vote on proposed resolutions at the company's annual meeting.

Note that a vote *for* a resolution is typically a vote against management. Perhaps understandably, corporate executives don't appreciate shareholders telling them how to run their company. Related, it is uncommon for the largest institutional investors to vote in favor of these resolutions – though a letter from Blackrock CEO Lawrence Fink could signal a seismic shift in this regard.^A Notably, even if a resolution passes, it is not a legally binding requirement. As a result, these engagements can lead to nasty fights that play out in the courts or within the media.

Divestment certainly gets much more attention amongst impact investors, even though the practice has uncertain influence, at best.^B Meantime, shareholder advocacy has unquestionably had a direct influence on numerous corporate practices, such as Home Depot's lumber sourcing, Dell's electronic waste goals, Coke and Pepsi's use of recycled plastics, etc.^C

^A <https://www.nytimes.com/2018/01/15/business/dealbook/blackrock-laurence-fink-letter.html>

^B <https://medium.com/@i3impact/you-didnt-build-that-part-2-94701f183b4b>

^C <https://www.asyousow.org/about-us/>

⁶ https://archive.asyousow.org/wp-content/uploads/2014/04/southerncompany2014coal_withdrawal.pdf

⁷ Ibid

take additional near-term actions to reduce its greenhouse gas emissions consistent with the national goal of 80% reduction by 2050.”⁶ In the words of Confluence, EMEF sought to “own what they own” by partnering with As You Sow in a no-cost manner. The result? The resolution was successfully withdrawn, with Southern Company agreeing to report to shareholders on the requested information as it relates to their distributed and renewable energy initiatives.⁷

Around the same time, EMEF extended a one-year concessionary loan to [Solar Mosaic](#), an innovative residential solar financing company that was just starting to gain traction. Despite Mosaic’s growth prospects, the company was still early-stage at the time, which is why the 4.5% interest rate was considered below-market. Given that impact investments are characterized by a wide range of return expectations, the Mosaic loan should be considered EMEF’s first impact investment. Here again, EMEF was successful: not only was the loan repaid, it was also considered a key piece of Mosaic’s eventual success. This was the sort of catalytic role that EMEF hoped to continue playing within the climate solutions marketplace.

MAKING AN ADVISOR CHANGE

Several more EMEF Board members started to participate more readily in Confluence, while also attending conferences organized by [Exponent Philanthropy](#) and [Mission Investors Exchange](#). Collectively, their chorus of impact investment endorsements was compelling. Each organization provided resources that helped the earliest EMEF Board members build a case for the discipline.

That said, there was considerable pushback from several other Board members against impact investing. For them, there was a bright line between grantmaking and investing: the former was the focus of the EMEF Board; the latter was the exclusive domain of the investment advisor with whom EMEF had worked since inception. Complicating this perspective was the fact that certain and current board members maintained personal relationships with that advisor. It’s also worth noting that the EMEF investment portfolio had performed suitably from a financial perspective. As such, this unknown trajectory toward impact was fraught, at least in the minds of some.

Nevertheless, a Finance Committee was formed to continue exploring how the foundation might better align its investments with its mission. As this nascent group within EMEF learned more, their conviction grew. So, too, did the Finance Committee’s influence after making several presentations to the Board. As a result,

EMEF hired Dr. Stephanie Gripne from the [Impact Finance Center](#) to circulate a Request For Proposals (RFP) from a select number of investment advisors.

Based on their longstanding relationship with their existing advisor, EMEF invited them to present their impact investing capabilities. But like most investment advisors, the firm was simply focused on building **model portfolios**. (Blue bolded terms like this one are defined in the Glossary.) While this investment approach works well in some instances (especially for the advisor, since it enables them to serve a higher number of clients), it is incongruous with any effort to customize a foundation’s corpus with its values.

With Dr. Gripne’s assistance, EMEF whittled the advisor proposals down to the top four, each of whom were invited to present their final pitch in Seattle. This face-to-face interaction was critical, given the difficulties associated with distinguishing one advisor’s esoteric jargon from the next. In the end, EMEF selected [The Caprock Group](#), a **family office** in the western U.S. Caprock has a proven track record for deploying substantial capital, across every asset class, with the intention of creating social and/or environmental benefits. The firm was founded on the principle that families and foundations deserve much more than model portfolios and other automated investment approaches. Instead, each client requires a solution set that is customized to their uniquely complicated needs. Therefore, every portfolio Caprock constructs is bespoke, built not only to meet clients’ financial objectives, but also to complement their values. Indeed, if done properly, this investment approach can further a foundation’s philanthropy. Coiled, as they are, around the impact frontier, the task of supporting an adolescent foundation was seen by Caprock as an opportunity to flex their expertise. So, at the start of 2015, Caprock pioneered with EMEF an exciting – though uncharted – expedition toward environmental impact.

Confluence Philanthropy, Exponent Philanthropy, & Mission Investors Exchange each provided resources that helped the earliest EMEF Board members build a case for impact investing.

YEAR 0

APRIL 2015 – JUNE 2015

AND WE'RE OFF!

Rather than rely on their new investment advisor to buy and sell individual stocks and bonds, EMEF hired Caprock to serve as their chief investment officer. Importantly, this dynamic helped maintain the bright line between philanthropy and investments; the family would continue to manage its grantmaking efforts, whereas Caprock would construct EMEF's portfolio in alignment with their financial and impact objectives. Thus, shortly after hiring Caprock, EMEF started investing for impact with three different asset managers – [Aperio Group](#), [Essex](#), and [Seattle Northwest](#) – each of which offered varying attributes. Notably, EMEF approved investments with these three firms at the very first Board meeting with Caprock. The values customization process took some time, given that the family wanted to ensure their holdings were well-aligned with the foundation's mission. However, the EMEF experience shows that conversion to an ESG-screened portfolio (when comprised solely of public securities) need not be measured in years, but months.

Aperio Group

- Constructs values-aligned, index-tracking portfolios of Public Equities
- Mimics performance of client-designated benchmark(s) & -tolerated tracking error
- Low-cost "beta": indexed, diversified exposure to global stock market

MIMICKING THE MARKET: PASSIVE MANAGEMENT IN PUBLIC EQUITIES

The first – and arguably most critical – manager EMEF hired was the Aperio Group. Aperio offers passively managed Public Equity portfolios that reflect a client's values and preferred risk profile, while optimizing around tax consequences and fees. These portfolios are then constructed to perform similarly to client-selected benchmarks (e.g. S&P 500, Russell 3000, MSCI All Country World Index).

Note: the only structure in which this type of customization and tax-loss harvesting can occur is a **separately managed account** (SMA). Neither pooled accounts nor mutual funds permit this level of granular control.

EMEF liked Aperio's solution set, not only because of the foundation's fee sensitivity but also because their portfolio had significant embedded capital gains on which they'd ultimately be taxed. Aperio is able to hold appreciated securities and build a portfolio around that constraint.⁸ EMEF was comfortable with an indexed approach to Public Equity investing – but had understandable concerns about any performance lag that might result from their potential ESG screens. Aperio assuaged the Board's anxiety by quantifying the **tracking error** EMEF could anticipate from the application of their mission.

The importance of this point cannot be overemphasized: Public Equity portfolios can now be built such that they mimic the financial performance of composite benchmarks AND incorporate a client's values, all with a high degree of confidence. In other words, for those

foundation trustees who are concerned that divestment entails unknown risks, there are Public Equity managers who can confidently quantify how much variance to expect.

In order to get broad exposure to the global public equity market, Caprock asked Aperio to construct a portfolio of domestic and international stocks that tracked a blended benchmark (80% S&P 500 and 20% MSCI All Country World Index excluding the U.S.).⁹ Moreover, after a productive dialogue amongst Board members about available ESG screens, Aperio tailored EMEF's holdings in pinpoint alignment with the foundation's mission by excluding the following:

- GICS Industry: Oil Gas & Consumable Fuels
- GICS Sub-Industry: Coal & Consumable Fuels
- Nuclear Power
- Fracking
- Tar Sands
- Carbon Underground 200
- Military Weapon

EMEF went one step further by applying Aperio's Environmental Impact Tilt, which increased the foundation's exposure to companies that derive revenue from alternative energy, sustainable water, green building, energy efficiency, and pollution prevention. The result of these positive and negative screens was a portfolio consisting of 542 securities, with an anticipated tracking error of only 0.60% against the composite benchmark.

Approximately one year later, Aperio offered an additional ESG overlay that significantly reduced the EMEF portfolio's global carbon emissions and intensity. The tradeoff? A scant increase in tracking error, from 0.60% to 0.85%. An additional 25 basis points of estimated benchmark performance dispersion was, in the eyes of EMEF, a very small tradeoff, given the considerable carbon footprint reduction.

As shown in the timeline (see Appendix B), EMEF required less than two months to identify their target benchmarks and select their ESG screens. Once EMEF finalized those portfolio parameters, it took Aperio less than one week to invest in the corresponding securi-

For those foundation trustees who are concerned that divestment entails unknown risks, there are Public Equity managers who can confidently quantify how much variance to expect.

⁸ EMEF may be a 501(c)3, but like most foundations, it still must pay a 1-2% excise tax on capital gains.

⁹ Less than two years later, this composite was shifted to 65% S&P 500/35% MSCI ACWI ex U.S. in order to increase international exposure.

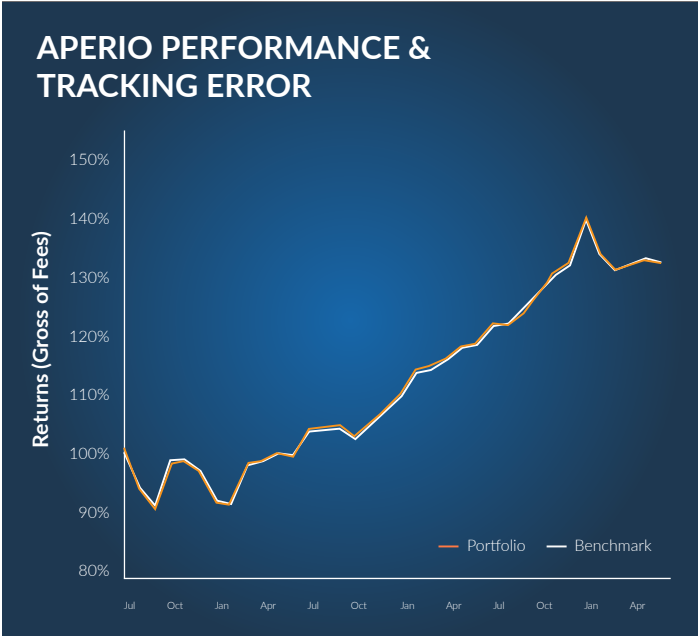
What does the manager do?
Why is the strategy appealing?
What role does the strategy play in EMEF's portfolio?

- Essex
- Long-only, all cap, Public Equity strategy focused on companies "doing more with less"
 - Emphasis on natural resources & energy efficiency poised to benefit from secular trends
 - Concentrated positions on public companies with an appealing thematic focus

ties. To be clear, this is not because EMEF acted hastily. Rather, this expediency reflects the fact that obtaining market-rate performance from mission-aligned Public Equities is now a straightforward exercise, particularly given the algorithmic solutions available within today's marketplace. At the risk of spoiling the Conclusion, the performance of EMEF's assets that are managed by Aperio prove this point convincingly: their after-tax annualized returns (gross of fees) have been 10.1% versus the composite benchmark's return of 10.2%, well within the predicted tracking error of 0.85%.

For a visualization of how tightly EMEF's assets with Aperio tracked their composite benchmark, please see the 'Aperio Performance & Tracking Error' graph.

Obtaining market-rate performance from mission-aligned Public Equities is now a straightforward exercise.



Source: Aperio Group

CARBON FOOTPRINT COMPARISON: BENCHMARK VS. EVOLVING EMEF PORTFOLIO			
	80% S&P 500-20% MSCI ACWI ex-US	Initial EMEF Portfolio	EMEF Portfolio-Global Carbon Footprint
Carbon Emissions*	7,688,743	2,748,233	1,519,783
Carbon Intensity**	216	185	43

* Scope 1+2 Carbon Emissions (t CO2)
** Scope 1+2 Carbon Intensity (t CO2/USD million sales)

THEMATIC INVESTING: ACTIVE MANAGEMENT IN PUBLIC EQUITIES

Most of EMEF's Public Equity exposure went to Aperio, based on the foundation's preference for passive management. That said, they still wanted to reserve a small portion of their assets for an actively managed strategy, one that could express their mission through a more concentrated portfolio of stocks. The eventual manager had to have a compelling investment thesis, along with a track record to back it up.

With these requirements, EMEF hired Essex, whose Global Environmental Opportunities Strategy (GEOS) was a perfect thematic fit. GEOS is a global listed-equity, all-cap strategy, benchmarked against both the MSCI All-Country World Index and the WilderHill Clean Energy Index. The manager invests in a long-only fashion in ~40 companies that enable greater natural resource and energy efficiency – while also providing positive returns for investors. (See Appendix C for GEOS' historical performance data.)

These were exactly the sort of corporations that EMEF

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Seattle Northwest

- Offers investment-grade Fixed Income portfolios with impact overlays
- Consistent benchmark outperformance, undergirded by rigorous financial & ESG analyses
- Capital preservation, liquidity, & predictable yield

wanted to own. Put another way, EMEF felt a sense of responsibility to support companies that contribute to global economic growth while deploying fewer resources. It was understood that GEOS would be much more volatile than an indexed strategy like Aperio, leading to a modest allocation. Nevertheless, EMEF viewed the strategy as a long-term holding that would likely perform well over a complete economic cycle.

EMEF wasn't just investing in Fixed Income for financial returns; the foundation wanted a bond portfolio that could also reflect, and perhaps even advance, its mission.



Source: Essex GEOS

GOING BEYOND “GREEN BONDS”: FINDING A FIXED INCOME SOLUTION

With its Public Equity needs met by Aperio and Essex GEOS, EMEF needed a Fixed Income manager whose ESG insights were every bit as rigorous as their cred-

it analyses.¹⁰ This was especially true at the time, given the growing controversy surrounding “green bonds” and their questionable impact bona fides.¹¹ While there were several great managers available, EMEF hired [Seattle Northwest](#) (SNW). This firm focuses exclusively on constructing investment-grade fixed income portfolios in a highly customized, low-cost and tax-efficient manner. Notably, they build bond portfolios within SMAs, which once again afforded EMEF the flexibility to tailor their holdings to their financial and impact objectives.¹² EMEF looked to Fixed Income as a source of liquidity for grants, as well as capital calls from the more illiquid strategies to which they would commit in the future. Given this expectation, it was critical they hire a manager who would not stretch for financial returns by extending average maturity or pursuing higher risk – even though bonds were offering historically low yields in 2015. The result? EMEF focused on an intermediate **duration** (3.5 – 4.5 years) portfolio of high credit quality bonds. Additionally, given the foundation’s tax-exempt status, SNW focused on government agency issuances and corporate credits as opposed to muni bonds. By investing with SNW, EMEF allocated capital to a bond manager with an established track record of out-performance; their “Taxable Intermediate” strategy has consistently outpaced the Merrill Lynch Corporate / Government A-AAA 1-10 year bench-

¹⁰ There is a growing consensus that all Fixed Income managers – regardless of impact intentionality – should consider climate risks as part of their fundamental risk analysis.

¹¹ See “Green’ Bond Issuance Booming, but Standards Are Unclear,” Reuters, January 26, 2015. In short, EMEF was not willing to work with a manager who accepted labels like “green bond” at face value, since the label is oftentimes just marketing.

¹² With most bond funds, the investor doesn’t directly own any of the securities. Instead, she owns shares of a mutual fund, which trades on the market according to the New Asset Value (NAV) of the hundreds of bonds held within the fund. This indirect ownership is not a problem if the price of the fund remains stable. However, as interest rates started rising in early 2018, the prices of many bonds – and therefore, the NAV of many bond funds – dropped. What this means is that when an investor must raise proceeds from a bond fund in order to make a distribution, she may be forced to realize a loss of principal. As an alternative, EMEF wanted to own their bonds directly within an SMA. While the market prices of these bonds could also fall, EMEF has the option to hold the securities to maturity – at which point they would not be forced to realize losses as they would had they invested in a bond fund. This may be a small, structural distinction, but it is an important one that goes overlooked by some of the most sophisticated investors.

¹³ SNW also offers portfolios narrowly focused on gender and education.

mark. (Please see Appendix C.) As shown in the Conclusion, SNW was another asset manager that performed as expected, with annualized returns over 30 basis points higher than their benchmark.

However, EMEF wasn't just investing in Fixed Income for financial returns; the foundation wanted a bond portfolio that could also reflect, and perhaps even advance, its mission. SNW examines not only the profile of a bond's issuer, but much more critically, the intended use of proceeds raised through the debt issue. Simply put, SNW seeks to ascertain what services, projects or infrastructure the bond will finance. While this would seem to be an obvious requirement, it requires an additional analysis that some self-proclaimed impact investors surprisingly fail to execute.

SNW offers a "General Impact Overlay," but here, again, EMEF opted to go one step further by investing in the manager's much more targeted "Environmental Issues Focus."¹³ This approach invests in organizations and projects focused on energy efficiency, renewable energy, and resource conservation efforts. Specific bonds from EMEF's portfolio include issuances from the World Bank ([International Bank for Reconstruction and Development](#)), which supports sustainable development across the globe; the [New York State Environmental Facilities Corporation](#), whose bonds go towards environmental infrastructure projects; and [Apple](#), the world's largest corporation, which also happens to be globally powered by 100% renewable energy.

Much like Aperio and Essex GEOS, SNW constructed a portfolio of publicly traded securities that inspired pride of ownership amongst EMEF's Board.

CRAFTING AN INVESTMENT POLICY STATEMENT

EMEF's decision to allocate capital to a set of new asset managers was consistent with the "Investment Objectives & Guidelines" outlined within the foundation's Policy & Operations Handbook. That document called for an asset allocation with proportions as follows: Public Equities (60%), Fixed Income (30%), Cash (10%).

During the first year of the pivot to impact, EMEF came to understand the importance of diversifying across public asset classes as well as private market investments. This approach enabled the foundation to pursue better risk-adjusted returns, and, critically, to generate more tangible environmental benefits. Before it could undertake this effort, however, EMEF recognized it needed to codify within an Investment Policy Statement (IPS) much more substantive parameters around portfolio construction for its future Finance Committee members.

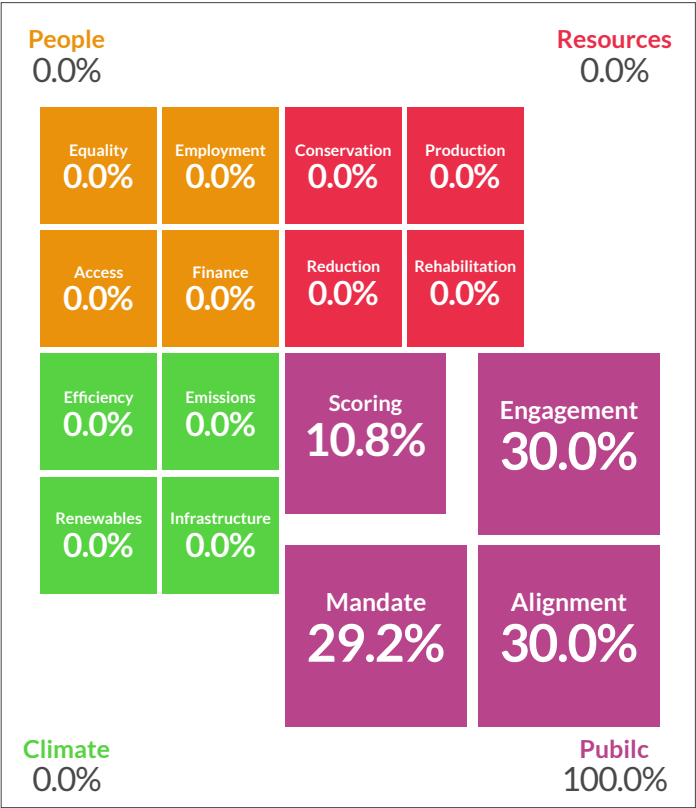
Consequently, it wrote a robust IPS to reflect the asset allocation restrictions, ranges, and targets, *as well as* the foundation's mission, values, and governance.

It was critical to EMEF that their IPS make explicit these quantitative and qualitative considerations. They didn't want this document buried in the archives, left to gather digital dust. They wanted future family members to recognize that "fiduciary responsibility does not end with maximizing return and minimizing risk," and that the foundation "has an objective to invest its corpus assets in sustainable and impact investments consistent with its mission and values." At the same time, EMEF recognized it was embarking on a new path. Thus, while the foundation understood the importance of setting the strategic direction within the IPS, it also preserved for itself the flexibility to adjust accordingly.

EMEF recognized it needed to codify within an Investment Policy Statement (IPS) much more substantive parameters around portfolio construction for its future Finance Committee members.

Since an IPS ought to be highly particularized for each foundation, it does not make sense to detail here every aspect of EMEF's document. That said, the foundation's long-term asset allocation ranges will help to contextualize many of the investment decisions it made in subsequent years.

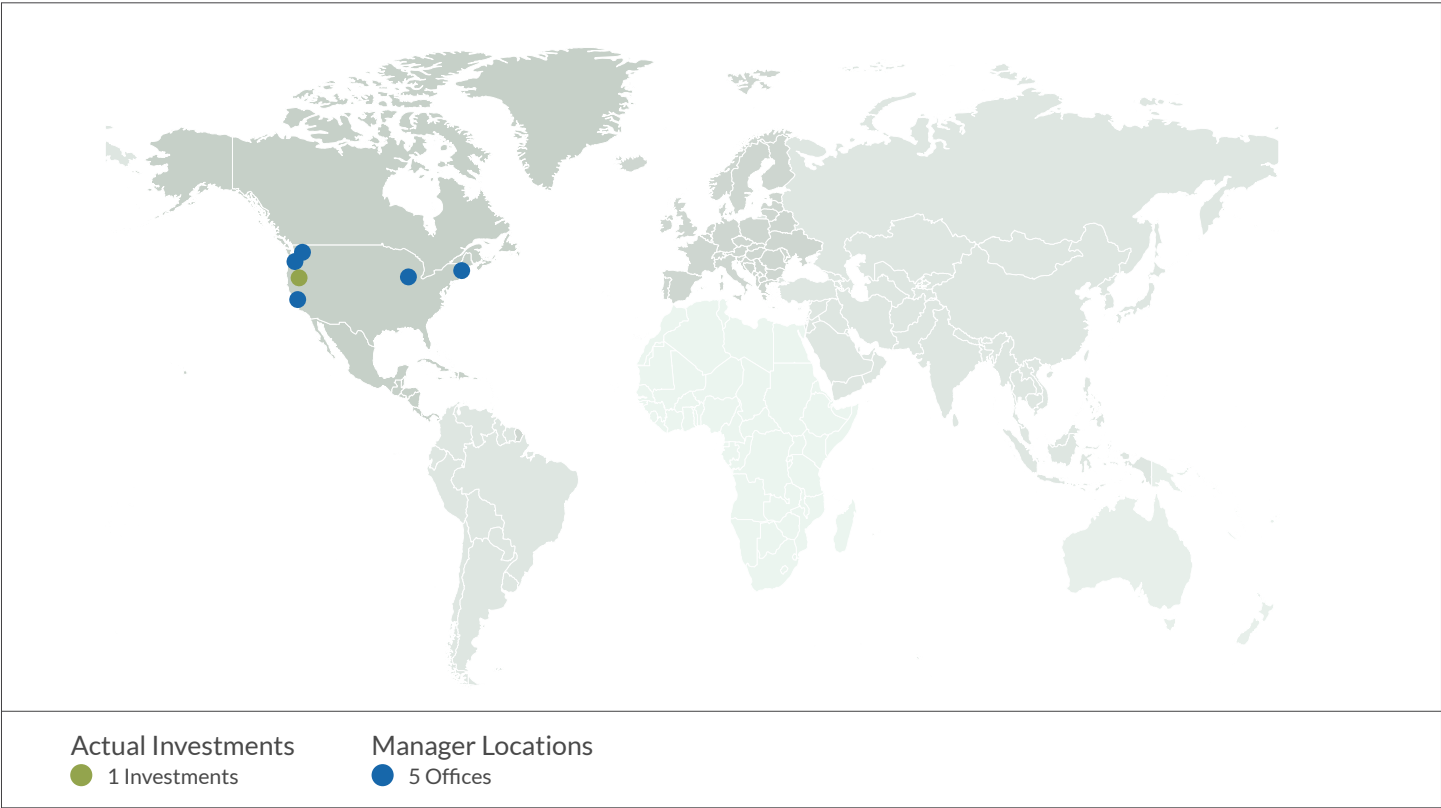
EMEF LONG-TERM ASSET ALLOCATION RANGES	
Cash	1-5%
Fixed Income	20-30%
Public Equities	25-35%
Alternatives	5-15%
Real Assets	10-20%
Private Investments	5-15%



EMEF Asset Allocation – End of Year 0

Cash	11.6%
Fixed Income	36.6%
SNW	36.6%
Public Equities	48.7%
Aperio	41.2%
Essex GEOS	7.5%
Alternatives	0.00%
Real Assets	0.00%
Private Investments	3.1%
Solar Mosaic Private Note	3.1%
TOTAL	100%

EMEF relies on a company called [Impact Portfolio Assessment & Reporting](#) (iPAR) to visualize two aspects of their portfolio: the upfront impact intentions and the ongoing impact returns. By focusing on the impact strategy of any capital deployment (regardless of investment structure or financial return expectation), iPAR facilitates unmatched portfolio perspective. In fact, iPAR is the first and only tool that harmonizes the torrent of impact information, across every asset class. As you can see below, the result is a streamlined view, ex ante, of a portfolio's geographic and thematic focal areas. And, as you will see in the Conclusion, the eventual impact metrics can then be mapped, ex post, against the same organizing taxonomy.



Source: iPAR

YEAR 1

JULY 2015 – JUNE 2016

ACCEPTING ILLIQUIDITY

By aligning their stocks and bonds with their mission, EMEF took a step that few foundations have ever considered, let alone implemented. As such, it would have made sense if EMEF stopped there. However, in fidelity to their mission, the foundation once again chose to go farther, by investing in private offerings. EMEF made this choice despite their initial lack of familiarity and comfort with the illiquid structures. Why? First, they understood that applying screens within Public Equities and Fixed Income would not catalyze the change they seek in the world. And second, EMEF came to appreciate that a traditional portfolio – consisting of stocks and bonds – would be highly unlikely¹⁴ to deliver their target 8.0% rate of return over the long-term. Unfortunately, the transition to a more illiquid portfolio was not as seamless as the application of ESG screens had been in the first phase of the engagement.

¹⁴ This perspective was based on several related observations. To start, interest rates within Fixed Income resided near historical lows, with any forthcoming rise leading to potentially significant losses in the principal value of bonds. This dynamic meant that Public Equities would have to make up a significant return gap – at the same time stock valuations resided above long-term historical averages. Additionally, a growing number of economists were questioning whether the U.S. economy could expect to sustain gross domestic product growth greater than 4.0% in the future. And finally, we were in one of the longest bull markets ever at the time.

To be fair, this analysis did not hold up well at all in 2017, when most traditional portfolios (60% stocks, 40% bonds) handily generated returns greater than 8.0%. While no one can predict the future, EMEF believed then – and now – that a portfolio diversified across six different asset classes gives them the best chance of achieving their target rate of return.

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Lyme Timber Forest Fund IV

- Acquires & manages U.S. timberland; focus on sustainable harvests & land conservation
- Strong track record across three prior funds of creating financial & environmental returns
- As first illiquid investment, offered asset diversification, inflation hedge, & current income

FALSE START

EMEF's first illiquid investment was an allocation to [Lyme Timber's Forest Fund IV](#), a strategy focused on the acquisition and management of forestland in the U.S. At the time, there were few impact investment managers with a demonstrable track record of success across three prior funds. Additionally, Lyme IV offered current income in the near-term from the sale of conservation easements and sustainably harvested timber. However, the strategy had a 12-year fund life, with up to three additional one-year extensions. This term meant it was entirely possible that EMEF might not get back their principal for 15 years – an outcome that made their Finance Committee quite uneasy.

Frankly, why wouldn't EMEF be uncomfortable with that kind of illiquidity? Historically, the foundation had been able to convert almost all their holdings into cash within several days. (The lone exception was the one-year note with Solar Mosaic.) EMEF may be considered an institutional investor, but there was no one on their Board with institutional investment experience. The notion of a 10+ year fund life was unfamiliar, and the rationale was unclear. As such, EMEF initially passed on Lyme IV – despite the manager's exemplary track record of delivering significant financial returns and environmental benefits.

EMEF's initial experience with Lyme IV underscores the critical importance of education, and not just when investing for impact. As the sidebar attests – and the portfolios of the world's largest endowments, pension funds, insurance companies, and sovereign wealth funds will affirm – illiquidity can augment a portfolio's returns.

Note that EMEF anticipated they would indefinitely distribute the requisite 5% of their assets. Given that the capital commitment to Lyme was only 2.8% of the portfolio, EMEF would not *need* to access those funds over the next 15 years. Instead, a carefully managed portion of the portfolio could be allocated over time to these sorts of illiquid funds. In the process, EMEF's endowment would be diversified across a mix of asset classes, investment managers, fund structures, liquidity features, and return components. (Please see "What are the Components of Financial Return?" sidebar.)

WHY WOULD ANYONE LOCK UP CAPITAL FOR OVER A DECADE?

Most investors expect ready access to their capital (i.e. liquidity) whenever they need it. But this liquidity oftentimes comes at an implicit cost. For example, according to Nerdwallet.com, the highest interest rate offered by a bank within a savings account at the time of this writing was 1.85%, whereas a certificate of deposit (CD) with a six-month term offered up to 2.00%. In other words, one could earn a marginally higher return by locking up their capital in a CD for six months. This tradeoff is true across every asset class: investors should expect a higher risk-adjusted return, i.e. an illiquidity premium, the longer they lock-up their capital.

In addition to higher anticipated returns, history shows that many illiquid investment strategies also offer:

- low correlation to stocks and bonds, largely because they have different return drivers and pricing mechanisms;
- diversification benefits, given that these assets are focused on separate categories of the capital markets
- an inflation hedge, meaning that the underlying asset should maintain its value even in the face of rising prices;
- access to inefficient markets, where value can be identified and unlocked by skilled asset managers.

Thus, if an investor can confidently predict her long-term capital needs, her portfolio is likely to perform better with illiquid investments.

Since many foundations' annual distributions are fixed at 5%, they have an enviable degree of predictability and control over their liquidity needs. Indeed, this type of transparency is an asset unto itself. It can empower foundations to accept illiquidity in a staggered, strategic manner, such that they drive better risk-adjusted returns within their portfolio.

Brevet Capital Management

- Structures short duration loans to credit worthy counter parties that are generating impact
- Strong underwriters, producing consistent returns with no correlation to other assets
- A steady source of income derived in part from loans that support energy efficiency

For a Board comprised of individuals who work outside the investment industry, EMEF necessarily required this type of targeted education around the portfolio construction process. The foundation may have agreed in principle to invest in illiquid securities when it hired Caprock, but EMEF's Board members still required a nuanced understanding of the implications of these investment types. In other words, only after EMEF was properly equipped with the knowledge of why lengthy lockups can work in their favor was the foundation's Finance Committee prepared to evaluate an esoteric opportunity like Lyme Timber IV.¹⁵

In the end, what was not to like about Lyme IV? The manager had consistently outperformed their benchmark, the NCREIF Timberland Index, in their previous funds. Lyme was also adept at commercializing land conservation, an activity that sequesters carbon within trees while also preserving natural ecosystems in perpetuity. To be clear, Lyme would cut down some trees – an outcome that produces current income within the EMEF portfolio. However, all of the lumber from Lyme's properties is certified by the most stringent sustainable forest certification standards in the world (e.g., [Forest Stewardship Council](#) and [Sustainable Forestry Initiative](#)). In other words, the manager would not practice the sort of clearcutting that devastates timberland habitats. Additionally, Lyme would create or maintain jobs critical within rural logging communities. Altogether, these social, environmental, and financial benefits compelled EMEF to make a sizable allocation to what is still its most illiquid impact investment. Despite being significantly oversubscribed, Lyme managed to invest 100% of their committed capital by June 30, 2018 (well within their designated investment period). Thus, EMEF's illiquid portfolio was off to a great start.

CAPITAL CALL "WAREHOUSING"

Lyme IV offered some current income, but EMEF could not rely on it to offset the record-low yields available at that time within Fixed Income. In addition, if the foundation was going to hit its 8.0% target rate of return – particularly on the heels of a continued run-up in Public Equity valuations – they felt a need to continue invest-

ing in non-marketable securities to drive performance. As such, EMEF allocated capital in Year 1 to three very different private debt offerings; these lending strategies offered much more attractive risk-adjusted returns than their public debt counterparts. All three funds had varying lockups, enabling EMEF to build up a “warehouse” for future capital calls from Lyme and other illiquid investments.

EMEF's first foray into private debt was with [Brevet Capital Management](#), specifically, the “impact class” of their Short Duration Fund. Brevet is a hedge fund that structures short-duration loans (average tenor less than 12 months) with limited correlation to the public markets and high certainty of cash flow. The reason why payback is so dependable is that the loans are linked to revenue streams associated with a high-credit quality counterparty. An example of one of the fund's investments at the time was a loan to a private company that provided job training skills to those incarcerated in federal prisons. These offenders helped to construct LED lighting fixtures and products, which would ultimately be paid for and installed by the U.S. government. By accelerat-

EMEF allocated capital in Year 1 to three very different private debt offerings; these lending strategies provided much more attractive risk-adjusted returns than their public debt counterparts.

ing these government payments to the private company, Brevet increased the number of energy efficiency retrofits – and thereby decreased greenhouse gas (GHG) emissions at government facilities. It was this latter environmental benefit that appealed to EMEF.

Of course, Brevet's track record of steadily delivering annualized returns greater than 8.0% was another reason EMEF committed 10.7% of their portfolio upfront.¹⁶ Additionally, Brevet was an [evergreen](#) fund with only a one-year lockup. While still considered an illiquid invest-

¹⁵ Note that a truncated version of the rationale behind each investment is listed in each section.

¹⁶ Based on Brevet's financial performance in the first 15 months, as well as their then-robust impact reporting, EMEF subsequently decided to invest another 2.8% of their portfolio with the manager in Year 2.

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Green Canopy Homes' Birch Fund

- Debt fund that finances net-zero energy residential housing in the Pacific Northwest
- Capitalizes on stark supply-demand imbalance in a region with robust economic growth
- Dependable, double-digit yield, with pinpoint mission & geographic alignment

Community Investment Management (CIM) Enterprise Loan Fund

- Marketplace lender provides capital to U.S. small businesses (SMEs) on responsible terms
- Combines underwriting expertise with technology to exploit lending market inefficiencies
- Another source of steady income, with better liquidity than other private debt offerings

ment, given the conversation that led to the investment in Lyme, Brevet's liquidity structure felt downright liberating.

The next private debt offering in which EMEF invested was [Green Canopy Homes'](#) (GCH) Birch Fund. GCH is a certified [B Corporation](#) that builds net-zero energy homes, with an emphasis on greater access and affordability. Notably, they are also located in the Pacific Northwest, like many members of EMEF. Despite having a respectable track record, GCH faced difficulties obtaining traditional financing from banks. In response, they structured a debt vehicle (the Birch Fund), through which limited partners (LPs) like EMEF could lend them capital. These were first lien position loans, backed by a cash loss reserve pool, corporate guaranty, and other strong covenants. The fund also offered a 9-11% target internal rate of return (IRR), with full liquidity projected by the end of 2019.

Given the thematic and geographic overlap with EMEF's areas of interest, this was a very attractive impact investment. Brevet and Lyme may have complemented the foundation's mission, but climate change mitigation was not the principal focus for either manager. GCH was different: the company recognized that buildings were the biggest contributor to GHG emissions. Though the Birch Fund was small, EMEF hoped their capital deployment to GCH would help the company reach the same sort of scale as their earlier loan to Solar Mosaic. Consequently, the foundation allocated 2.1% to the fund.¹⁷

The third private debt offering, to [Community Investment Management's](#) (CIM) Enterprise Loan Fund, was arguably the least connected to EMEF's mission. CIM is a marketplace lender that finances loans for the engine of the U.S. economy: small- and medium-sized enterprises (SMEs). Since the Great Recession, SMEs have been starved for access to capital as banks have focused instead on loans to bigger corporations. CIM exploits this market inefficiency with an exemplary combination

WHAT ARE THE COMPONENTS OF A FINANCIAL RETURN?

There are two components of an investment return:

- Income, which is used synonymously throughout this case study with (current) yield, coupons, interest (payments), dividends, and distributions; and
- Capital appreciation, which refers to the positive change in the market price of an asset.

A multifamily apartment building may best illustrate the difference between the components. The building should generate income from the tenants' monthly rent payments. If the building is properly maintained, its appraised value could increase. If the building's owner decides to sell the property (i.e. liquidate the asset), any return above the original purchase price would be considered capital appreciation.

This is perhaps an oversimplification; both return components have complicated asset class distinctions and tax implications. But for the purposes of this exercise, it is the timing of these return types that matter most. After all, it is by design that EMEF's portfolio generated current income in many forms: coupons from Fixed Income; dividends from Public Equities; loan interest and repayment from Alternatives; and various distributions (from rents, timber sales, loan interest and repayment) from Real Assets and Private Investments. Each of these payments occurred in the present; they were not predicated on an uncertain liquidity event, at some point in the distant future.

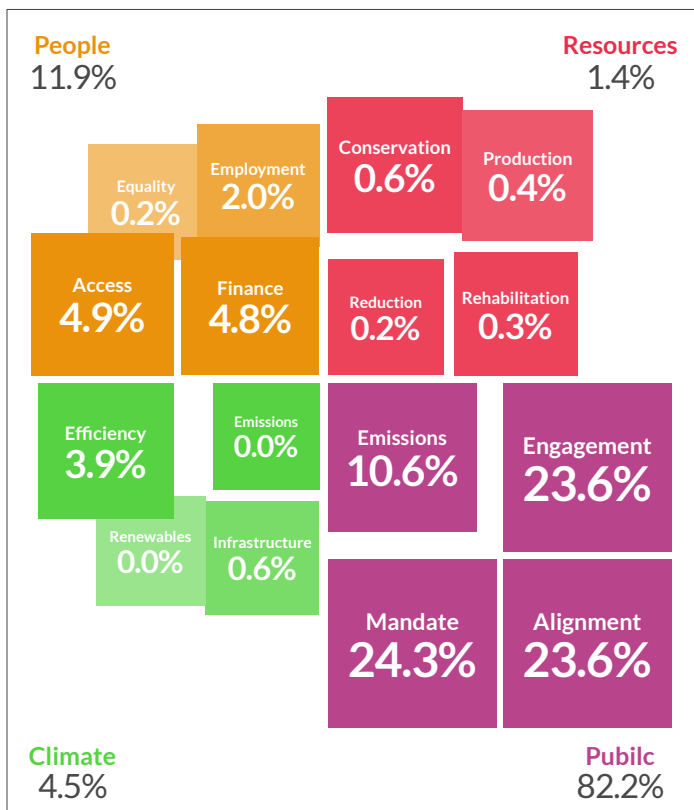
There are trade-offs associated with that type of immediacy: funds offering current yield typically offer lower returns than those focused on capital appreciation. As noted in the prior sidebar, there is a premium associated with locking up proceeds. Indeed, elongated time and heightened risk are two essential inputs of capital appreciation. Thus, each investor must calibrate their components of return directly to their risk tolerance, short-term needs, and long-term objectives.

¹⁷ Based on Green Canopy Homes continued success, as well as their robust impact reporting. EMEF made two more allocations to the Birch Fund in Years 2 & 3.

Though the Birch Fund was small, EMEF hoped their capital deployment to Green Canopy Homes would help the company reach the same sort of scale as their earlier loan to Solar Mosaic.

of underwriting expertise and technological innovation. Importantly, CIM is an endorser of the Small Business Borrowers Bill of Rights, which means the manager supports responsible and transparent lending practices – within a market otherwise beset by unscrupulous behavior, usurious interest rates, and other unfair terms.

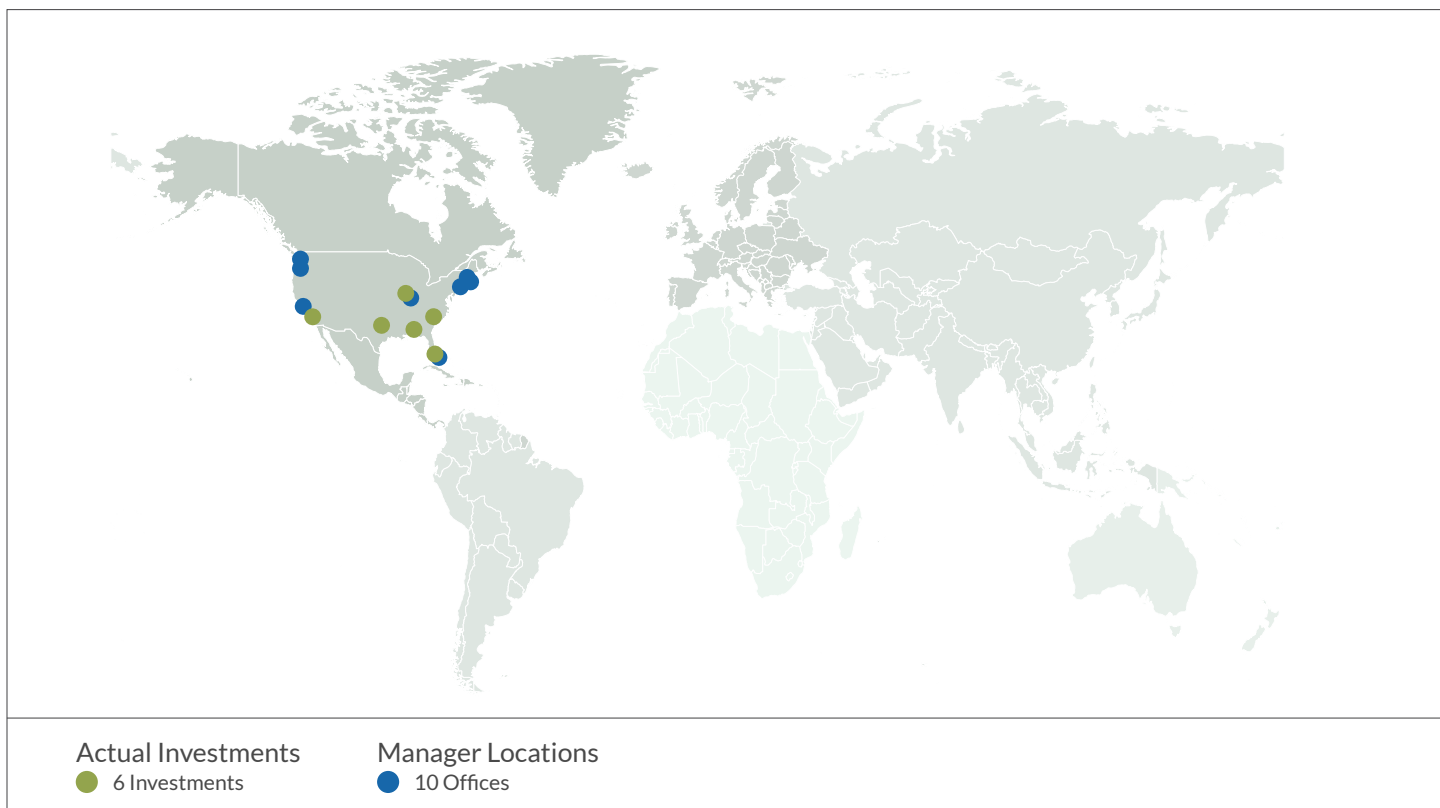
CIM's loans go toward higher-than-average numbers of women-, minority-, and veteran-owned companies. Perhaps a more important impact consideration from EMEF's perspective is that CIM adheres to the [IFC Exclusion List](#), which means the fund limits exposure to the fossil fuel industry (amongst others). Meantime, CIM provides steady income (6-8% per annum) with monthly liquidity. From a portfolio construction perspective, these were two very attractive financial characteristics. In combination with EMEF's other private debt offerings, the 2.1% allocation to CIM bolstered their portfolio with the current yield and rolling liquidity that would be required to start investing in a wider range of impact offerings.



EMEF Asset Allocation – End of Year 1

Cash	5.9%
Fixed Income SNW	40.1%
Public Equities Aperio Essex GEOS	37.3%
Alternatives Brevet I-Class CIM	13.8%
Real Assets Green Canopy Homes' Birch Fund Lyme Forest IV	3.0%
Private Investments	0.00%
TOTAL	100%

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Source: iPAR





YEAR 2

JULY 2016 – JUNE 2017



AN EMERGING ARMATURE

As the EMEF experience demonstrates, it only takes a few months to align a portfolio of marketable securities (i.e., Public Equities & Fixed Income) with an investor's values. However, it requires *years* for an investor to deploy capital (regardless of impact intent) across private equity, venture capital, and other non-marketable strategies. Why? First, like any allocation with numerous illiquid fund commitments, the EMEF portfolio sought to minimize exposure to any one macroeconomic milieu. This meant that capital commitments would have to be spread out over multiple years. Additionally, given most funds' multiyear investment horizon, EMEF could only inch along toward their long-term portfolio targets in Year 2. The reasons for this dynamic are not obvious, and have their own similarly esoteric offshoots (e.g., j-curves, entry/exit environment). EMEF learned these lessons gradually throughout Year 2, which led to a more comfortable, contemplative pace of capital deployment.



EMPHASIS ON EDUCATION

EMEF ended Year 1 energized. But for the foundation to invest authoritatively across additional asset classes and fund structures, they needed to continue their education process. Why?

At the beginning of Year 2, EMEF only had one allocation – Lyme IV – with a finite fund life ending after 2019. There were no allocations to private equity or venture capital in the portfolio. There was limited exposure to international investments, none of which were in private vehicles. And only one of EMEF's allocations was convincingly augmenting their mission. Given that the plan was to construct a diversified portfolio, built to deliver competitive financial returns and to combat climate change, EMEF needed to develop a strong understanding of several braided concepts.

First is that diversification takes many forms. At the start of Year 2, EMEF held investments in five distinct asset classes with seven different asset managers. Part of the motivation was to access uncorrelated markets: the return drivers for FSC-certified lumber, small business loans, and energy efficient housing in Seattle are all different from each other, as well as those for stocks and bonds. EMEF also invested with numerous asset managers to limit concentration risk. Simply put, if any single investment lost its entire value, EMEF did not want its corpus to experience a considerable decline. Instead, the foundation preferred to limit the portfolio's exposure to any one asset, asset manager, and asset class.

By the same logic, the foundation also wanted to avoid over-exposure to any one vintage year. As EMEF continued to invest in private funds, it would have been a mistake to commit too much capital to one entry or exit environment. (Please see sidebar for the reasoning, and Appendix D for an illustration of how EMEF has accomplished this outcome) Thus, even after EMEF took the requisite time to fully understand each asset class's complexities in Year 2, it still didn't make sense to invest the entire IPS-designated allocation to each of these asset classes. Instead, the plan was to carefully spread capital commitments within Real Assets and Private Investments over anywhere from four to six years.

A subtle, but important, consequence follows from this need for vintage year diversification: it would likely take a decade for EMEF's portfolio to reach maturity (i.e. the point when all committed capital has been called). This is a slippery concept for many investors to grasp. Note that most illiquid funds have finite lives that range from 5-10 years, with their investment periods commonly occupying half of the fund life (2.5-5 years). This is the designated time during which managers are

ARE OENOPHILES THE ONLY ONES WHO CARE ABOUT VINTAGE YEARS?

A "vintage year" marks the time when capital is committed to an investment. It is a critical concept when investing in illiquid funds, particularly those with defined time periods over which capital must be deployed and then returned to limited partners (LPs). These funds' success can be heavily predicated on the prevailing economy's strength – or lack thereof. Historically, economic cycles have tended to last approximately four years. In response, institutional investors generally spread allocations over a similar timespan, thereby reducing the portfolio's exposure to any potential future recessionary environment.

A hypothetical example best illustrates this point. Let's say an investor committed their entire private equity allocation (20%) to four different managers in 1998. Assuming each of the managers structured their funds with a ten-year fund life, all of them would be required to start selling assets in 2008. Recall that this was a time when the credit markets had seized up, liquidity was scarce, and deal volume consequently ground down to a virtual halt. In this hypothetical, the investor surely would have realized significant losses, regardless of the underlying funds' strategic diversification.

Vintage year diversification is one way to mitigate this risk. After all, no one can possibly predict what might happen ten years from today. Indeed, it is often only in hindsight that an investor can ascertain whether she is currently paying elevated prices for an asset. Even more reason for an investor to methodically stagger her illiquid investments over a number of vintage years.

expected to deploy as much of the committed capital as possible.¹⁸ The result? Let's say EMEF continues to diversify by vintage years through 2020. At that point, if the foundation commits capital to a manager with a typical 10-year fund life and corresponding five-year investment period, it could be 2025 before the entirety of that commitment is called. This nuance necessitates patience with portfolio construction, especially when employing illiquid investments.

Another related concept warrants explanation. When managers are raising capital, they often have a strong pipeline of opportunities in which they'd like to invest – quickly. After all, competition for these

¹⁸ Of course, not every asset manager ultimately invests 100% of fund proceeds. It may be that the fund loses key personnel, can't find attractive opportunities, devotes too much time to early portfolio assets, etc. Whatever the reason, this is a dynamic that can further complicate the asset allocation process.

assets can be fierce. Once managers acquire an asset, they subsequently want as much time as possible to ensure its appreciation. But again, these markets are inefficient, and their underlying transactions are complex. Therefore, it takes considerable time, travel, and talent for asset managers to construct a portfolio of these investments.¹⁹

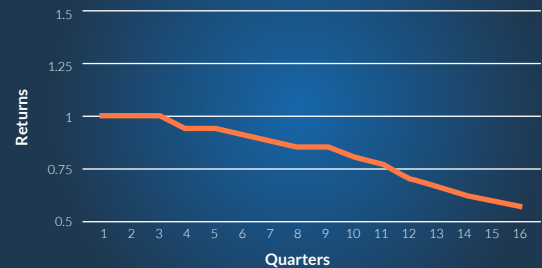
This was another essential insight for EMEF. Many of the private market funds toward which they increasingly allocated capital came with annual management fees of 1-2%, along with performance fees of 10-20%. These compensation structures may be commonplace in the private investment industry, but they were initially a cause of concern to EMEF. Again, why wouldn't they be? Historically, the foundation's portfolio had been exclusively invested in individual securities, with just a smattering of low-cost mutual funds and ETFs. Even if these new asset managers performed as expected, EMEF's total cost for portfolio management would witness a substantial increase. And to be clear, this has nothing to do with impact investing, but rather, the shift toward non-marketable investment opportunities. The "J-curve" could eventually exacerbate this tension around costs, since many private funds incur management fees before they post any investor returns. (Please see sidebar.)

The volunteers on EMEF's Finance Committee and Board devoted considerable time to learning these lessons. Before they committed capital to funds that would experience a steep J-curve, EMEF gained an appreciation for why these were costs worth bearing. As the foundation witnessed the crawling cadence of capital calls from illiquid funds, they developed a tolerance for the time it takes a portfolio to mature. Finally, EMEF's most discomfiting realization was that they'd have no choice but to accept elevated exposure to liquid asset classes. Note, this was at a time when Cash offered no interest payments, Fixed Income provided "return-free risk," and Public Equities' valuations resided near historical highs. Even more reason, in EMEF's eyes, to lessen the reliance on publicly traded securities.

Before they committed capital to funds that would experience a steep J-curve, EMEF gained an appreciation for why these were costs worth bearing.

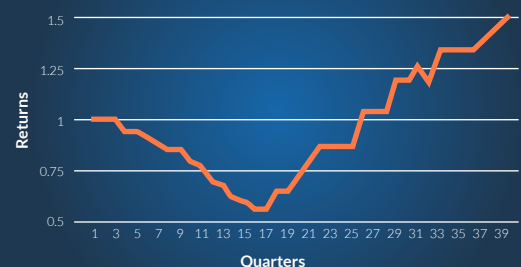
WHAT IS A J-CURVE AND WHY IS IT SO SCARY?

EARLY YEARS



Nearly every private fund collects annual management fees, somewhere in the range of 0.75% to 2.50% of committed capital. These fees cover the asset managers' considerable cost of doing business. However, many of these funds rely on the appreciation – and disposition – of their assets to offset these costs. While the hope is that a manager can purchase an asset and quickly sell it at a sizable profit, the reality is that this process takes many years. During this time, investors should anticipate that the imposition of management fees will lead to early losses, causing the performance curve to slope downward. This is the start of the "J-curve," and the optics are unnerving to many investors. Note in the example below that after several consecutive quarters, the fund may have posted a sizable loss.

END OF FUND LIFE



Some strategies assuage this tension by generating income early in the fund's life, perhaps via timber sales, rent collection, or loan repayment. But as every fund monetizes its assets, the expectation is that distributions to LPs will eventually outstrip all fees and any losses. For many venture capital and private equity funds, this can take several years, as they wait for their portfolio companies to achieve a liquidity event (e.g. initial public offering, acquisition, sale, etc.). As these "exits" produce gains from capital appreciation, the second part of the J-curve starts to take a much more appealing shape.

¹⁹ Indeed, that's why some managers don't even end up calling 100% of their committed funds!

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Kairos Kimpact Evergreen Real Estate Investment Fund

- Evergreen affordable housing fund focused on social programs & environmental upgrades
- Experienced manager, dedicated to showing that impact can drive returns in real estate
- Current income with equity upside; second private allocation seeking capital appreciation

North Sky Capital Clean Growth Fund IV

- Secondaries fund that purchases discounted LP ownership interests in cleantech funds
- Differentiated capital markets approach creates immediate value on acquisition
- Participation in a diversified array of private companies, many with mission alignment

OPENING THE INVESTMENT APERTURE

EMEF allocated capital to an even more expansive array of impact investments in Year 2. Admittedly, at first blush, the litany of strategies seems rather opportunistic: renewable energy infrastructure makes sense, but Asian equities and affordable housing? Moreover, what exactly is a secondaries fund? Despite the hodgepodge appearance, each of these investments fulfilled a distinct set of needs within EMEF's portfolio – while also providing a constellation of ancillary benefits.

To start, the [Kairos Investment Management](#) Kimpact Fund, much like the earlier investment with Green Canopy Homes, was squarely aligned with EMEF's programmatic focus on green building. Kairos had already demonstrated in previous funds that by investing in

Despite the hodgepodge appearance, each of these investments fulfilled a distinct set of needs within EMEF's portfolio – while also providing a constellation of ancillary benefits.

water, waste, and energy efficiency improvements, they could improve the financial returns of affordable housing.²⁰ Going forward, the manager's thesis is that by quantifying (1) the cost savings on environmental upgrades and (2) the returns on their new investments in social programs, they can prove that impact intentionality bolsters financial returns within real estate. Kairos' long-term goal is to become the first pure-play affordable housing impact real estate investment trust (REIT). If successful, EMEF – as an early investor – would receive warrants to purchase shares at a discount to the initial public offering (IPO) price. While that kind of

equity upside was appealing, the 6-8% stabilized cash yield that Kimpact targeted in the meantime matched EMEF's return requirements. As such, they decided to invest 3.6% of their portfolio with the manager.

Many people will recognize that there is a secular tailwind to a strategy like Kimpact, specifically, the significant supply-demand imbalance in affordable housing. Less clear, but equally favorable, are the fundamentals that favored EMEF's 1.4% allocation to [North Sky Capital's Clean Growth Fund IV](#) (CGF). Focused on "secondaries," North Sky buys existing partnership interests in private equity funds at a significant discount. By way of background, the cleantech manager universe skyrocketed from 15 to over 300 between 2005 and 2008. This increase created a bubble at the time, but it would later produce an interesting set of investment opportunities for North Sky. The reason is that a small group of these 300+ funds still contained assets with unrealized value in 2016. Meantime, some of these funds' LPs, plagued by impatience and/or in desperate need of liquidity, were willing to sell their ownership in those assets at a 20-60% discount. Equipped with considerable transparency into a deep pool of funds, North Sky could create value immediately on acquisition.

In turn, EMEF invested in yet another fund with a shallow J-curve. The foundation also obtained exposure to many different sectors: renewable energy, energy efficiency, and green building materials, as well as organic food, water treatment, and advanced materials. Not to be overlooked, by investing in what may have been the only impact-focused secondaries fund, EMEF was supporting a critical component of the impact capital markets. Put simply, impact investors will need ample avenues through which they can generate liquidity going forward. As the secondaries market matures, so too will the impact investment discipline.

Like Kairos and North Sky, [Generation Investment Management](#) is a best-in-class asset manager with

¹⁷ In particular, Kimpact is focused on low-income housing tax credit (LIHTC) multifamily properties, manufactured housing, and self-regulated units with deed restrictions.

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Generation Investment Management Asia Equity

- Long-only, actively managed, ESG Public Equity strategy focused on Asian companies
- Few firms have shown such exemplary ability to drive “alpha” from sustainability insights
- Much-needed international / regional diversification from a best-in-class manager

New Energy Capital Infrastructure Credit Fund

- Debt provider to small- & medium-sized renewable energy projects within the U.S.
- Another fund capitalizing on banks' inability to invest in smaller deals
- More yield, with equity upside from warrant coverage, plus renewable energy generation

demonstrated success. Founded by former U.S. Vice President Al Gore and David Blood, Generation believes that long-term investing requires systemic diligence of future business risk and opportunities, including factors related to environmental, social, and governance (ESG). However, Generation is not just an ESG investor. Their rigorous integration of sustainability analysis has few, if any, peers in the Public Equity manager marketplace. For proof, one only need to witness the continued outperformance (relative to their benchmarks) of both their [Global Equity](#) (MSCI All-Country World Index) and [Asia Equity](#) (MSCI Asia excluding Japan) strategies. (Please see Appendix C.)

At the time of their allocation, EMEF also had very limited exposure to emerging markets – even though the region enjoys favorable demographics and economic growth prospects. Asia accounts for nearly half the global population, almost three-quarters of the global emerging markets benchmark, and over one-quarter of global GDP. Against this backdrop, EMEF sought to invest in publicly traded, values-aligned, Asian corporations. There was no question Generation Asia Equity met this need, which is why EMEF allocated 2.8% of its portfolio to the manager.

The fourth and final allocation, to [New Energy Capital's Infrastructure Credit Fund](#), was the sort of impact investment that EMEF anticipated might appear much earlier in their portfolio. Of all the ways in which one could have invested in renewable energy at the time, there were few strategies that offered New Energy's array of attributes: a short lock-up (five years); strong projected cash yield (4-7%), with equity upside (which increased the target returns to 9-12%); an LP-friendly term sheet; an emphasis on smaller projects; a demonstrated ability to invest across various clean energy inputs; and an avoidance of technology risk. The fact that New Energy had delivered IRRs of 32.6% and 17.0% in their previous two funds further distinguished this

manager. Given the inherent environmental returns this strategy would generate, it was a good fit (2.8%) for EMEF's portfolio.

A SOLUTION TO THE SEDUCTION OF DIRECT DEALS

It has been said that impact investing, with its promise of doing good and making money, offers a seductive message. Acceptance of that premise helps to explain the tantalizing appeal of fundraising pitches from some early-stage entrepreneurs. Passionate, purposeful, and at times heavily promoted, these business leaders enjoy an outsized amount of attention within the impact investment marketplace. This outcome makes sense given the importance of small business to the U.S. economy, as well as the critical innovations that spring from some of today's entrepreneurs. Put simply, it is critical that capital flow toward these companies.

At the same time, one could argue that “direct deals,” impact or otherwise, offer the least appealing risk-adjusted returns – especially to inexperienced investors. The financings tend to be small, time-consuming, and therefore, inefficient. Equity-based investments are illiquid, generate no current yield, and have a high likelihood of going to zero. Nevertheless, let's say that a bold entrepreneur beats the odds and achieves an appreciable liquidity event for her investors. Hooray! We must then hope the impact intent is preserved in perpetuity, particularly since that intent is often what motivated (in part or in whole) the initial investment.

EMEF's first foray into impact investing, like so many other families and foundations, was a direct deal. However, unlike many first-timers, EMEF's entrée was a successful one: Mosaic repaid their loan, with corresponding interest, and experienced significant growth as a result. Therefore, it made sense that EMEF wanted to pursue more direct investments. For example, they

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

PRIME Coalition (Program Related Investment)

- Catalyzes philanthropic capital to early-stage solutions with GHG reduction potential
- Impressive team curates best technologies with greatest environmental upside
- Recoverable grant to public charity well-suited to identify exciting direct deal possibilities

asked Caprock to review an opportunity that would finance the installation of a ground source heat pump system as part of a local community college's net-zero energy initiative; an effort focused on sustainable forestry projects in South America and sub-Saharan Africa; and a London-based company that partnered with sovereign wealth funds to invest in clean energy infrastructure within emerging markets. Note, however, that no investment advisor is equipped to diligence effectively every appealing, one-off, direct investment opportunity – certainly not with the global footprint mentioned here.

Thankfully, EMEF was introduced to [PRIME Coalition](#), a public charity that partners with philanthropists to place charitable capital into market-based solutions addressing climate change. PRIME works with a world-class investment advisory committee to identify, downselect, and diligence companies with the highest possible climate impact and a high likelihood of commercial success, but that nevertheless will have a difficult time raising sufficient financial support.

PRIME offered a fascinating set of solutions to EMEF, namely:

- **deal exposure**, because the foundation enjoyed learning about emerging technologies, interesting companies, and charismatic entrepreneurs;
- **deal curation**, since no team was better-equipped than PRIME to find solutions with such significant emissions reduction potential;
- **deal avoidance**, meaning that EMEF could steer their commercial capital toward investments with arguably more favorable financial attributes – while continuing to support early-stage entrepreneurs;
- **administrative ease**, since PRIME removes any concerns about charitable intent by facilitating support for their docket companies via program-related investment (PRI), recoverable grant, or traditional grant.

As its first partnership with PRIME, EMEF ended up making a grant directly to [ConnectDER](#), a company developing a device that enables residential solar to con-

EMEF recognized early on that thematic rigidity is inharmonious with expectations for competitive financial returns.

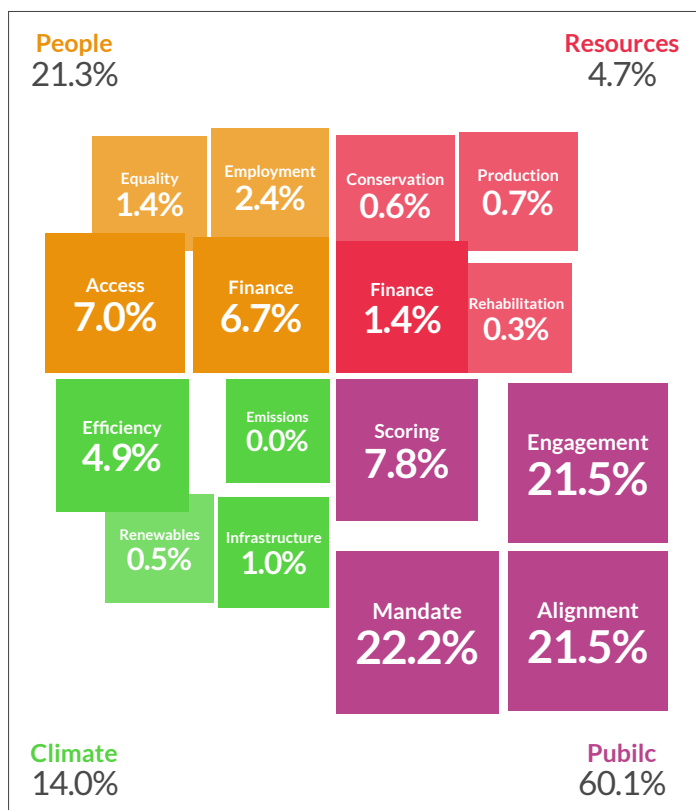
nect to the grid cheaply, safely, and rapidly. As discussed in the next section, the partnership between PRIME and EMEF would continue to bear fruit in the future.



EMEF took their time to do things the right way in Year 2, filling several important gaps in their asset allocation. They signed favorable term sheets and invested with proven managers. They didn't take on too much illiquidity, nor did they invest in any funds with a steep J-curve. Finally, each strategy exploited inefficiencies in the marketplace and was well-positioned to benefit from long-term trends.

It was by design that EMEF continued to diversify across varying assets, geographic foci, financing types, and terms. This effort was not just about risk mitigation (i.e., the driving factor behind vintage year diversification). Instead, in Year 2, EMEF was focused on maximizing financial return. The three private fund managers all targeted double-digit IRRs, whereas the public equity strategy expected to outperform its benchmark handily.

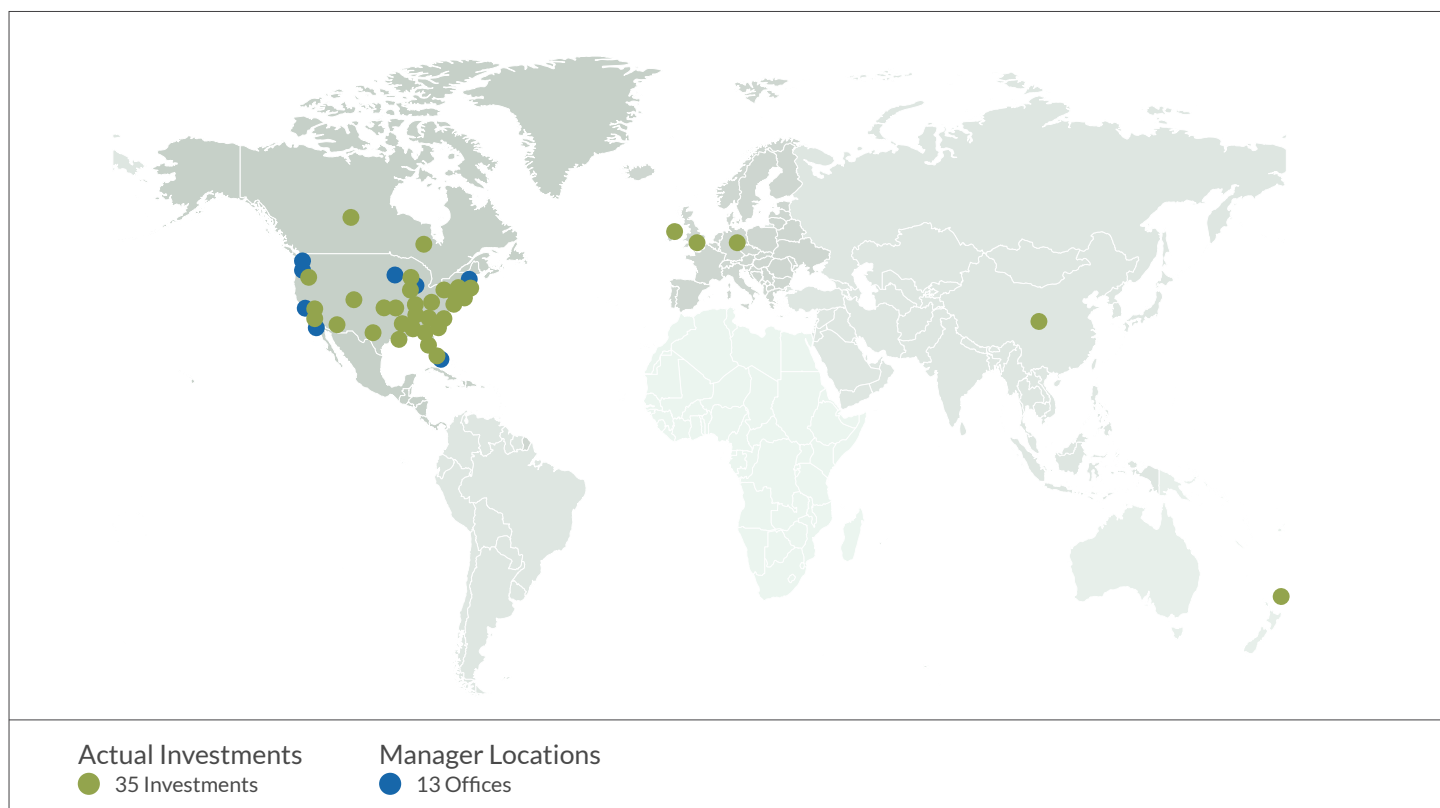
Admittedly, these investments' impact also varied considerably in intent, depth, and alignment with EMEF's mission. The Board understood and appreciated this outcome. Put another way, EMEF recognized early on that thematic rigidity is inharmonious with expectations for competitive financial returns. Indeed, this understanding represents the yin and yang of the impact investing discipline, even when confronting an issue as broad as climate change. The good news is that, when foundations are successful in meeting their return expectations, liquidity needs, and income requirements, they can then do some exciting things with their grantmaking, as EMEF did via its partnership with PRIME.



EMEF Asset Allocation – End of Year 2

Cash	0.6%
Fixed Income	30.9%
SNW	30.9%
Public Equities	41.7%
Aperio	34.1%
Essex GEOS	7.6%
Alternatives	18.2%
Brevet I-Class	14.0%
CIM	4.2%
Real Assets	7.7%
Green Canopy Homes' Birch Fund	2.8%
Lyme Forest IV	1.5%
Redwood Kimport	3.4%
Private Investments	1.0%
North Sky Clean Growth IV	0.5%
New Energy Infrastructure Credit	0.5%
TOTAL	100%

EMEF relies on a company called [Impact Portfolio Assessment & Reporting \(iPAR\)](#) to visualize two aspects of their portfolio: the upfront impact intentions and the ongoing impact returns. By focusing on the impact strategy of any capital deployment (regardless of investment structure or financial return expectation), iPAR facilitates unmatched portfolio perspective. In fact, iPAR is the first and only tool that harmonizes the torrent of impact information, across every asset class. As you can see below, the result is a streamlined view, ex ante, of a portfolio's geographic and thematic focal areas. And, as you will see in the Conclusion, the eventual impact metrics can then be mapped, ex post, against the same organizing taxonomy.






Source: iPAR



YEAR 3

DIVERSIFICATION RUNS DEEP

EMEF, emboldened by the encouraging evolution of their portfolio, invested more aggressively in climate-focused solutions in Year 3. The foundation added eight new impact allocations, all but one of which was focused on climate change mitigation or resiliency. Two of these new private funds would deploy capital within emerging markets, whereas another would become EMEF's third direct deal. The Board also opted to continue its PRI strategy with PRIME Coalition. EMEF made these calculated investment decisions in steadfast pursuit of their mission. While each allocation was marked by individual uncertainties, their aggregation did not inescapably lead to elevated portfolio risk. After all, the foundation worked to continue diversifying carefully across investment structures, impact strategies, asset classes, vintage years, and return types. They also re-upped their allocations with managers who had performed well. Moreover, at no point did they sacrifice fidelity to their mission. Indeed, this was the year EMEF recognized that their ongoing efforts might be compelling enough to share publicly, with the hopes of inspiring others to invest for impact.



What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Advance Global Capital Trade Growth

- Provides working capital to SMEs in emerging markets via factoring & invoice purchases
- First-time fund with global origination platform, solid structure & good terms
- Current income with favorable liquidity; first private investment in emerging markets

Althelia Sustainable Oceans Fund

- Provides debt to sustainable aquaculture projects & other marine assets around the globe
- Innovative approach to ocean conservation, de-risked by USAID's 50% first-loss provision
- First allocation to Real Assets outside the U.S., but still with an emphasis on current yield

GROWING THE GEOGRAPHIC REACH

As the iPAR graphic on page 27 demonstrates, the EMEF portfolio was concentrated heavily within North America at the start of Year 3. This outcome in no way signals EMEF geographic preferences; despite a lingering affinity for investing in the Pacific Northwest, the family understands that climate change is a global phenomenon. EMEF's limited exposure to international investments was instead a reflection of 1) the higher costs commonly associated with transacting around the world and 2) the elevated risks (e.g., regulatory, geopolitical, legal) investors must often accept, especially in emerging markets.

Two of EMEF's new allocations, however, overcame those impediments. The first, [Advance Global Capital's Trade Growth Fund](#), invests in assets backed by invoices of small- and medium-sized enterprises (SMEs) operating in emerging and underserved markets across the globe. Frequently referred to as factoring, this strategy supports the growth of SMEs (nearly half of which are owned by women) by accelerating their accounts receivable. Once again, EMEF recognized that the fund's financial attributes compelled impact agnosticism. By allocating 2.8% of their portfolio in the Founders' Series, the foundation received a competitive cost structure: a 1.25% management fee and only a 10% performance fee. Moreover, as an early investor in this first-time fund, EMEF also enjoyed no lock-up, alongside a quarterly **redemption** feature and a 6-8% return expectation (all from current income).

At 2.8% of EMEF's portfolio, the allocation to the [Althelia Sustainable Oceans Fund](#) (SOF) was another high-impact investment that few foundations or investment advisors would ever consider. Why? There are few, if any, funds in the marketplace with its assortment of impact intentions, financing structures, and geographic foci. Althelia, a Luxembourg-based asset manager,

launched the SOF to create, accelerate, and implement sustainable wild-caught fisheries, aquaculture, and other blue economy projects in developing countries and small island states. Althelia accomplishes these objectives by extending loan capital and purchase agreements to marine projects. Each of these projects will also benefit from the implementation of Althelia's industry-leading ESG standards and resulting third-party certifications (e.g.,

One should not overlook the fact that oceans sequester approximately one-third of the carbon emitted by human activity. And yet, there is an alarming dearth of capital invested in ocean health, sustainable fisheries, and reef restoration.

[Marine Stewardship Council](#), [Fair Trade](#)). By partnering with community stakeholders (i.e., local governments, cooperatives, and citizens), Althelia thereby incentivizes enhanced yields in production, responsible seafood supply chains, and improved livelihoods. In return, the SOF receives loan interest along with a defined share of project revenues.

The coastal ecosystems in which Ecuadorian lobster, Mexican scallops, and Seychellen finfish live represent the frontlines of climate change. Perhaps closer to home, one should not overlook the fact that oceans sequester approximately one-third of the carbon emitted by human activity. And yet, there is an alarming dearth of capital invested in ocean health, sustainable fisheries, and reef restoration. Simply put, these investments are very difficult to source and structure.

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Lyme Forest Fund V

- Acquires & manages U.S. timberland; focus on sustainable harvests & land conservation
- Familiar manager: Lyme IV delivering appreciable financial & impact returns
- Prolonged exposure to timberland assets, whose value as an inflation hedge is mounting

In recognition of these dynamics, [USAID](#) has helped to de-risk the SOF by providing a 50% first-loss guarantee. This term means that USAID will cover up to \$50 million of the fund's losses. Note that Althelia also solidified confidence-inspiring support from many other influential entities: technical assistance from the [Environmental](#)

By blending capital sources—upfront philanthropic grants with follow-on commercial investment; tax subsidies with private dollars—impact investors can foster innovative solutions to intractable problems.

[Defense Fund](#) and [Conservation International](#); anchor investments from [AXA](#), a global insurance company, and several development banks; and a program-related investment from the [David and Lucille Packard Foundation](#). However, without USAID's guarantee, it's safe to say that EMEF would not have invested.

This anecdote illustrates the influence of **credit enhancements**, an otherwise underutilized tool in the impact investment discipline. By blending capital sources (upfront philanthropic grants with follow-on commercial investment; tax subsidies with private dollars), impact investors can foster innovative solutions to intractable problems. In the eyes of EMEF, these are the stories that must be celebrated, to illuminate the nooks of creativity that are all-too-often obscured within the capital markets.

INVEST IN WHAT YOU KNOW —AVOID WHAT YOU DON'T

While EMEF is different in many ways from other foundations, they are quite similar in their desire to invest with well-known entities – particularly managers who have delivered financial returns and environmental benefits, as promised. Consequently, in June 2018, EMEF made the relatively easy decision to increase their

allocation to Green Canopy Homes' Birch Fund, which had already delivered a 9.3% IRR. Additionally, EMEF allocated 2.8% of their portfolio to Lyme Timber V, whose predecessor fund, Lyme IV, had already invested 100% of capital and delivered a 14.2% IRR. While Birch promised liquidity no later than December 2019, Lyme V would be another significant lock-up (12-15 years). Thankfully, this time around, EMEF was well-versed on the upside of that kind of illiquidity.

Around the same time, EMEF opted to fully redeem its inaugural private investment, the impact offering ("I Class") of Brevet Capital's Short Duration Fund. This was the first time EMEF went through the redemption process, which is never easy, especially from a logistical perspective.

For starters, like many private funds, redemption from the Short Duration Fund could only be requested on a quarterly basis and with 90-day advance notification. After the redemption process is complete, only 90% of withdrawal proceeds are returned to the investor – 30 days after the end of the designated quarter. The remaining 10% of the investment is subsequently returned up to 60 business days following the completion of the fund's annual audit. Thus, while EMEF redeemed their allocation on June 29, 2018, they won't receive 90% of their investment until Halloween, with the remainder likely paid out in mid-2010.

Again, this extended redemption process is rather standard in the world of non-marketable securities and underscores the importance of rigorous liquidity management.

The Brevet redemption may be prolonged, but the decision was a simple one for EMEF. Note that Brevet

Earning significant attention will be those managers who can convincingly link their financial returns to measurable, appreciable, and endurable social and/or environmental benefits.

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Evelar Solar

- Secured debt to Utah-based company focused on solar solutions, software, & installations
- Fast-growing company with solar industry's first real-time bid-and-finance platform
- Another double-digit yield, with more equity warrants, in a renewable energy company

Greenbacker Renewable Energy Corporation

- Acquires & manages a portfolio of 200+ renewable power projects throughout the U.S.
- Solid portfolio of assets backed by power purchase agreements with creditworthy entities
- Mission-aligned, low volatility, uncorrelated current yield, with equity upside in 2023

had delivered strong financial returns: 8.3% annualized since 2015. Recall as well that the manager had initially generated environmental benefits, via the installation of energy efficiency products at government facilities. However, in 2016, Brevet stopped producing impact metrics for the fund. EMEF tried to remain patient as Brevet worked to find a solution. In the meantime, the assets in which Brevet had invested via the I Class had highly questionable social benefit, with no discernible environmental returns. After waiting nearly two years for any sort of impact reporting, EMEF decided it would not tolerate the lack of transparency.

These three investment decisions underscore the importance of impact management, transparency, and reporting – not just within the EMEF portfolio, but also the broader impact investing industry. One can achieve market-rate financial returns, or better, in any number of ways. Earning significant attention will be those managers who can convincingly link their financial returns to measurable, appreciable, and enduring social and/or environmental benefits.

THE CLIMATE SOLUTIONS INNOVATION CONTINUUM

Quick, name an investment that combats climate change. Hopefully, based on the strategies described above, you thought of energy efficient buildings, or maybe even carbon sequestration via forest and oceanic ecosystem preservation. Much more likely, images of solar panels or wind turbines came to mind. These increasingly pervasive renewable energy tools have become iconic symbols in the fight against climate change. And yet, waste heat infrastructure, energy settlement networks, and demand response software also play an important role. Notably, Paul Hawken's seminal book, *Drawdown*, shows that refrigerant management and food waste reductions are the top- and third-ranked

Solar panels & wind turbines have become iconic symbols in the fight against climate change. And yet, waste heat infrastructure, energy settlement networks, and demand response software also play an important role.

carbon dioxide reduction solutions, respectively. Finally, as the Stabilization Wedges of Princeton University's [Carbon Mitigation Initiative](#) show below, we cannot overlook increased electrification of the transportation sector or usage of alternative fuel sources.

In other words, it will take an array of approaches to keep Earth's average temperature from increasing more than two degrees Celsius above pre-industrial levels, thereby meeting the central aim of the Paris Agreement.

As articulated throughout this case study, EMEF has diversified its portfolio to help minimize financial risk. By deploying capital across different asset classes, managers, investment structures, geographies, and vintage years, EMEF has increased the likelihood of achieving its long-term 8.0% return target. However, the foundation believes the merits of diversification also apply to climate change mitigation and resiliency. EMEF recognized early on that it could not invest exclusively in wind farms and solar arrays. Not only would that undercut its efforts to diversify the drivers of financial return, but it also wouldn't necessarily be the most effective way to combat climate change. As such, EMEF continued in Year 3 to methodically invest all along the **climate solutions innovation continuum**.

This was the year EMEF added its most significant exposure to renewable energy. It started with another

direct deal, a three-year mezzanine loan to [Evelar Solar](#) that represented 1.4% of the portfolio. This investment offered a double-digit yield, with equity upside and a relatively short lock-up. Moreover, like Mosaic several years prior, this company took a unique financing approach to support the adoption of residential solar. Later, EMEF invested in an offering from [Greenbacker Renewable Energy Corporation](#), which acquires and manages a portfolio of renewable energy power plants and energy efficiency projects. At the time EMEF allocated 4.2% of its portfolio to Greenbacker, the company already had a portfolio of nearly 200 assets (predominantly comprised of solar and wind facilities), each gen-

EMEF believes the merits of diversification also apply to climate change mitigation and resiliency. The foundation recognized early on that it could not invest exclusively in wind farms and solar arrays.

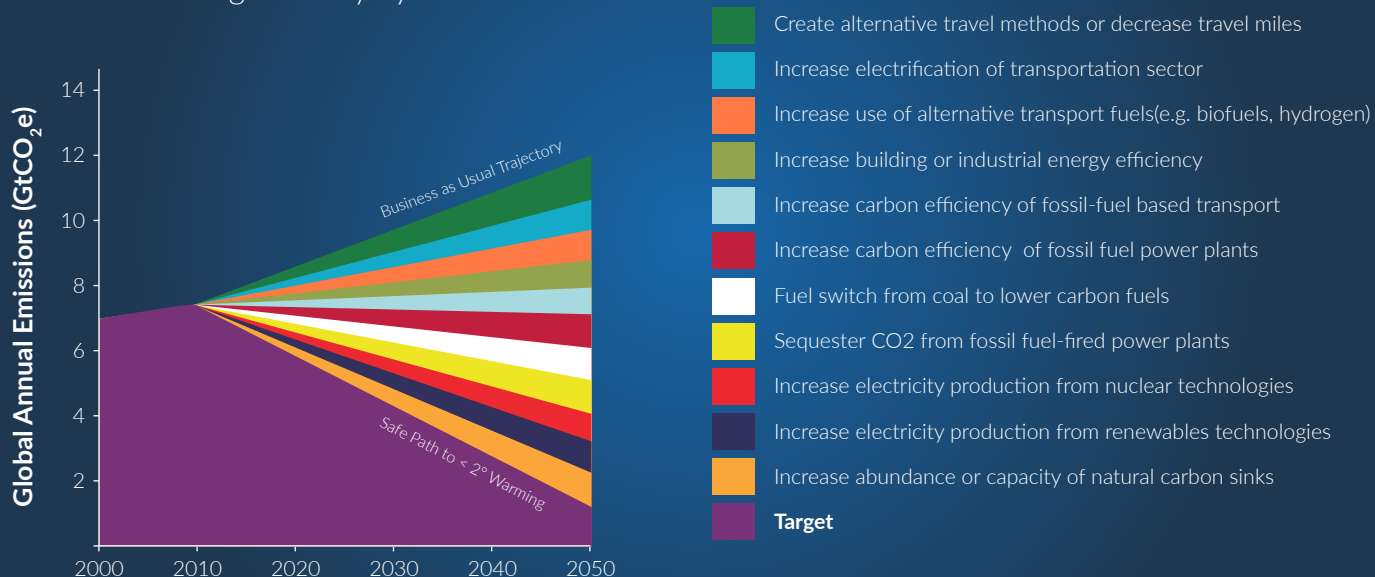
DRAWDOWN CLIMATE SOLUTIONS BY RANK

Rank	Solution	Sector	Total Atmospheric CO ₂ -EQ Reduction (GT)
1	Refrigerant Management	Materials	89.74
2	Wind Turbines (Onshore)	Electricity Generation	84.60
3	Reduced Food Waste	Food	70.53
4	Plant-Rich Diet	Food	66.11
5	Tropical Forests	Land Use	61.23
6	Educating Girls	Women and Girls	59.60
7	Family Planning	Women and Girls	59.60
8	Solar Farms	Electricity Generation	36.90
9	Silvopasture	Food	31.19
10	Rooftop Solar	Electricity Generation	24.60

Source: [Drawdown.org](#)

EMISSIONS REDUCTION STRATEGIES

This is a simple framework used to illustrate various strategies available to reduce emissions significantly by 2050.



Sources: [Carbon Mitigation Initiative](#), Princeton University; [PRIME Coalition](#)

What does the manager do?

Why is the strategy appealing?

What role does the strategy play in EMEF's portfolio?

Vision Ridge Sustainable Assets Fund II

- Real Assets strategy with an emphasis on sustainable & renewable inputs
- Ability to exploit inefficiencies in energy storage, agriculture, transportation, & real estate
- Inflation protection, cash yield, & low correlation, with new focus on different verticals

Arborview Capital Partners II

- Private equity fund investing in growth-stage companies that emphasize sustainability
- Strong returns in prior fund; adds noteworthy strategic value via board representation
- Continued diversification across returns types & vintage years; first growth-stage fund

Energize Ventures

- Provides venture capital to tech companies accelerating the transition to clean energy
- First-time fund with a unique strategy & compelling corporate partnership with Invenenergy
- First allocation to a fund focused exclusively on emerging climate solution technologies

erating income backed by long-term power purchase agreements (PPAs) with high credit-quality counterparties. With a 6.6% tax-equivalent yield and potential for a liquidity event in several years, this was yet another investment that offered immediate income with long-term capital appreciation potential.

Four other allocations in Year 3 ensured exposure for EMEF to many of the emission reduction solutions specified above.

To start, [Vision Ridge Partners](#) deployed capital across industries that are familiar to EMEF (energy and real estate) as well as those where the foundation did not have any private capital invested at the time (agriculture and transport). With their Sustainable Assets Fund (SAF) II, Vision Ridge continued to believe that a sustainable approach in each of these sectors had reached, if not surpassed, unit economic parity with traditional practices. Battery storage is a perfect case in point: as technology and implementation costs have plummeted, there has been a considerable uptick in demand for electric scooters, cars, and buses. If Vision Ridge's first fund offering is any indication, SAF II is expected to deliver appreciable financial returns (from early income and longer-term capital appreciation) alongside carbon dioxide reductions. For these reasons, EMEF chose to commit 4.2% of its portfolio to this strategy.

EMEF's 1.4% allocation to [Arborview Capital II](#) relied on similar logic. Specifically, the foundation was compelled to invest in a seasoned manager that identifies companies poised to prosper from sustainable solutions. While this fund would have some sectoral overlap (energy efficiency, resource efficiency) with pre-existing investments, Arborview enabled EMEF to branch out into

food production, waste reduction, and organic consumer products. This strategy also offered the portfolio its first allocation to growth stage private equity. Therefore, Arborview allowed EMEF to continue accumulating diversified allocations along not only the climate solutions continuum but also the various stages of Private Investments financing.

The third investment – another 1.4% allocation – was to [Energize Ventures](#), whose mission is to accelerate the transition to the future of energy. By partnering with the largest renewable energy company in North America ([Invenenergy](#)), Energize gains useful perspective on which technologies make energy more affordable, reliable, and secure. Therefore, unlike EMEF's infrastructure-focused strategies, Energize invests in capital-light, clean energy business models, such as battery control systems, electric vehicle charging networks, and cybersecurity solutions. By investing in Energize's portfolio of early-stage companies, EMEF accepted a collection of risks (e.g., technology, personnel, valuation, dilution, revenue, growth, competition, failure) that is quite different from any of its

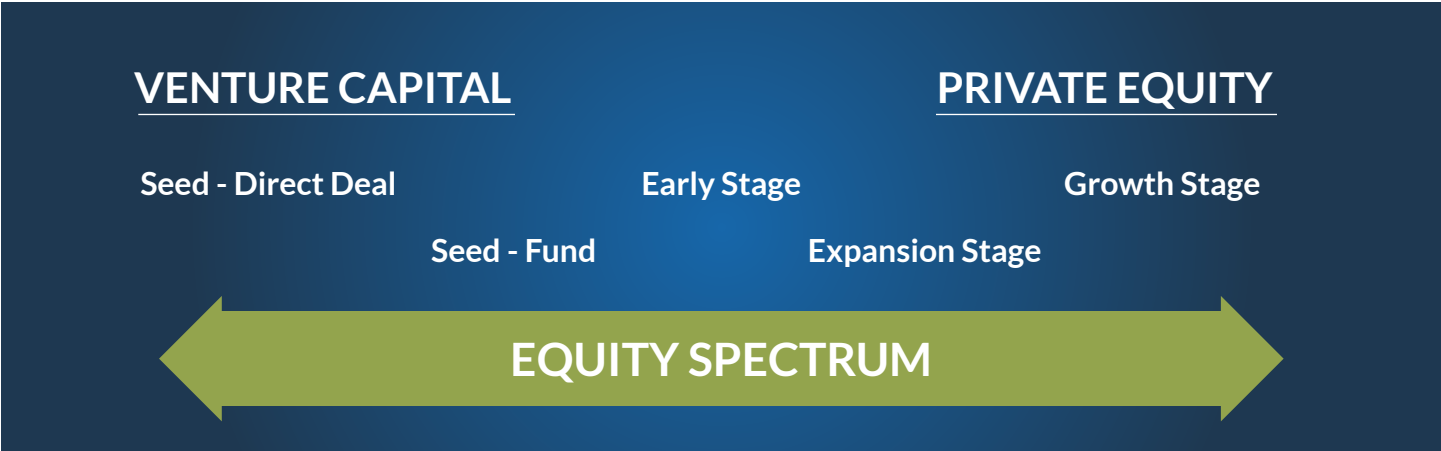
Although the opportunity did not yet make sense for a spot in the foundation's commercial portfolio, EMEF was excited to make yet another catalytic investment in a company with considerable emissions reduction potential.

other allocations. Knowing those risks had been “budgeted” across the portfolio – thereby limiting concentration accordingly – EMEF was able to get comfortable with this strategy.

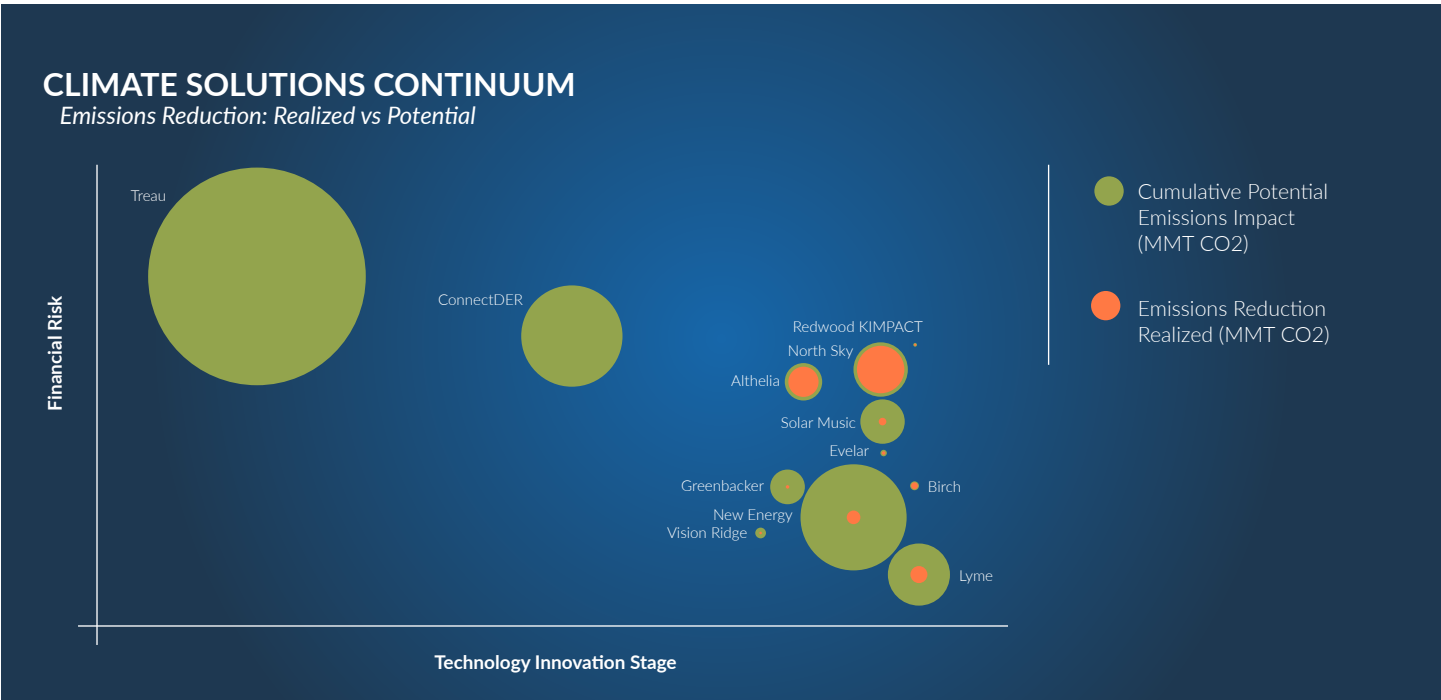
The fourth and final capital deployment was a program-related investment (PRI) to another PRIME-sourced opportunity, [Treau](#). According to PRIME, EMEF helped to “support the development of room air conditioner equipment that is twice as efficient at half the cost, and that greatly reduces greenhouse gas emissions from refrigerants.” Note in the *Drawdown* list above – as EMEF’s Board certainly did – that the top-ranked solution for total atmospheric carbon dioxide reductions is refrigerant management. Although the opportunity did

not yet make sense for a spot in the foundation’s commercial portfolio, EMEF was excited to make yet another catalytic investment in a company with considerable emissions reduction potential.

In sum, during Year 3 EMEF invested in an assortment of solutions, many of which addressed climate change more directly than allocations from Years 0-2. In some cases, these Year 3 opportunities were early-stage, perhaps run by first-time managers or entrepreneurs, and highly likely to experience a steep J-curve. More often, these were second-time funds, focused on later-stage companies, backed by operating assets or large corporations, that delivered early returns in the form of current yield.

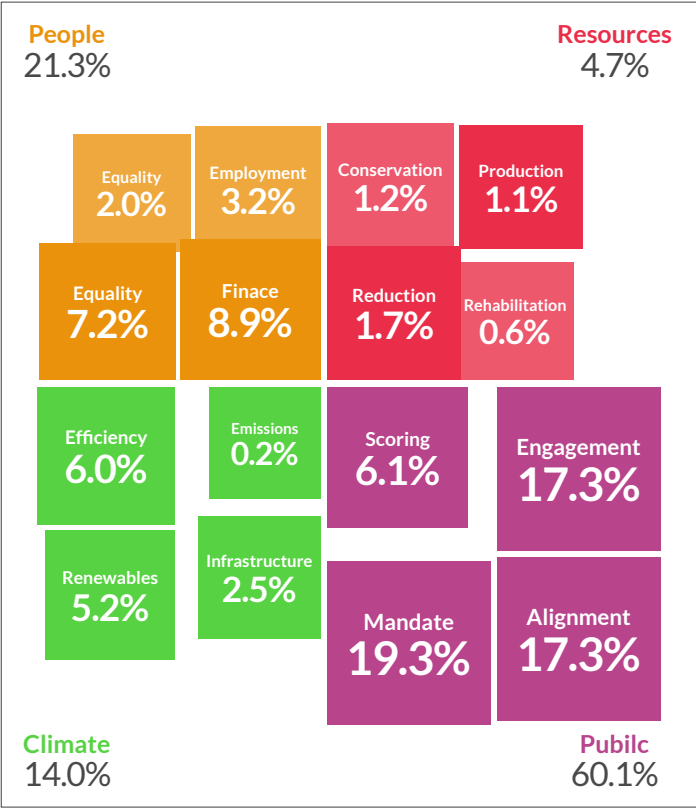


Source: The Caprock Group



This analysis was conducted by PRIME Coalition, based on 1) the manager’s reported impact metrics as of 6/30/18, and 2) PRIME’s calculation of each strategy’s emissions reduction potential.

Source: [PRIME Coalition](#)



EMEF relies on a company called **Impact Portfolio Assessment & Reporting (iPAR)** to visualize two aspects of their portfolio: the upfront impact intentions and the on-going impact returns. By focusing on the impact strategy of any capital deployment (regardless of investment structure or financial return expectation), iPAR facilitates unmatched portfolio perspective. In fact, iPAR is the first and only tool that harmonizes the torrent of impact information, across every asset class. As you can see below, the result is a streamlined view, ex ante, of a portfolio's geographic and thematic focal areas. And, as you will see in the Conclusion, the eventual impact metrics can then be mapped, ex post, against the same organizing taxonomy.

EMEF Asset Allocation – End of Year 3	
Cash	0.3%
Fixed Income	24.0%
SNW	24.0%
Public Equities	35.1%
Aperio	27.6%
Essex GEOS	4.4%
Generation Asia Equity	3.1%
Alternatives	21.2%
Brevet I-Class	14.1%
CIM	4.2%
Advanced Trade Growth	2.9%
Real Assets	14.9%
Green Canopy Homes' Birch Fund	4.2%
Lyme Forest IV	3.0%
Redwood Kimpact	3.5%
Greenbacker Renewable Energy	4.2%
Althelia Sustainable Oceans	0.0%
Vision Ridge Sustainable Assets	0.0%
Lyme Forest V	0.0%
Private Investments	4.6%
North Sky Clean Growth IV	0.5%
New Energy Infrastructure Credit	1.7%
Evelar Solar	1.4%
Invenergy Future	1.0%
Arborview II	0.0%
TOTAL	100%



Source: iPAR

CONCLUSION

PERFORMANCE TO-DATE

After shifting 100% of its assets toward impact investing, EMEF now has an allocation that is decidedly advancing its mission. The foundation has diversified its holdings across asset classes, industries, investment structures, return drivers, and vintage years. EMEF's portfolio has a few notable concentrations, particularly around geography (the U.S.) and sub-industry (renewable energy). And yet, these elevated exposures have been purposeful. At every turn, EMEF's advisor, Caprock, has ensured appropriate liquidity while assiduously managing risk. Finally, the foundation has realized a respectable amount of income – in a low-interest rate environment no less – but not at the expense of long-term capital appreciation.

The question that naturally follows is, what sort of financial and environmental returns has this portfolio achieved over the past three years?

Let's first review the financial performance, with a pointed emphasis on those asset classes (Fixed Income and Public Equities) where asset valuations are marked to market. Given that focus, SNW, Aperio, Essex GEOS, and Generation Asia Equity have together produced composite annualized returns of 5.0%, net fees, over the past three years.

OK, so...is that good?

The table below shows the individual performance of SNW, Aperio, Essex GEOS, and Generation Asia Equity relative to their benchmarks.

There are four key takeaways:

1. SNW has consistently outperformed the Merrill Lynch Corporate/Government A-AAA 1-10 year index, their designated benchmark based on the investment-caliber bonds in which the manager invests.
2. Aperio has tracked closely the performance of the composite benchmark (65% S&P 500 / 35% MSCI ACWI excluding the U.S.) the manager is expected to mimic.
3. Essex GEOS has outperformed one of its benchmarks (the Wilderhill Clean Energy Index), while underperforming the other (MSCI All-Country World Index).
4. In the limited time EMEF has been invested in Generation's Asia Equity strategy, the fund has delivered solid returns, though admittedly below its benchmark (MSCI Asia excluding Japan).

EMEF PUBLIC SECURITY PERFORMANCE		Three -Year Returns*	
Manager (Asset Class)	Benchmarks	Annualized	Cumulative
Seattle Northwest (Fixed Income)		1.5%	4.5%
	Merrill Lynch Corporate / Government A-AAA 1-10 year	0.9%	2.8%
Aperio Group (Passive Public Equities)		10.1%	33.4%
	65% S&P 500 / 35% MSCI All-Country World index excluding the U.S	10.2%	33.7%
Essex GEOS (Active Public Equities)		1.9%	5.9%
	(1) Wilderhill Clean Energy Index	-2.8%	-8.2%
	(2) MSCI All-Country World Index	6.4%	20.4%
Generation IM Asia Equity (Public Equities - Active)		8.6%	8.6%
	MSCI Asia excluding Japan	9.9%	9.9%

* Gross performance data, from June 30, 2015 to June 30, 2018 for SNW, Aperio, and Essex GEOS.

* Since the inception date for each manager varies slightly, the gross returns are standardized from June 30, 2015 to June 30, 2018 for SNW, Aperio, and Essex GEOS. The return figures for Generation Asia Equity correspond to performance from June 30, 2017 to June 30, 2018. Note that this allocation came much later in EMEF's portfolio construction process. It is also worth noting that this strategy has bested its benchmark over the long term, as shown in Appendix C.

In sum, these four managers — and, by extension, the EMEF portfolio — have all performed suitably. To be fair, the backdrop against which each has been investing over the last three years has presented challenges. As a reminder, the interest rates afforded by bonds touched the lowest levels in history and have only recently started to rise. Neither of these circumstances has been favorable for Fixed Income. Public Equities have enjoyed a much more sanguine environment, though two of EMEF's managers (Aperio and Essex GEOS) have missed out on the recent run-up in the fossil fuel-focused Energy sector. Finally, trade tensions with the Far East have temporarily hindered the performance of Generation's Asia Equity strategy. Despite these conditions, public security managers have preserved the purchasing power of their endowment, while also reserving access to capital for the foundation's steadily mounting allocations toward private market vehicles.

One thing to keep in mind: any investor that is new to illiquid investments must rely heavily on the returns of public securities to drive portfolio performance. Again, this dynamic is due to the liquidity afforded by stocks and bonds vis-à-vis the multi-year investment horizons and 10+ year lives of many funds available within Real Assets and Private Investments. When EMEF shifted to a new investment management approach in 2015, its Finance Committee recognized its reliance on public securities. And again, this was at a time when Fixed Income yields were extraordinarily low, and Public Equity valuations were extraordinarily high. Thus, while 5.0% admittedly falls short of EMEF's target rate of return of 8.0%, the figure validates the foundation's embrace of private market investment opportunities.



As such, one should also ask: what about the majority of the portfolio (57.4%) that has been committed to Alternatives, Real Assets, and Private Investments? Here, the wanting answer is, only time will tell. There are three reasons for this incomplete response:

1. Although some allocations have produced appreciable IRRs stemming exclusively from current yield, those managers must return EMEF's principal for the performance figures to have true meaning. In other words, while income-focused strategies from Advance Trade, Brevet, CIM, Evelar, Greenbacker, Green Canopy Homes, and New Energy have collectively generated composite annualized returns of 7.6%, it would be intellectually dishonest to portray this figure as anywhere near final.

2. Several other strategies — Lyme IV, Kimpact, & North Sky — have also distributed income to EMEF. Additionally, their portfolios contain assets whose valuations are appraised by independent third-parties. Thus, these investments have measurable financial returns. However, the double-digit IRRs they seek are predicated on long-term capital appreciation of the assets in which they invest. And since none of these managers have begun liquidating their respective portfolio of assets, it would be both unfair and inaccurate to suggest that their composite annualized returns of 8.2% to-date will necessarily resemble their final results.
3. The remaining commercial allocations — Arborview, Althelia, Invenergy, Lyme V, & Vision Ridge — have yet to call a majority of their capital commitments. This means that they are still very early in their respective fund's lives. Consequently, it would be premature and incomplete to share any financial performance data for these strategies.



The last question relates to impact returns: what sort of environmental benefits has the EMEF portfolio generated over the past three years? The graphic below specifies just some of the cumulative data that has been reported by EMEF's various investees via iPAR.

So, again, we must ask, are these environmental returns good?

For the following four reasons, it is currently *much* harder to evaluate impact than financial performance.

1. **There are no obvious methods to interpret such arcane figures.** This EPA [website](#) shows that 2,303,739 metric tons of carbon dioxide equivalent (CO₂e) is the same as greenhouse gas emissions from 493,306 passenger vehicles driven for one year. That kind of metric typically elicits blank stares, at best, when presented to impact investors. *Perhaps* this case study can illuminate the need for better tools that equip investors with an improved comprehension and appreciation for the impact they generate within their portfolios?
2. **There are no benchmarks against which EMEF's environmental returns can be compared.** No foundation would consider setting an annualized target rate of greenhouse gas abatement. This

despite the fact that many foundations are fixated on measuring outcomes associated with their grantmaking. *Perhaps* this case study will establish a yardstick against which other foundations can compare the impact of their portfolios?

3. There are no standardized reporting protocols.

Just within the iPAR Climate Theme (above), some managers produce voluminous annual reports, whereas others share only a handful of quarterly metrics (if that). This type of uneven reporting frustrates the most serious impact investors and flummoxes the recent entrants to the field. *Perhaps* this case study will encourage managers to coalesce around a consistent set of metrics, along with predictable timelines and measurement approaches?

4. There are no impact auditors to verify the environmental returns.

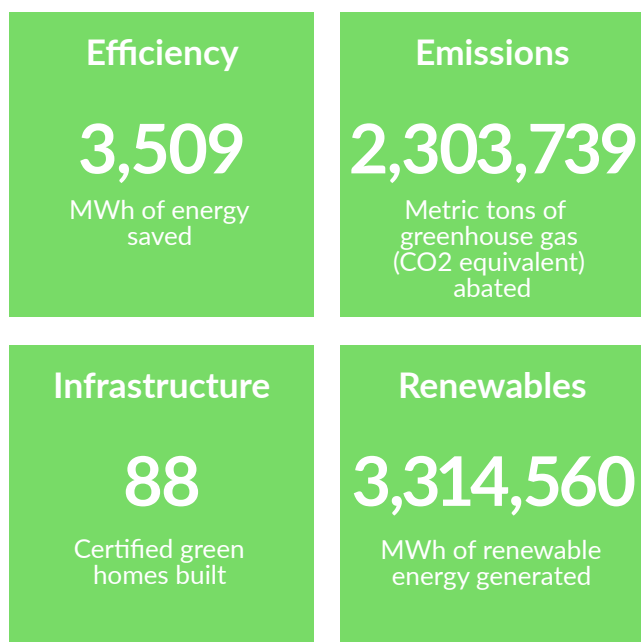
To be fair, there is no reason

to doubt the veracity or integrity of data reported by EMEF's asset managers. That said, one cannot help but to feel a bit uncomfortable with the fact that almost all impact data is self-reported. *Perhaps* this case study will underscore the glaring need within the impact investment industry for some sort of impact accountant?

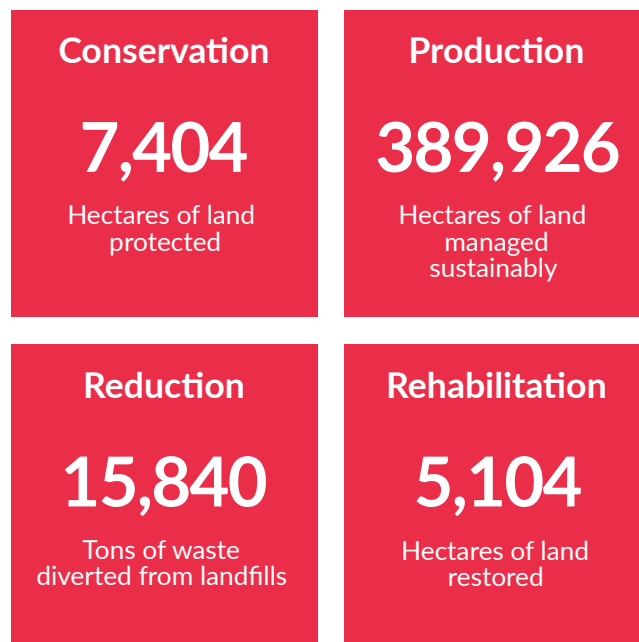
Clearly the nascent field of impact measurement and reporting needs substantial improvement. Investors must demand transparency and accountability from the asset managers to whom they allocate capital. Without it, investment decisions will continue to be based on incomplete information. At the same time, the industry needs some sort of standardization, so one manager's impact success (or lack thereof) can be compared with the next. Only then will investors be properly equipped to evaluate performance – financial returns alongside environmental benefits – in a holistic manner.

In spite of these limitations, EMEF is proud of what its portfolio has done for the environment. There is no

CLIMATE



RESOURCES



This analysis requires a bit of context. EMEF is just one investor, amongst many, in each of its investment vehicles. As such, it was not their capital alone that helped to generate all these environmental benefits. Instead, the figures represent "since inception" metrics that have been reported by each manager, over the entire duration of their respective efforts. No attempt has been made to temporalize or ascertain EMEF's pro rata share of each fund's impact, given the considerable complications associated with such a calculation.

Let's take just one case in point: EMEF's one-year note to Solar Mosaic in 2014. The company reported in June 2018 that it had facilitated 65,664 residential solar installations since its founding in 2011. Clearly EMEF does not deserve attribution for any of the installations that pre-date its investment. But again, Mosaic's founders admit that EMEF's loan was quite catalytic to the company's growth. Therefore, doesn't EMEF deserve some credit, not only for the installations achieved during its one-year loan, but also for the impact generated after the loan was repaid? If so, how much, and/or, for how long? An additional challenge from an impact accounting standpoint is that Mosaic does not precisely know how many solar installations they had facilitated on the exact day in 2014 that EMEF invested. Nor did they restart the installation meter the day they repaid EMEF's loan. This example highlights just some of the difficulties with impact attribution.

question the foundation has deployed substantial capital toward mission-aligned activities that, *but for* their investment, would not have otherwise occurred. The figures reported above are incrementally higher thanks to EMEF's involvement. It's also worth noting that the renewable energy generation, land conservation and rehabilitation, carbon sequestration, energy efficiency implementation, and waste diversion EMEF achieved over the last three years far surpasses the impact they previously achieved with their traditional stock and bond portfolio.



Given that their portfolio will not reach maturity until the middle of the next decade, EMEF recognizes that this is only the first installment of a longitudinal case study. The foundation's Board acknowledges that impact investing is still in its thesis validation mode: while early results suggest that one need not sacrifice financial returns to pursue impact, any definitive proclamation on the topic will require more than three years of empirical evidence. It will take more *time* for managers' assets to appreciate, just as it will take more *effort* from managers to capture and report the impact generated by those assets. In the meantime, EMEF will continue to iterate, improve, and illuminate its impact investing efforts – in the hopes that many more foundations and families will increase their capital deployments toward climate solutions.

GLOSSARY

B Corporation: per the B Corp [website](#), “Certified B Corporations are businesses that meet the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose. B Corps are accelerating a global culture shift to redefine success in business and build a more inclusive and sustainable economy.” In other words, this is exactly the sort of company in which EMEF was proud to invest.

Climate solutions innovation continuum: a concept developed by several authors (Scott P. Burger, Fiona Murray, Sarah Kearney, and Liqian Ma) in a Stanford Social Innovation Review article entitled “[The Investment Gap That Threatens the Planet](#).” They posit that “The most effective portfolio to achieve climate change mitigation will require thoughtful investments in climate solutions along the entire ‘innovation continuum,’ from conceptual ideas to solutions that are ready for commercial deployment and widespread impact.” While EMEF was unaware of the continuum as they built out their portfolio, it is a useful framework through which to view their panoply of climate-focused investments. As such, the foundation will keep in mind this continuum – and its related rationale – as it continues constructing its portfolio.

Credit enhancement: a financial tool that helps borrowers by improving the terms of their debt, and supports lenders by improving the risk-return profile of their loan. Examples include loan guarantees, letters of credit, insurance, or incremental collateral, all of which may be provided by third-parties to increase the borrower’s likelihood of repayment. An [Issue Brief](#) on loan guarantees written by the [Global Impact Investor Network](#) underscores the importance of credit enhancements: “In the growing impact investing market, many projects and enterprises may have powerful prospects for positive social and/or environmental impact while lacking a risk-return profile that meets the needs of conventional investors seeking risk-adjusted, market-rate returns. For such opportunities, credit enhancement can unlock private capital to help solve a wide range of pressing challenges.”

Duration: a widely misunderstood topic, this term refers to a bond’s (or portfolio of bonds’) price sensitivity to interest rate changes. Note that while duration is expressed as a number of years, it is most commonly communicated as a measure of interest rate risk. For example, if interest rates go up by 1.0%, the principal value (or price) of a bond would likely go down by ~1.0% for each year of duration. (Interest rates have an inverse relationship with bond prices.) Consequently, in a period of rising interest rates, in-

vestors typically target shorter duration bond portfolios in order to minimize interest rate risk.

Evergreen: this is an adjective that simply means the fund expects to continue accepting investor capital on an ongoing basis for the indefinite future.

Family office: these are oftentimes private companies established to oversee the entirety of wealth for either one family (a “single family office”) or multiple families (a “multi-family office”). Their scope and scale differ as widely as the families they serve, but their *modus operandi* is typically to deliver customized solutions, free from the conflicts of interest that pervade the financial services industry.

Model portfolios: an investment management approach that automates portfolio construction, based on the belief that standardized allocations are suitable for most clients. This “cookie cutter” approach enables advisors to manage more clients while optimizing for efficiency.

Redemption: an action by which an investor converts into cash their holdings in an investment or fund. With a Fixed Income instrument like a bond, this typically means the return of an investor’s principal within several days, when the bond is sold in the secondary market. However, for private market funds with lock-up periods, the redemption process can take much longer. This is due in large part to the fact that their investments are not traded within a public market. Consequently, their investment positions can take a fair amount of time to liquidate (i.e., convert to cash).

Separately-managed account (SMA): when used in reference to stocks and bonds, this is a portfolio of securities that is constructed and managed by a dedicated asset management firm in accordance with the needs of an investor. Unlike a mutual fund, an investor owns each security within an SMA. This dynamic affords investors more flexibility and control over the upfront composition of the account, as well as its ongoing management.

Tracking error: this refers to the difference between a portfolio’s return and the index(es) it was constructed to mimic. For those seeking passive Public Equity exposure, a low tracking error (ideally less than 1.0%) is desirable. Tracking error is calculated by taking the standard deviation of the difference between the portfolio and benchmark returns over time. As such, tracking error can be positive or negative, and it is a forward-looking estimate based on historical results.

APPENDIX A

ASSET CLASS SEGMENTATION

CASH

Support spending, grantmaking, and ongoing capital calls

- Return emphasis: current income (if any)
- Money Market Accounts
- Certificates of deposit
 - Community Development Financial Institutions (CDFIs)
 - Community banks

Immediate Liquidity

FIXED INCOME

Provide consistent cash flows, while also offering stability to the portfolio in times of market volatility

- Return emphasis: current income
- Government
- Municipal
- Corporate
 - Investment Grade
 - High Yield
- Green Bonds

Liquidity: 2-45 days

PUBLIC EQUITIES

Provide strong inflation-adjusted returns driven by growth in global corporate profits

- Return Emphasis: capital appreciation
- Passive + Active
- Large, Mid, Small Cap
- Developed, Emerging Mkt
- Option Strategies
- Positive/Negative Screens
- Shareholder Engagement

Liquidity: 2-45 days

ALTERNATIVES

Offer consistent returns and low correlation to other asset classes

- Return emphasis: depends on structure, but typically current income
- Structured Finance
- Small Business Lending
- Trade Finance
- Factoring
- Microfinance

Semi-Liquid: 45-365 days

REAL ASSETS

Tangible assets that afford a hedge against unanticipated inflation as well as low correlation with other asset classes

- Return emphasis: depends on asset type, but typically a nice mix of both current income & capital appreciation
- Green Real Estate / Workforce & Affordable Housing
- Sustainably Managed Timberland / Agriculture
- Renewable Energy Infrastructure
- Land Conservation / Rehabilitation
- Sustainable Aquaculture

Illiquid: 1-15 years

PRIVATE INVESTMENTS

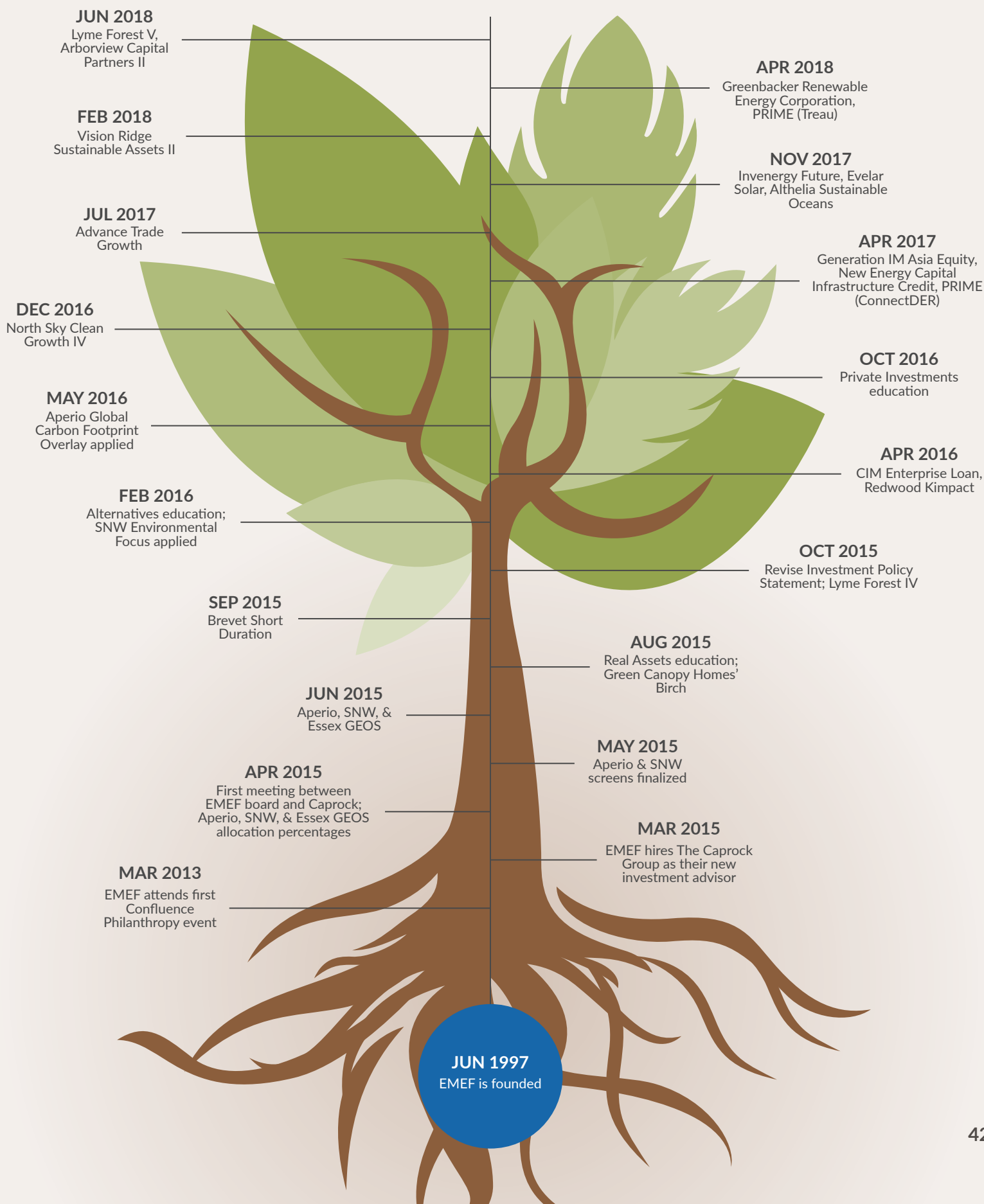
Provide strong inflation-adjusted returns driven by inefficient markets and the ability to accept illiquidity

- Return emphasis: capital appreciation
- Private Equity
- Venture Capital
- Mezzanine Debt
- Direct Investments (Seed, Early, Growth)

Illiquid: 1-12 years

Source: The Caprock Group

APPENDIX B



APPENDIX C

ESSEX GEOS <i>Performance History</i> <i>(as of 6/30/18)</i>								ANNUALIZED			
	MTD	QTD	YTD	1 YEAR	3 YEAR	5 YEAR	SINCE INCEPTION	1 YEAR	3 YEAR	5 YEAR	SINCE INCEPT.
GEOS (Gross)	0.24%	0.50%	-1.87%	3.44%	6.63%	29.25%	97.08%	3.44%	2.16%	5.27%	7.83%
MSCI World Index	-0.17%	1.09%	-0.67%	9.03%	20.40%	45.82%	116.72%	9.03%	6.38%	7.84%	8.97%
Wilderhill Clean Energy Index	-4.76%	-0.08%	-1.78%	15.27%	-8.16%	-7.11%	-48.62%	15.27%	-2.80%	-1.46%	-7.13%

Source: Essex

SNW – TAXABLE BONDS, INTERMEDIATE DURATION <i>Composite Performance History</i> <i>(as of 6/30/18)</i>											
	2018 YTD	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
SNW Taxable Intermediate (Gross)	-0.6%	2.4%	2.2%	1.8%	3.2%	-1.0%	5.2%	6.0%	6.0%	6.8%	6.7%
ICE BofA ML 1-10yr AAA-A U.S. Corp & Gov't Index Return	-0.8%	1.6%	1.5%	1.4%	3.1%	-1.2%	3.3%	5.8%	5.5%	6.5%	6.4%
Number of Portfolios	319	310	270	210	179	114	95	70	21	2.9	6.0
Gross Excess Return (Gross %)	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%	0.7%	1.2%	14%	11%

Source: SNW Asset Management

GENERATION IM ASIA EQUITY <i>Performance History</i> <i>(as of 6/30/18)</i>			
	FUND GROSS	MSCI AC ASIA EX-JAPAN	GROSS EXCESS RETURN
12 Months	8.60%	9.90%	-1.30%
3 Years	9.22%	7.02%	2.20%
5 Years	10.54%	8.17%	2.37%
Since Inception	8.81%	4.71%	4.09%

(as of 6/30/18) - Source: Generation Investment Management

APPENDIX D

VINTAGE YEAR DIVERSIFICATION

Manager	Primary Returns from	Asset Allocation %	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2031	2030	2032
Alternatives																				
Brevet	Current Yield*	14.1%	Quarterly Liquidity																	
CIM	Current Yield	4.2%	Monthly Liquidity																	
ATGF	Current Yield	2.9%	Quarterly Liquidity																	
Real Assets																				
Lyme IV	Capital Appreciation	2.8%	3-Year Invest Period +1 12-Year Lock Up +1 +1 +1																	
GCH's Birch	Current Yield	4.2%	Investment Period Last Loan 12/18																	
Kimpact	Current Yield*	3.5%	2-Year Lock Up 3-Year Gate																	
Althelia SOF	Current Yield*	2.8%	4-Year Investment Period 8-Year Lock Up +1 +1																	
Vision Ridge SAF	Capital Appreciation	4.2%	5-Year Investment Period 10-Year Lock Up +1 +1																	
Greenbacker	Current Yield*	4.2%	1-Year Lock Up: Quarterly Liquidity																	
Lyme V	Capital Appreciation	2.8%	3-Yr Invest Period +1 12-Year Lock Up +1 +1 +1																	
Private Investments																				
North Sky	Capital Appreciation	1.4%	4-Year Investment Period 8-Year Lock Up +1 +1 +1																	
New Energy I	Current Yield*	2.8%	2.5 Yr Invest Period 5-Year Lock Up +1																	
Evelar	Current Yield*	1.4%	3-Year Lock Up																	
Invenergy	Capital Appreciation	2.8%	5-Year Investment Period 10-Year Lock Up +1 +1																	
Arborview II	Capital Appreciation	1.4%	5-Year Investment Period 10-Year Lock Up +1 +1																	

Returns from current yield Returns from capital appreciation

* strategy offers additional capital appreciation upside (e.g., warrants, preferred equity, projected asset sale)

Source: The Caprock Group

THANK YOU



Edwards Mother Earth Foundation