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Building Impact Portfolios

Jeff Finkelman

Athena Capital Advisors LLC
55 Old Bedford Road
Lincoln, MA 01773
781.274.9300
athenacapital.com



THE POTENTIAL OF IMPACT INVESTING IS OFTEN ILLUSTRATED IN STORIES OF INDIVIDUAL INVESTMENTS. New entrants to the field and experienced participants alike are drawn to the idea of putting capital behind an inspiring social entrepreneur, an innovative business model, or a transformative technology. For investment advisors, the excitement over these kinds of one-off investment opportunities presents a dilemma: how to combine them into a portfolio that satisfies an investor's impact objectives while also meeting the investor's risk and return requirements?

Though finance is itself a relatively new field, it offers some guidance on how to approach this novel challenge. Modern Portfolio Theory (MPT), introduced by Harry Markowitz in 1952, gave investors a theoretical and mathematical toolkit for portfolio design.¹ Investors instinctually understood the value of diversification, but until the arrival of MPT, they lacked a systematic process for constructing portfolios that could deliver the highest expected return for the least amount of risk.

*MPT remains the foundation of the investment management industry today and offers impact investors a starting point when building portfolios that maximize both financial and "social" return for a given level of risk. **Building Impact Portfolios** is the second paper in a two-part series on impact investing. The first paper, **Impact Investing: History and Opportunity**, reviewed the wide range of impact investment strategies available across asset classes. This paper outlines a framework for blending those opportunities together into a coherent and comprehensive portfolio. It is geared towards institutional investors, such as foundation endowments, family offices and the firms that advise them. But any investor interested in moving beyond a deal-centric approach to impact investing and towards one that integrates impact throughout the investment process may find it useful.*

Modern Portfolio Theory & Impact Investing

Modern Portfolio Theory (MPT) is comprised of a set of mathematically-complex theories about risk, return and the way financial assets interact with one another. But like many economic theories, MPT is ultimately focused on answering a philosophical question: what makes investors happy? The technical term economists use for happiness is "utility," a concept that has its origins in the work of 19th century philosophers John Stuart Mill and Jeremy Bentham.² MPT is built on the assumption that when faced with choices, individuals will always select the option that brings them the greatest amount of utility. In financial markets, that means most investors avoid risk, which tends to reduce utility, and seek financial return, which increases utility.³

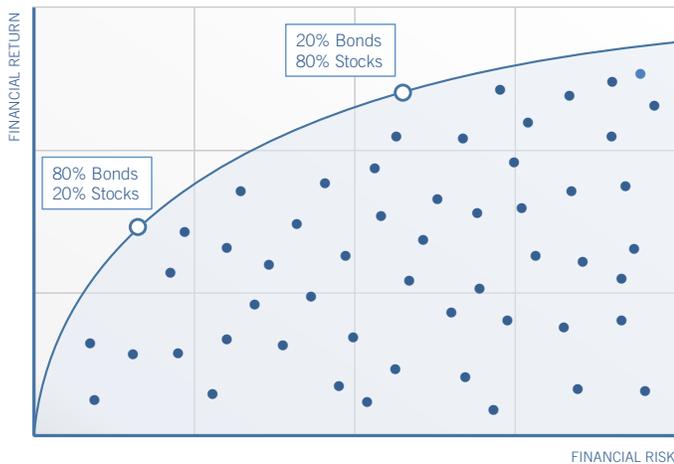
What makes MPT so compelling is that it systematizes the task of identifying the combination of stocks, bonds

and other investments that maximize investor utility. At the core of the theory is the concept of diversification. Though investors have long understood the benefits of diversification, MPT quantified its effects. It demonstrated mathematically that the risk of a portfolio is not simply the average risk of its component assets, but is largely a function of how those assets move in relation to one another. Investors can often increase their utility when they add assets to their portfolios that are uncorrelated with their other holdings.⁴

In fact, for any group of assets, there exists a set of optimal portfolios that will deliver the highest level of expected financial return for a given level of risk. When these portfolios are plotted on a graph of financial return and financial risk, one next to the other, they form what is known as the "efficient frontier" (See Figure 1).

The Efficient Frontier

Figure 1



The efficient frontier captures the essence of the investment decision facing traditional investors. Once the frontier has been drawn, investors need only decide how much risk they can tolerate and select the corresponding optimal portfolio. Those with high degrees of risk tolerance may choose an optimal portfolio heavily-weighted towards risky assets such as stocks, while those with low levels of risk tolerance may select an optimal portfolio heavily-weighted towards safer investments such as bonds.⁵

While the efficient frontier marks the end point of the process for traditional investors, it leaves impact investors with an incomplete solution. The two dimensional framework of risk and return lacks information about the social and environmental characteristics of the optimal portfolios or the assets they contain. As many authors and impact investing practitioners have argued, a third dimension is needed to capture all the factors important to impact investors.⁶

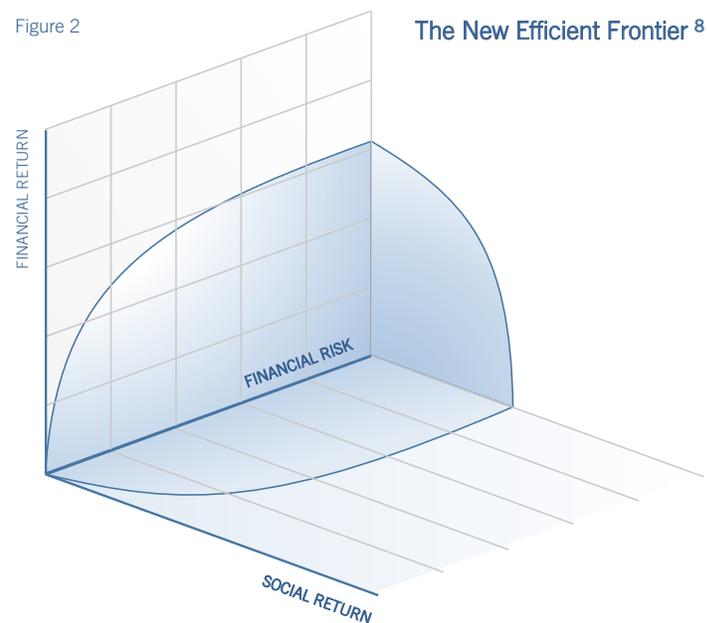
The obvious candidate for this third dimension is simply “impact.” Brian Dunn of Aquillian Investments took this approach in *Modern Portfolio Theory –with a Twist*, an early attempt at adapting MPT for impact investors. In Dunn’s model, the optimal portfolio was one which, for a given level of risk, maximized financial return while generating the greatest amount of positive environmental or social impact for society.⁷ While this

framework remains useful, it is missing one nuance. Though impact investors share a common desire to effect positive change in the world, they do not all agree on the specific social or environmental issues that deserve the greatest attention or the interventions that are most effective.

Given the investor-specific nature of impact investing, the risk-return framework of MPT is most accurately expanded not by including a measure of social *impact* on the world, but rather by introducing a measure of social *return* to the investor. Investments with the highest social return will be those that generate the largest amount of impact in the issue areas of greatest importance to the investor. The result is a set of portfolios that combine to form a new, three-dimensional efficient frontier that is unique to each investor (See Figure 2).

Figure 2

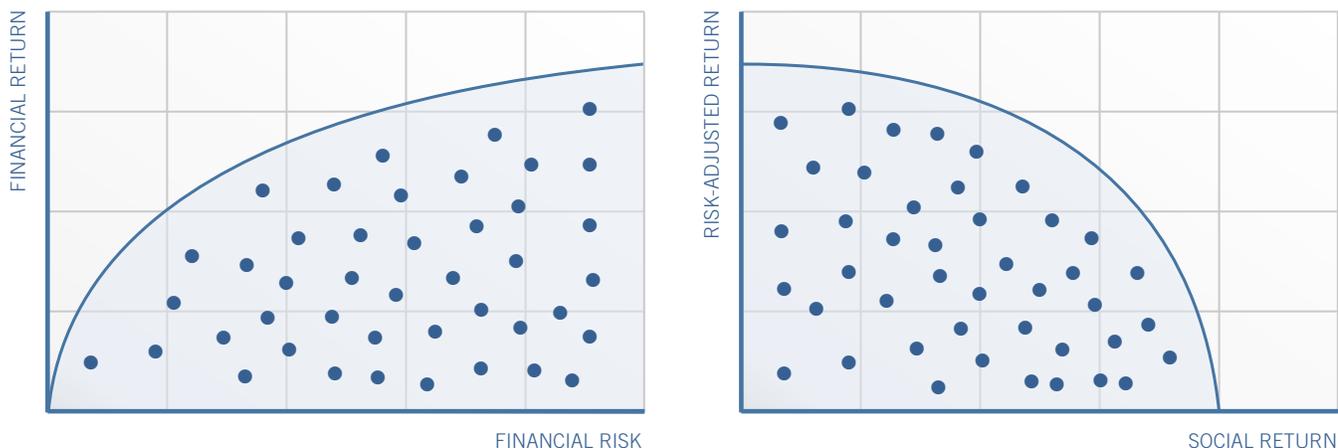
The New Efficient Frontier ⁸



For ease of interpretation, the frontier can also be represented as a combination of the traditional efficient frontier and a second graph with financial risk and return combined into a single measure of risk-adjusted return, calculated as the ratio of financial return per unit of financial risk.

Figure 3

The New Efficient Frontier



Implications of the Model for Portfolio Management

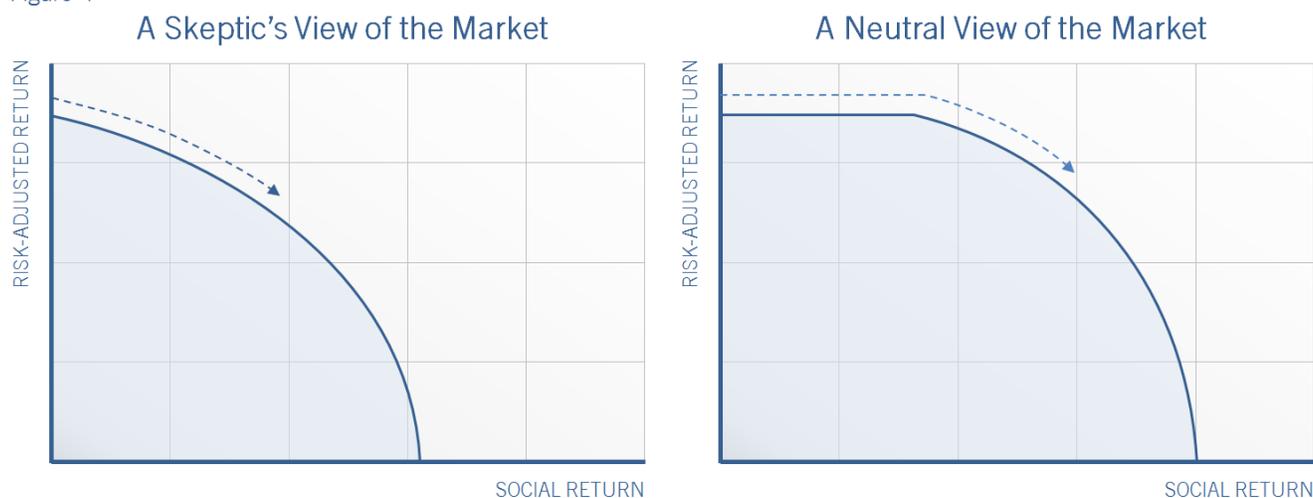
This new, three-dimensional model introduces several key issues worth recognizing. First, the model appears to leave out the concept of values-alignment, which is often achieved through the use of negative screens. Investors often gain satisfaction from the knowledge that their investment portfolios exclude holdings that conflict with their most deeply-held beliefs or their institutional mission. This would appear to be a source of social return that can be measured on the third axis. However, values-based investment decisions tend to be binary rather than a matter of degree. Negative investment screens are thus more appropriately treated as portfolio constraints. They limit the investments that can be used to construct optimal portfolios.

The second issue the model highlights is the relationship between risk-adjusted financial return and social return. As drawn in the Figure 3, the downward sloping shape of the new efficient frontier implies that investors

must sacrifice one in order to earn the other. In the extreme, this idea is not controversial. The portfolio located at the far-right end of the frontier, on the axis of social return itself, has no expectation of earning a risk-adjusted return. It is more appropriately labeled a portfolio of philanthropic grants, not investments. However, impact investing skeptics argue that any movement away from a portfolio optimized for financial risk and return is, by definition, sub-optimal. In their view, the frontier slopes steeply downward as soon as social return increases above zero.

The experience of seasoned impact investors suggests that earning a social return does not always require investors to accept uncompensated financial risk or lower expectations of financial return. A more realistic representation of the curve includes a flat section where the investor's willingness to sacrifice risk-adjusted return is irrelevant. Along this portion of the frontier, investors are able to find impact investments that deliver competitive, risk-adjusted returns.

Figure 4



How far out on the axis of social return investors can push their portfolios before sacrifices are required is ultimately a function of the opportunities available in the market. The width of the flat portion of the frontier will grow as the opportunity set expands and new, innovative impact investing strategies emerge.

The third and final issue is that the concept of social return risks disrupting the efficiency of the efficient frontier. There are no informational barriers in the world of MPT. The dynamics of supply and demand guarantee that assets with the same financial risk and expected financial return will all trade quickly and at the same price.⁹ Social return introduces informational asymmetries that slow down the process of price discovery. Investors may agree on an asset's risk, expected return, and even its impact potential, but that still may not be enough to consummate a trade. Buyers and sellers must also spend time and energy understanding the unseen preferences for different types of social or environmental impact that influence investor behavior.

The informational challenges of social return can be overcome if investors develop a new language to organize and communicate their non-financial interests. The section that follows proposes one possible path forward. It outlines how investors can quantitatively operationalize the concept of social return within a portfolio management framework.

Building an Impact Portfolio

The CFA Institute, a global, non-profit association of investment professionals that oversees the Chartered Financial Analyst (CFA) credential, describes the portfolio management process as a cycle comprised of three stages: planning, execution, and feedback.¹⁰ Just as MPT provides an essential, but incomplete theoretical framework for impact investing, the traditional portfolio management process is relevant to impact investors, even though it must be adapted to meet their needs.

Though all three stages of portfolio management are critical, the focus of this discussion will be on planning and execution, which are the forward-looking components of the process. Feedback, which is backward-looking, naturally leads to a discussion of how best to measure the realized social or environmental outcomes of impact investments. Several efforts are underway to tackle this complex topic, but a broad consensus about best practices has yet to be reached.¹¹ Cataloguing these efforts is a worthy endeavor but will be reserved for exploration in a future paper.

Planning: The Investment Policy Statement

The planning stage of portfolio management is focused on bringing definition to the concept of investor "utility." It is a contemplative process that requires investors to consider what they intend to achieve

with their investment portfolios and how far they are willing to stretch to reach their objectives. Their conclusions are typically recorded in a document called the Investment Policy Statement (IPS). Designed to be a living document open to periodic review, the IPS is a guidebook investors follow as they build their portfolios and evaluate individual investment opportunities. Traditionally, it contains information on an investor's return requirements, degree of risk tolerance, liquidity needs, investment time horizon, tax sensitivities, and a collection of "special circumstances" unique to the investor. The special circumstances most relevant to this discussion are values-alignment, ESG preferences, impact preferences, and impact investor type.

Special Circumstance: Values-Alignment

Building a values-aligned portfolio is typically achieved with the use of negative investment screens. Common examples include tobacco, firearms, military arms, alcohol, gambling and nuclear energy, but the choice of screens will vary by investor. Catholic investors may wish to prohibit investments connected to abortifacients or stem cell research, while environmental investors may choose to limit investments in companies that own fossil fuel reserves.

Regardless of the screens selected, investors should outline the parameters of their exclusion criteria in detail. Investors that trade their own portfolios of individual securities or those that hire external teams to manage customized, separately-managed accounts (SMAs) have the ability to employ very specific screening criteria. These may include revenue limitations for certain types of business lines or detailed definitions of relevant screening concepts, such as what constitutes stem-cell research.

However, highly customized screening is a luxury afforded principally to large investors. Smaller investors must consider how their screening preferences align with the investment products available in the market. Managers of commingled investment vehicles, such as mutual funds and exchange-traded funds (ETFs), may not implement screens that align perfectly with an investor's priorities. The IPS should outline where the investor is willing to be flexible and which criteria are non-negotiable.

Special Circumstance: ESG Approach

As noted in *Impact Investing: History & Opportunity*, there are several approaches to a type of investing commonly referred to as ESG Investing. Just as investors may have specific sectors or geographies they wish to exclude from their portfolios, they may also have preferences regarding the implementation of an ESG mandate. Some investors are comfortable selecting investment managers that use ESG analysis solely as a risk management tool, while others favor solutions-oriented ESG portfolios, such as those tilted towards low-carbon sectors or companies. The IPS should detail the investor's priorities regarding which types of companies or strategies should be "screened-in" to their portfolios or overweighted relative to others.

Special Circumstance: Impact Preferences

As noted earlier, the social return of an investment is a function of both its potential to generate impact and the investor's unique set of social and environmental goals. While assessing an investment's impact potential is part of the execution stage of portfolio management, recording the investor's impact preferences is a component of the planning process.

However, before investors can proceed with either of these tasks, they need a unifying framework that connects the wide variety of possible investor preferences with the full range of impact investment opportunities available in the market. One such framework is an issue area classification system. Efforts are underway to develop and promote classification systems for widespread use,¹² but investors can also build their own.

An effective classification system strikes the right balance between concision and breadth, accommodating the full spectrum of relevant issue areas without becoming unwieldy. For instance, there is little sense adding issue areas to the system that attract little investor interest or for which there are few investment opportunities. The classification system should also be flexible enough to cover both broadly-defined issue areas, such as the environment, as well as more narrowly-defined issue areas, such as affordable housing.

Sample Issue Area Classification System

Figure 5

Community	Community Infrastructure	Affordable Housing
		Transportation
		Community Facilities
	Financial Inclusion	SME Finance
		Agricultural Finance
		Microfinance
	Diversity & Inclusion	Gender Diversity
		Ethnic Diversity
		Equal Opportunity
Environment	Energy & Efficiency	Clean Energy Generation
		Green Building
		Energy Storage
	Conservation	Land Conservation
		Habitat Preservation
		Urban Green Space
	Waste	Material Waste
		Toxic Emissions
		Electronic Waste

Investor Preferences

Figure 6

0%	Community Infrastructure
0%	Financial Inclusion
100%	Diversity & Inclusion
100%	Energy & Efficiency
20%	Conservation
10%	Waste

Figure 5 provides a simplified example of a classification system. The table is structured as a tree that moves horizontally from the broadest categories on the left to the most detailed on the right. The table has been abridged for formatting reasons but can be expanded vertically as issue areas are added at different levels of the tree.

Once a classification system is in place, investors can return to the IPS to record their impact preferences. A useful first step is to draft a mission statement that outlines the investor’s impact objectives and explains the role the investment portfolio is expected to play in achieving those goals. Investors often have a variety of motivations for integrating impact into their portfolios. Drafting a mission statement can help them crystallize and prioritize their views. The statement also serves as a critical touchstone to which investors can return throughout the portfolio management process.

The next step involves converting the prose of the mission statement into a quantitative expression of the investor’s unique impact preferences. One approach to this process is to imagine the classification system as a kind of impact soundboard, with a volume dial attached to each issue area. Those issue areas most relevant to the investor’s mission should have their dials turned all the way up, while ancillary issue areas may have their volume set low. Issue areas completely unrelated to the mission can be muted.

The goal of the exercise is to establish a set of investor preferences that indicate which issue areas are potential sources of social return. In practical terms, the volume dial can be represented as a scale that ranges from zero to 100%. Figure 6 illustrates one possible preference allocation.

Special Circumstance: Impact Investor Type

The “impact soundboard” is useful for identifying the specific issue areas that align with an investor’s interests, but it says nothing about an investor’s willingness to pursue those interests at the expense of greater financial risk or lower financial return. Impact investors often confront this trade-off when evaluating individual investment opportunities, such as a low-interest community development loan or a fund managed by a first-time team. But trade-offs can also occur at the portfolio level. An unrestrained pursuit of social return may result in excessive exposure to certain asset classes, geographies, or other sources of diversifiable risk, even in cases where the underlying investments are considered “market-rate.”

Trade-offs are common enough in impact investing that the community has developed terminology to describe several common ways investors balance financial risk, financial return, and social return. The IPS should explain which of the following profiles best match the investor’s views:

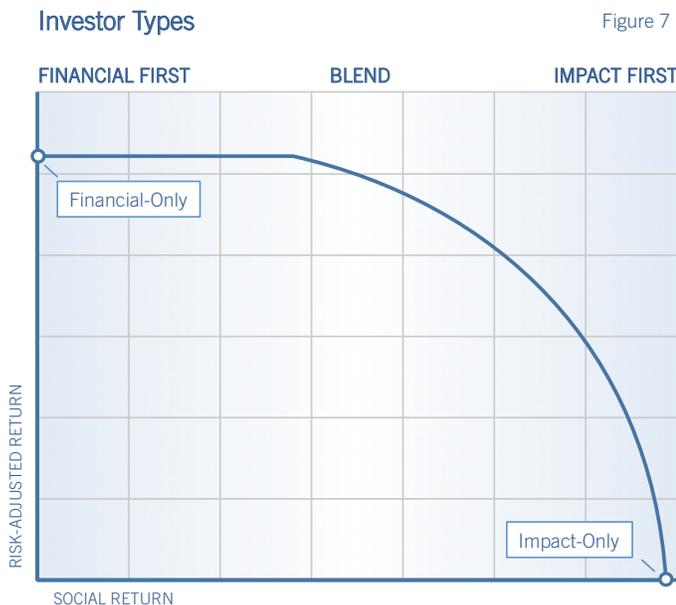
Financial-Only Investors: This category represents the status quo of the traditional investment landscape. Financial-Only Investors seek to maximize financial return without regard for social return and are constrained only by their tolerance for risk. Impact investments are relevant to these investors only in terms of their potential to enhance risk-adjusted returns.

Financial-First Investors:¹³ These investors only consider opportunities that lie on the flat portion of the new efficient frontier, where social return can be earned without sacrifice. When deciding among otherwise similar investment opportunities, Financial-First Investors will sometimes use social return as a tie-breaker. These investors are typically unwilling to tilt their portfolio towards social return if doing so will threaten the achievement of their financial objectives.

Blend Investors: Blend Investors lie between Financial-First and Impact-First investors. Their pursuit of social return is tempered by fidelity to their financial objectives. They may occasionally consider below-market investment opportunities if the social returns are particularly high, but the bulk of their portfolios are in market-rate investments.

Impact-First Investors:¹⁴ These investors are the opposite of Financial-First Investors. Though they seek a financial return, Impact-First Investors prioritize social return and are willing to adjust their risk and return expectations accordingly. Not only will they consider high-impact investments with low financial returns, but they will also weight their portfolios more heavily towards asset classes that deliver the greatest amount of social return.

Impact-Only Investors: Impact-only investors are better known as philanthropists. They seek to maximize social return without regard to financial risk or financial return.



Sample Investment Policy Statement The Smith Foundation¹⁵

The purpose of this Investment Policy Statement (IPS) is to provide The Smith Foundation (“the Foundation”) with the framework and parameters to govern management of its endowment assets. The IPS is intended to foster a clear understanding of the Foundation’s investment objectives. The Foundation may amend this IPS at any time.

Purpose:

The Foundation’s mission is to identify and support the next generation of leaders in the field of climate science, with a focus on science education, career advancement, and diversity. The principal purpose of the endowment is to fund the Foundation’s programmatic activities, including grants and program-related investments. However, the board of directors also regards the endowment as a resource to be used in service of mission. The endowment should be invested in a manner that aligns with the Foundation’s core values, that takes account of all the environmental, social and governance risks that may affect investment performance, and that furthers the mission of the institution.

Risk, Return, Liquidity, Tax Considerations and Time Horizon [CONDENSED]

The Foundation has a moderate risk profile and the endowment must maintain sufficient liquidity to fund annual spending of no less than 5% of the endowment’s assets. Within the bounds of the Foundation’s risk profile, the endowment seeks investment returns sufficient to maintain the value of the corpus after fees, inflation, and annual spending.

The endowment is a Financial-First impact investor. Though it intends to pursue impact investment opportunities across asset classes, it is not willing or able to sacrifice financial return or accept excessive financial risk.

Values Alignment & Impact Preferences:

The Foundation regards climate change as a risk to the global economy. As governments across the globe strengthen their regulation of greenhouse gas emissions and consumer preferences shift towards cleaner sources of energy, entities that hold significant reserves of fossil fuels face the risk of material financial loss. Accordingly, the Foundation’s endowment will not hold the debt, equity, or any other type of security issued by a corporation included among the Carbon Underground 200.¹⁶

With the assistance of program staff, the board has conducted a review of various impact issue areas and selected a set of impact preferences. These preferences reflect the board’s view of the best use of endowment assets in furtherance of the Foundation’s mission.

ISSUE AREAS	PREFERENCE WEIGHT	FOCUS AREAS
Education	100%	STEM Education Education Technology Access to High-Quality Education
Diversity & Inclusion	100%	Gender Diversity in Entrepreneurship Ethnic & Racial Diversity in Entrepreneurship
Energy & Efficiency	30%	Clean Energy Storage Clean Energy Generation Distributed Energy Building Efficiency

Execution: Putting Principles into Practice

The execution phase of the portfolio management process is comprised of two major steps, one building on the other. During the asset allocation process, investors identify the asset classes most appropriate for their portfolios and then set target weights for each. Investors next employ a due diligence process to evaluate the investments that will be used to meet those targets. The section that follows will review these two steps in detail.

Asset Allocation

There is no single, agreed-upon set of asset classes or sub-asset classes, but several widely-used categories can serve as the basis for discussion. These include cash and its equivalents, fixed income, US equity, international equity, hedge funds, private equity, real estate, and commodities. Each asset class has its own unique set of risk, return, and liquidity characteristics. Blending them together through an asset allocation process gives investors access to the diversification benefits described in MPT. Some use sophisticated optimization techniques while others seek the wisdom of the market through investor surveys. Regardless of approach, the ultimate goal is to establish an allocation that is consistent with the objectives outlined in an investor's IPS. An investment's impact preferences play an important role in several key areas.

Implications of Screening: Commodities

Depending on the nature and rigidity of the screens specified in an investor's IPS, entire asset classes or sub-asset classes may be ineligible for investment. Commodities are particularly vulnerable to exclusion. Though investors typically participate in the commodities sector through the futures market, rather than taking delivery of physical commodities, the asset class is not hospitable to those concerned about the environmental damage sometimes associated with extractive industries.

Investors with screens focused on fossil fuels may be willing to retain exposure to certain commodities sub-asset classes, such as precious metals, base metals,

and agricultural goods, while excluding energy. Those that regard natural gas as a transition fuel may also be willing to maintain energy sector exposure through investments such as Master Limited Partnerships, which often own natural gas pipelines and storage facilities. Unfortunately, a large, highly-liquid market for "clean" commodities has yet to emerge. Carbon credits, water rights, and renewable energy credits are traded in some markets, but they remain niche instruments.

Investors generally hold commodities because the asset class has historically provided an effective hedge against unexpected increases in inflation. There are no perfect substitutes, but investors that choose to reduce or eliminate their commodities allocation may wish to shift their exposure into Treasury Inflation-Protected Securities (TIPS). These government-backed, fixed income instruments deliver a return that adjusts to changes in the Consumer Price Index.

Social Return in Public vs. Private Markets

Though public markets offer the opportunity to generate impact at a massive scale, private markets often offer investors much greater control over the issue areas targeted, the structure of investments and the use of capital. For these reasons, some investors may wish to increase their allocations to private equity and private real estate. However, shifting assets into these asset classes may come at the cost of greater risk and illiquidity. To maintain balance, investors might consider simultaneously increasing their allocation to lower-risk assets, such as high-quality fixed income investments, while also decreasing their allocation to the higher-risk portion of their public equities portfolio, such as U.S. and international small-cap equity.

Hedge Funds

Hedge funds are not known for being highly-impactful investments. Several of the sub-asset class strategies, such as global macroeconomic, relative value and arbitrage-based strategies, have little relevance to impact issue areas. Other types of hedge funds are sometimes criticized for short-term thinking, aggressive tactics and a lack of transparency. For these and other reasons, broad exposure to the asset class may be not be

appropriate for Impact-First or Blend Investors focused on maximizing the social return of their portfolios.

However, investors need not abandon the asset class entirely. The irrelevance of some hedge fund strategies to social and environmental issues means they may be acceptable to those investors interested primarily in avoiding harm. There is also a growing cohort of ESG-focused hedge funds, particularly within the sub-asset class known as equity long/short. These funds often organize their strategies around an ESG theme, such as the transition to a low-carbon economy. One fund might take long positions in companies working to accelerate the transition, while shorting those companies that are vulnerable to a shift away from fossil fuels.¹⁷ Another fund might focus on picking the winners and losers within a low-carbon industry, such as renewable energy production, automotive electrification or materials science.

Hedge funds are typically included in a traditional multi-asset class portfolio because of their potential to generate uncorrelated returns. Investors that choose to lower their hedge fund allocation may have difficulty obtaining those benefits elsewhere. When reallocating their capital, they might consider either over-weighting asset classes with high social returns or simply increasing all asset classes proportionately.

Investment Due Diligence

The marketplace for impact investments has grown tremendously over the past decade and impact investors are constantly bombarded with new and intriguing opportunities. Sorting through them all can be a challenge. A thoughtful and methodical due diligence process not only offers investors protection against avoidable financial loss but also helps to ensure their capital is generating the level of social or environmental impact they expect.

The discussion that follows will focus on measures investors can take to evaluate the impact potential of an investment opportunity. It concludes with the calculation of social return, which is transformed from an abstract concept into a tangible metric that is a function of (a) the amount of capital an investment deploys in each of a given set of impact issue areas; (b)

the quality of the investment's impact strategy in each of those issue areas; and (c) the importance the investor assigns to each of those issue areas.

Preparatory Due Diligence: Understanding the Issue Area Landscape

Evaluating the quality of a particular investment opportunity requires knowledge of the broader investment landscape. Investors of all kinds often begin their due diligence with research into the supply and demand dynamics, competitive trends, and business strategies being pursued within the investment's target market. Impact investors extend this analysis to the investment's target impact issue areas.

Impact investors have two primary goals when conducting landscape research within a given issue area. First, they must develop a view of what constitutes a high quality impact strategy, a task that can be simply stated but hard to complete. The following questions may serve as a useful research guide:

- What social and environmental outcomes constitute success within the issue area?
- Which theories of change have shown the greatest promise in generating those outcomes? Which theories of change have proven unsuccessful?
- What is the role of private investment capital in achieving the target outcomes?
- How do the efforts of private investors relate to those of the public and philanthropic sectors?
- What specific investment strategies are private investors pursuing in the field?
- Which asset classes offer the most numerous and most compelling investment opportunities?
- Which specific companies or investment managers are most active in the sector?

Answering these questions may require certain value judgments, particularly when it comes to defining success within the issue area. But investors can still employ a research process that is grounded in evidence and fact. In addition to conducting a literature review,

investors will benefit from identifying and engaging with practitioners, such as investment managers, grant-makers, regulators, and academics. At the conclusion of the process, investors will have established an impact evaluation framework they can reference when assessing individual investment opportunities.

The second goal of landscape research is to identify the financial risk and return dimensions of the issue area. Some impact strategies are more likely to generate “market-rate,” risk-adjusted financial returns than others. Investors should gain an appreciation of the trade-offs that may be required to earn a social return within a given issue area.

Investment Analysis: Issue Area Classification

Equipped with landscape research, investors can begin assessing the individual investment opportunities that flow through their pipeline. The first step involves classifying investments using the issue area classification system. Few investments will fit neatly into a single issue area the way they might fit within an asset class. A more natural and flexible approach is to treat each impact issue area as a type of capital-weighted exposure, similar to geographic or sector exposure.

Setting exposures is straightforward in some cases, such as a venture capital fund that intends to deploy its capital equally across the education, affordable housing and waste recovery sectors. It would simply be assigned a 33 percent exposure to each of those three issue areas. Other investments may not invite a clear solution. Microfinance investment vehicles, for instance, could easily be classified as having 100 percent exposure to the issue area of financial inclusion. However, because microfinance is often associated with other development benefits, such as women’s empowerment and economic development, a more varied set of issue areas exposures may be more appropriate.

Investment Analysis: Impact Ratings

The investor’s next task is to rate the quality of an investment’s impact strategy. Rating systems have flaws but are commonly used in the impact investing community and bring consistency to the assessment

process. Given the wide margin of error involved in converting a qualitative assessment into a numerical rating, ranges with more than four to five intervals risk giving investors a false sense of precision. The following is an example of a simple, but effective rating system:

0	No Impact
1	Medium-Low Impact
2	Medium Impact
3	Medium-High Impact
4	High Impact

The impact rating is meant to reflect a forward-looking assessment of an investment’s impact potential and should be rooted in the investor’s landscape research. A rating is assigned not for the investment opportunity as a whole, but rather for each of the issue areas to which it has exposure.

Calculating Social Return

The social return calculation acts as a bridge that connects an investor’s unique set of impact preferences with the results of a thorough impact due diligence process. Social return is a function of three variables: an investment’s issue area exposures, the quality of its impact strategies within each issue area, and the investor’s preference for each issue area.

Social return is a two-step calculation. First, an investment’s issue area exposures and impact ratings are multiplied together. The result is a set of raw impact scores that indicate, within each issue area, the level of the impact an investment is expected to generate per dollar invested. Next, the raw impact scores are multiplied by the investor’s set of issue area preferences. The results are then summed to arrive at a single measure of the investment’s expected social return.

The case study on the next page illustrates how an investor might calculate social return for a prospective investment opportunity.

Ratings Profile: Education Technology Ventures III, LP¹⁸

Education Technology Ventures III (ETV3) is an early-stage venture capital fund focused on the K-12 segment of the education sector. The fund targets companies that create in-class learning technologies that improve student outcomes as well as those offering technology-enabled tutoring services. Both of ETV3’s managing partners are women, a differentiating attribute they believe has attracted deal flow other firms in Silicon Valley may not see or simply overlook. To date, roughly half of the 20 portfolio companies ETV has held since its first fund have been led by female founders.

ETV3 is targeting a total capital raise of \$120 million. The Smith Foundation has reviewed the opportunity with the expectation of participating in the fund’s first close.

Education:

The Foundation’s landscape review of the education sector identified several key attributes of high impact strategies: business models that generate top-line growth based on student outcomes; a focus on providing access across the socio-economic spectrum; and flexible learning models that accommodate different learning styles and adjust to different aptitude levels.

While ETV’s investment track record is consistent with ETV3’s strategic focus on outcome-based revenue models and adaptive learning, the manager’s existing portfolio companies have typically targeted private educational institutions and tutoring services that cater to higher-income households. The types of technological solutions ETV3 proposes to capitalize do have the potential to be transformative for all students, but because they are unlikely to immediately benefit a diverse student population, the fund has been assigned a “Medium-High Impact” rating rather than a “High Impact” rating for the Education issue area.

Diversity & Inclusion:

The Foundation’s Diversity & Inclusion landscape review highlighted severe gender-based disparities in the technology sector. Though it emphasized the need to take a broad and nuanced view of gender issues, it determined that providing direct support to female venture capitalists and entrepreneurs has high impact potential.

On this basis, ETV3 is awarded a “High Impact” rating in the Diversity & Inclusion issue area. The fund managers are women and have shown a far greater openness to female entrepreneurs than the average venture capital fund. The large number of female entrepreneurs in their pipeline is consistent with their reputation as advocates for gender equity in Silicon Valley.

Issue Area Exposures:

ETV3’s issue area exposure has been split equally between Education and Diversity. Though the entirety of the fund’s capital will be deployed in the education sector, the fund’s gender profile is consistent with the Foundation’s gender lens investing strategy. On that basis, an investment will give the Foundation equal exposure to both issue areas.

ETV3 IMPACT RATING	ISSUE AREA EXPOSURE		IMPACT RATING		RAW SCORE		FOUNDATION PREFERENCES		SOCIALRETURN
Education	50%	x	3	=	1.5	x	100%	=	1.5
Diversity	50%	x	4	=	2	x	100%	=	2.0
Energy & Efficiency	0%	x	0	=	0	x	30%	=	0.0
Total Social Return:									3.5

Bringing it All Together

The concept of the efficient frontier, depicted graphically as a crisp, clean line, might give the impression that optimal portfolios are easily identified. The reality is that investors are constantly working to discover, without any guarantee of success, which combination of assets will place them on the frontier. Asset allocation and investment due diligence help establish the investor's menu of investment options, but the process culminates with portfolio construction, the final step in the execution stage of portfolio management.

Portfolio construction involves a complex optimization problem. Impact investors are seeking to maximize the social and financial return they earn per unit of risk, but they are constrained by both their tolerance for risk and their willingness to trade financial for social return. Those inclined to take a quantitative approach can use mathematical optimization techniques that have been enhanced to include social return.¹⁹ For others, an iterative process that blends qualitative and quantitative analysis may be more appropriate.

The target weights that emerge from the asset allocation process are a natural place to begin. Each asset class weight represents a capital budget available for distribution across one or more investments. As investors consider the investment options identified during due diligence, they should keep in mind the financial return, financial risk, and social return characteristics that originally informed the asset class' target weight. The goal should be to select investments the investor believes are consistent with those parameters. If they are ignored, the assumptions underlying the asset allocation will be invalidated and the portfolio's performance will be much more likely to deviate from expectations.

The process is relatively straightforward for those that identify as Financial-First or Impact-First investors. Once they have eliminated investments that fall short of their expectations for each asset class, they can use financial or social return, depending on the investor, to rank their remaining options. In US Equities, for instance, a Financial-First investor might not consider the quality of an investment manager's shareholder

engagement strategy until the very end of the selection process, whereas it would likely be the starting point for an Impact-First investor.

These types of tie-breakers do not work for Blend Investors. An asset with low expected financial return may still be attractive if it holds potential for significant social return, and vice versa. There are no hard and fast rules to guide investors to a perfectly-balanced portfolio. An iterative process is required. Investors must evaluate how each investment they consider in a given asset class affects the risk and return profile of the entire portfolio and adjust the size of the investment until the appropriate balance is reached.

The social return metric realizes its full value during this process. Just like financial return, social return can be aggregated on a capital-weighted basis across the entire portfolio or any portfolio segment. Social return makes information about the social or environmental characteristics of individual investments available for broader portfolio analysis:

- As investors make adjustments to the size of individual positions, they are able to observe changes in each asset class' contributions to the portfolio's overall social return. That information can be combined with expected financial return to assess which asset classes, or even which individual investments, are delivering the greatest social and financial return per unit of risk.
- The issue area exposure estimates, which are embedded in the social return calculation, can help investors assess where they may be over- or under-concentrated. Shortfalls in target issue area exposures will become clearer, helping to guide manager searches or to inspire new issue area landscape reviews.
- Finally, social return can be used to plot investor portfolios on the new efficient frontier alongside viable alternatives. The results may indicate the portfolio's social return profile needs to be adjusted.

The sample portfolio report in Figure 8 provides an example of how social return can be used to monitor progress towards achieving an investor's social and environmental objectives.

Figure 8

Social Return Report

The Smith Foundation

Following the completion of the Foundation's IPS, the investment staff updated the endowment's asset allocation targets and recently launched a new investment selection framework focused on achieving the Foundation's social and environmental priorities. This report presents the current social return expectations of the endowment, which are expected to improve over time.

Social Return
1.8

Asset Allocation

Asset Class	Current	Diff.	Target
Cash & Equivalents	2.5%	0.0%	2.5%
Fixed Income	22.0%	1.5%	23.5%
US Equity	23.5%	0.5%	24.0%
International Equity	24.0%	0.5%	24.5%
Hedge Funds	10.0%	5.0%	5.0%
Private Equity & Debt	10.0%	2.5%	12.5%
Real Estate	5.0%	1.0%	6.0%
Commodities	3.0%	1.0%	2.0%

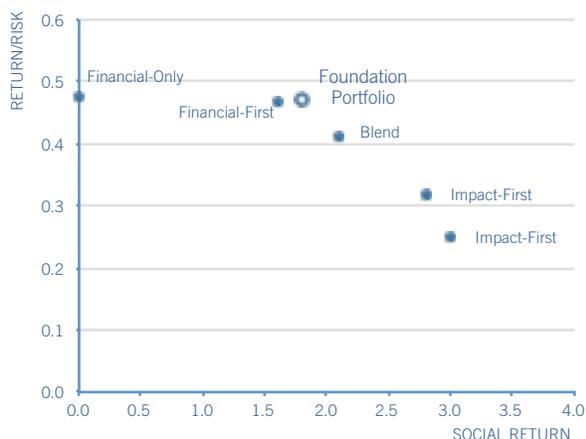
The Foundation is in the process of shifting assets away from commodities and hedge funds and towards private equity and private real estate.

Impact Allocation

Investment Type	Current	Diff.	Target
Traditional	49.0%	39.0%	10.0%
SRI (Screened)	8.0%	6.0%	5.0%
ESG Investments	13.0%	(14.5%)	25.0%
<i>Risk-Only</i>	0.0%		
<i>Best-In-Class</i>	65.0%		
<i>Thematic</i>	35.0%		
Impact Investments	30.0%	(30.5%)	60.0%

Over the next 5 years, the Foundation is targeting a 60% allocation to impact investments.

Social Return Profile

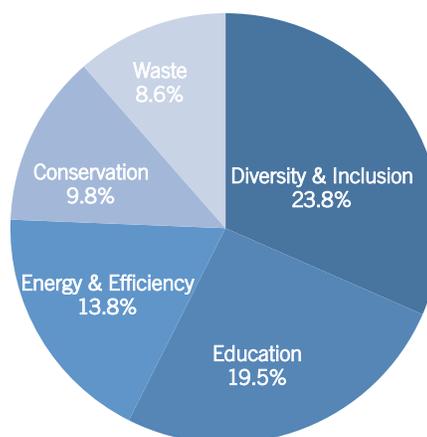


The endowment is currently positioned in a manner consistent with its profile as a Financial-First investor and is competitive with alternative options.

Contribution to Social Return

Asset Class	Return	%
Cash & Equivalents	0.2	9.4%
Fixed Income	0.3	18.6%
US Equity	0.1	7.4%
International Equity	0.1	3.2%
Hedge Funds	0.0	0.0%
Private Equity & Debt	0.7	37.8%
Real Estate	0.4	23.5%
Commodities	0.0	0.0%
TOTAL	1.8	100.0%

Issue Area Allocations (Impact Capital Only)



Top 10 Investments by Social Return

Investment	Asset Class	Top Issue	S(R)	% Port.
Fund A	Priv. Eq.	Diversity	4.0	2.3%
Fund B	Priv. Eq.	Education	4.0	2.0%
Fund C	Fixed Inc.	Diversity	3.8	6.5%
Fund D	Priv. Eq.	Energy	3.8	1.6%
Fund E	Real Estate	Education	3.8	1.4%

Note: This data is fictional and for informational and illustrative purposes only.

Conclusion

The excitement that often surrounds individual impact investment opportunities will remain an essential fuel for the growth of the field. But for impact investing to go “mainstream,” an oft-cited goal among practitioners, investors need more tools to systematically integrate social and environmental impact into the investment process. Fortunately, the impact investing community is rich with talented and innovative thinkers. The framework presented here is just one approach to the integration challenge.

One key area for future development is in the feedback stage of the portfolio management process. Though impact measurement systems are advancing at a rapid pace, data is lacking in some segments of the capital markets. As data availability improves, so does the potential of the social return framework. In time, the social return metric might no longer be limited to setting forward-looking expectations; it could also become a standardized measure of outcomes actually achieved.



Jeff Finkelman, CFA
Research Associate, Impact Investments

Jeff is a member of Athena's research team and focuses on socially-responsible, ESG, and impact investing across asset classes.

Prior to joining Athena, Jeff was an Investment Officer with the Office of Investment and Innovation at the U.S. Small Business Administration. Jeff's primary responsibility involved reviewing and completing due diligence on private equity funds for the Small Business Investment Company (SBIC) program, a public-private investment fund. During his time in government, Jeff also helped draft the investment policy governing SBA's Impact Investment Fund and spent six months as a Presidential Management Fellow with the Office of African Nations at the U.S. Department of the Treasury. Previously, Jeff served as a United States Peace Corps Volunteer in Togo, West Africa.

Jeff received a Master of Arts in International Finance and Development from Johns Hopkins School of Advanced International Studies and a Bachelor of Arts in International Relations from Tufts University.

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¹ Harry Markowitz, "Portfolio Selection", *The Journal of Finance*, 7, no. 1, (March, 1952): p. 77-91.

² Jeremy Bentham, *Introduction to the Principles of Morals and Legislation* (Mineola, NY: Dover Publications, 2007); John Mill, *Utilitarianism*, ed. G. Sher (Indianapolis, IN: Hackett Publishing Company, 2001).

³ Vijay Singal, "Portfolio Risk and Return: Part I", *CFA Institute*, 2010, p. 27, https://www.cfainstitute.org/learning/products/publications/readings/Documents/riskmanagement/RR_2017_L1V4R42.pdf

⁴ Bob Litterman & the Quantitative Resources Group – Goldman Sachs Asset Management, *Modern Investment Management*, (Hoboken, NJ: John Wiley & Sons, 2003), p 7-8.

⁵ Singal, p. 34.

⁶ See Brian Dunn, "Modern Portfolio Theory –with a Twist," (White Paper, Aquillian, August 2006), accessed November 2016, <https://www.americansforcommunitydevelopment.org/downloads/NewEfficientFrontier.pdf>; and Yasemin Saltuk and Ali El Idrissi, "A Portfolio Approach to Impact Investment," (White Paper, J.P. Morgan, October 1, 2012), accessed November 2016, https://www.jpmorganchase.com/corporate/socialfinance/document/121001_A_Portfolio_Approach_to_Impact_Investment.pdf

⁷ Dunn, p. 2.

⁸ Adapted from Dunn, p. 2.

⁹ Singal, p. 21.

¹⁰ John Maginn, Donald Tuttle, Dennis McLeavey and Jerald Pinto, "Private Wealth Management: The Portfolio Management Process and the Investment Policy Statement." *CFA Institute*, 2006, https://www.cfainstitute.org/learning/products/publications/readings/Documents/privatewealth/RR_2017_L2V6R47.pdf

¹¹ A number of organizations have made significant progress in developing measurement standards. These include, but are not limited to, the Global Impact Investing Network's Impact Reporting and Investment Standards, the Sustainability Accounting Standards Board, the Global Reporting Initiative, MSCI's ESG Research, Sustainalytics and others.

¹² "Navigating Impact Investing: The opportunity in impact classes," *Tideline with Cathy Clark, Duke University*, July 2016, http://tideline.com/wp-content/uploads/Tideline_Navigating_Impact_Investing_Working_Paper.pdf?utm_source=site&utm_medium=download&utm_campaign=downloads

¹³ Investing for Social & Environmental Impact," *Monitor Institute*, January 2009, p. 32, http://monitorinstitute.com/downloads/what-we-think/impact-investing/Impact_Investing.pdf

¹⁴ Ibid, p. 32.

¹⁵ This organization is fictional and for informational and illustrative purposes only. Any similarity to an actual organization is purely coincidental.

¹⁶ "The Carbon Underground 200," *Fossil Free Indexes*, 2016, <http://fossilfreeindexes.com/research/the-carbon-underground/>

¹⁷ "Shorting" is a technique used to profit from a decline in a company's share price. The practice involves selling borrowed shares at the current market price, then repurchasing them at later date if and when the share price has dropped. The profit to the short-seller is the difference between the proceeds received from the initial sale and the cost of repurchasing the shares.

¹⁸ This organization is fictional and for informational and illustrative purposes only. Any similarity to an actual organization is purely coincidental.

¹⁹ The mathematical underpinnings of an optimization process that integrates social return are available in Lisette Cooper, Jeremy Evnine, Jeff Finkelman, Kate Huntington, and David Lynch, "Social Finance and the Postmodern Portfolio: Theory and Practice," *Journal of Wealth Management*, 18, no. 4 (Spring 2016): 9-21.

Many of the discussion points in this paper are derived from or are an extension of the analysis provided in Lisette Cooper, Jeremy Evnine, Jeff Finkelman, Kate Huntington, and David Lynch, "Social Finance and the Postmodern Portfolio: Theory and Practice," *Journal of Wealth Management*, 18, no. 4 (Spring 2016). This article is available at: <http://www.ijournals.com/doi/10.3905/jwm.2016.18.4.009>

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