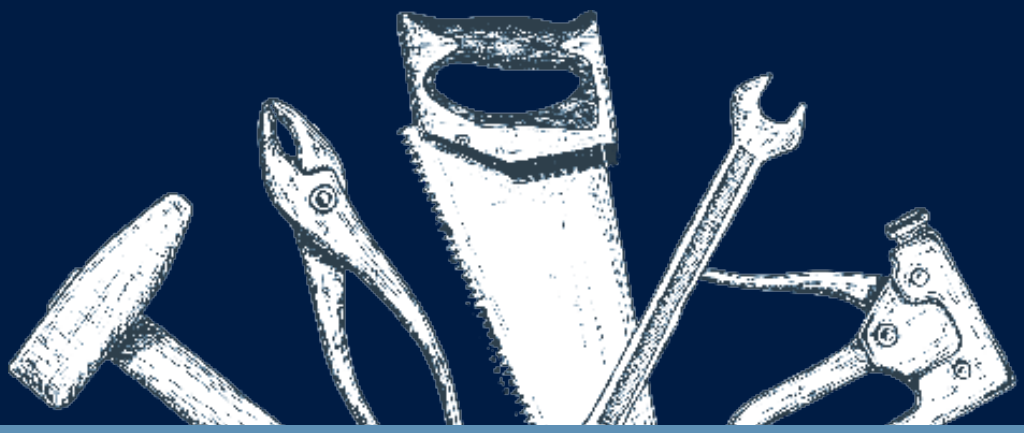
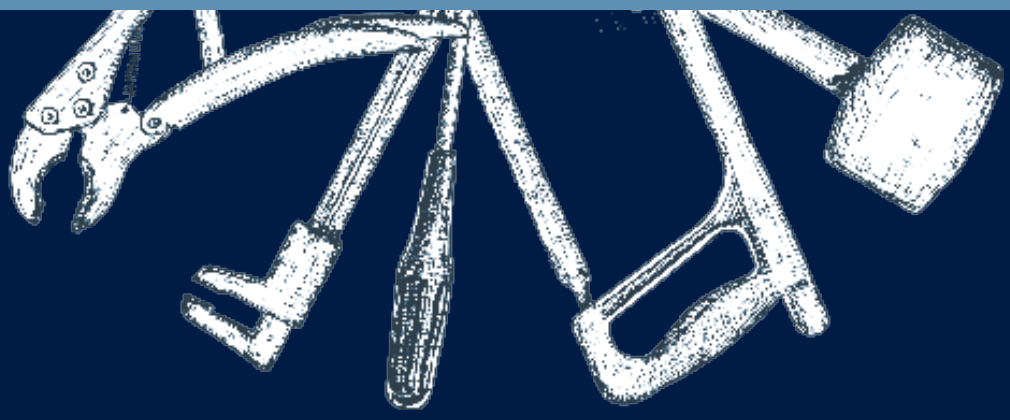


EFFECTIVE INVESTING FOR THE LONG TERM: INTENTIONALITY AT SYSTEMS LEVELS



By Steve Lydenberg, William Burckart, and Jessica Ziegler

NOVEMBER 2017

TIIP THE INVESTMENT INTEGRATION PROJECT

HIGH MEADOWS INSTITUTE

DISCLOSURES

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Long-term investors can benefit from broad-based market performance as well as from outperforming those markets. Such outperformance is often referred to as "alpha" and, because alpha is ultimately a zero-sum game, it is difficult for investors to attain consistently—and impossible for all to do so at any one time. Nevertheless, all investors benefit when the economy and financial markets perform well. Investment "has to be a positive-sum game to some extent, or else no one would play…" as Peter Bernstein points out:

> But where does that positive sum come from in the first place? From the growth of the economy itself, whose fruits must accrue to someone, somewhere, some time.[1]

The question of whether investors have an impact, either positive or negative, on the economy or financial markets—and on the foundational environmental societal and financial systems upon which they are built—is therefore an important one.

That an increasing number of investors are concerned about short-termism in the financial markets and wish to see longer-term practices predominate is one indication of a desire for investment techniques that can help preserve and create value at these market, or systems, levels. Consequently, more and more investors now integrate environmental, social and governance (ESG) factors into investment management, both as a tool for potential alpha generation and to minimize market-level, and consequently systems-level, risks and to maximize their rewards.

For that reason, considerations of long-term value creation are increasingly directing investors' attention to policies and practices effective in the preserving and enhancing these systems. Accordingly, this report examines the potential of what we call the "tools of intentionality" to facilitate effective impact by investors at these levels and by implication to increase opportunities for enhancing overall market performance.

The report also addresses the question of why institutional investors are using such tools in a variety of ways at this moment in the history of finance. It hypothesizes that the increased complexity of the world today has made investors—and particularly long-term investors—dependent on globally interrelated environmental, societal and financial systems in a way qualitatively different than that of the past; complexity that is driven by evolutions in demographics, technologies, and communications. Since these changes are creating a world fundamentally different from that of the previous century, it is not surprising that elements of finance have also begun to evolve.

One aspect of these changes lies in the increasing momentum behind long-term institutional investors' intentional decisions to acknowledge and act upon their ability to effectively impact environmental, societal and financial systems, while still managing their portfolios efficiently.

To help long-term investors act intentionally at these levels, this report has identified ten "tools" of intentionality. They are:

- **Additionality**: making investments that add to the wealth-creating potential of environmental, societal, and financial systems that might not otherwise have been made.
- **Diversity of Approach**: offering diverse products with systems-level targets or undertaking a variety of approaches to address a single systems-level issue.
- **Evaluations**: placing a non-financial value on difficult-to-quantify wealth-creating elements of environmental, societal, or financial systems.
- **Interconnectedness**: increasing the information flows among peers relevant to environmental and societal systems-level considerations.
- **Locality**: making sound investments that support the development of resilient environmental, societal, and financial systems within limited geographic boundaries.
- **Polity**: engaging in public policy debates relevant to investment risks and rewards at an environmental, societal, or financial systems level.
- **Self-Organization**: creating organizational structures to build the capacity of the investment community to address systems-level considerations.

» **Solutions**: developing and investing in vehicles that seek to address and solve specific systems-level societal or environmental challenges.

» **Standards Setting**: developing broadly accepted bounds of normative conduct that set standards for industry conduct or for industry specific investments.

» **Utility**: maximizing the alignment of specific asset classes with environmental, societal, or financial systems-level concerns.

These ten tools provide long-term investors with effective means for translating systems-level concerns into action, while still operating with the daily disciplines of the markets.

INTRODUCTION

Intentional management of investments' impacts on environmental, societal, and financial systems is a potentially useful practice for long-term investors.

Finance emphasizes the utility of efficiency in competitive markets in assuring optimal allocation of assets (i.e. of labor and capital). In times of scarce labor and capital, assuring their efficient allocation has proven a powerful tool in promoting economic growth.

Since the latter half of the 20th century, however, there have been dramatic increases in the supplies of labor (i.e. burgeoning populations around the world) and substantial growth in the amounts of investable capital (i.e. currently an estimated $250 trillion). Combined with revolutionary advances in telecommunications, transportation, and information technology, these developments have meant that the efficiency with which the investment community can impact these environmental, societal and financial system, either positively or negatively, has increased proportionately. Investors consequently have become more aware of the importance of their influence on these systems.

In this broader context, this report addresses several questions:

- Why is it important for long-term institutional investors to manage effectively risks and rewards at environmental, societal and financial systems levels and how can they do so?
- How does effective action at a systems level differ from portfolio management techniques that rely primarily on efficiency?
- How can the tools of intentionality promote this effective action?
- What best practices are emerging?

Building on the findings in TIIP's "Tipping Points 2016" landscape analysis,[2] this report initiates a dialogue on how the tools of intentionality can best be defined and implemented. Aspects of the ten tools elaborated here will be familiar, as segments of the investment community have already taken initial steps in this direction. TIIP's aim here is to describe these tools and to elaborate on their most effective use. In doing so, TIIP hopes to shed light on vehicles available to facilitate the effective management of systems-level risks and rewards.

This report does not address other important questions, such as how to measure effectiveness as investors put these tools into action; how investors might best report on the impact of their systems-level initiatives; the role of collaborative action; or what analogous tools are available to corporate managers.

This report instead confines itself to an examination of why intention, in addition to efficiency, is necessary, and provides:

- Definitions of each tool;
- Descriptions of their characteristics and implementation; and
- Examples of best practices.

The following section examines the theoretical framework within which the consideration of intentional decision-making takes place in relation to the efficient allocation of assets and the maximization of portfolio returns. The report then provides details on the ten tools of intentionality and examples of how they are currently being used in practice.

BEYOND EFFICIENCY: EFFECTIVE INVESTING FOR THE LONG TERM

Summary

- Efficient allocation of assets in investment has helped drive economic growth over the centuries, but unrestrained it can also negatively disrupt or damage environmental, societal, and financial systems.
- Negative externalities have historically been adequately moderated through regulation (e.g. legal bans), market mechanisms (e.g. imposition of costs) or voluntary actions (e.g. industry self-regulation).
- Given their growing influence and power, investors are increasingly able to create positive and negative externalities and, ultimately, to impact systems.
- By ignoring this potential impact, investors can unintentionally damage the environmental, societal and financial systems crucial to their wealth-creating opportunities.
- Investors that acknowledge their influence can act intentionally and effectively to stabilize or enhance these systems and their wealth-creating opportunities.

Cumulatively, decision-making by the global investment community impacts environmental, societal, and financial systems and these systems in turn impact the performance of all portfolios. It is therefore in institutional investors' long-term interest that these systems function smoothly and predictably. Long-term institutional investors are well-served by intentionally managing the risks and rewards implicit in their investment decision-making at these systems levels.

An increasing number of institutional and individual investors—particularly those with a long-term focus or self-described as responsible, sustainable, or impact-oriented—have expressed concern that today's financial markets are too short-term in their perspective, do not adequately account for environmental, social and governance (ESG) factors, are not adequately concerned with value creation as opposed to speculative profit taking, and can disrupt the stability and sustainability of our environmental, societal, and financial systems. They have developed a variety of vocabularies to describe what they believe is a more balanced, effective and ultimately productive approach: sustainable investing, investment stewardship, ESG integration, long-term value creation, universal ownership, and impact investment, among others.

These long-term, wealth-creating considerations imply a concern for the health and well-being of these systems that provide the framework within which investors' wealth-creating potential can be realized. Environmental systems supply necessary raw materials for energy, manufacturing and infrastructure; societal systems provide the organizations and ground-rules for institutional and individual conduct and license to operate; and financial systems structure the markets that facilitate economic transactions.

For these systems to function effectively, investors need to:

- Acknowledge their ability to affect these systems;
- Understand how this ability can stabilize and enhance these systems; and
- Intentionally implement policies and practices that contribute to these systems' ability to create wealth for themselves and all investors.

Investors can create a balance between their effective actions at systems levels and their efficient management of portfolios in ways that enhance returns and create wealth at both levels simultaneously.

In this sense, effectiveness can be thought of as a form of "long-term efficiency." The differentiating factor between the two is that efficiency at the portfolio level can be expressed relatively easily in terms of price (i.e. individual security valuation), as well as returns to the specific portfolio, whereas effectiveness at the systems level is more difficult to capture in terms of price. What's more, the returns that it generates accrue to a diverse set of financial and economic actors that make quantification difficult if not impossible.

INSTITUTIONAL INVESTORS, EFFECTIVENESS AND INTENTIONALITY

This report uses the term "intentionality" to describe a broad array of systems-related activities that investors can adopt to manage risks and rewards at these levels. As

used here, the "tools of intentionality" are distinguished from portfolio-level and business investment activities that, as Adam Smith once described them, can generate societal benefits without any intention to do so:

> As every individual, therefore, endeavors as much as he can both to employ his capital in support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labors to render the annual revenue of the society as great as he can. He generally, indeed, **neither intends to promote the public interest, nor knows how much he is promoting it**... he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he **intends only his own gain**, and he is in this, as in many other cases, led by an invisible hand to promote **an end which was no part of his intention**.[3] [emphasis added]

In this invocation of the invisible hand—a term only used three times in his writing—Smith appears to excuse industrious merchants from the need to consider questions of societal benefit. Yet elsewhere in ***The Wealth of Nations*** he writes emphatically about their inclination toward monopoly, abuse of customers, and disregard for the safety and well-being of employees, and proposes various governmentally imposed safeguards to limit such abuses.

Over the past several centuries, striking an effective balance between regulation adequate to rein in these natural tendencies and sufficient freedom for the entrepreneurial spirit to thrive has been a constant struggle. In clear-cut cases, such as child labor and the dumping of toxic waste, abuses have been banned. But much of recent economic history has consisted of trial-and-error attempts to define the appropriate relative roles for government and the markets in assuring the common wealth.

Recently the role of "intention" on the part of investors has resurfaced in the context of impact investment. The Global Impact Investment Network (GIIN), for example, explicitly states the need for "intention" in investing alongside efficiency. For the GIIN, the investments it advocates are:

> made into companies, organizations, and funds **with the intention** to generate social and environmental impact alongside a financial return.[4] [emphasis added]

This language of intention resonates with that "triple bottom line"—people, planet and profits—from the 1990s and echoes the concept of a "social return on investment" that has emerged from the world of venture philanthropy and foundations since that time. Underlying these concepts is the foundational idea that intention is a necessary component of investments if a social good broader than efficient capital allocation is to be considered.

If interest in responsible and impact investing is any indication, this **intention** to manage the social and environmental effects of investments along with their financial returns may represent not simply efforts to serve a niche market, but initial steps toward a more fundamental shift in the definition of the role of finance as itself having intentional responsibility for the larger systems within which it operates. For example:

- The **Principles for Responsible Investment**, with its 1,600 plus signatories representing over $60 trillion in assets under management as of early 2017, has undertaken the task of addressing "nine priority conditions" necessary to tackle for the creation of a "sustainable financial system."[5]
- The **International Corporate Governance Network** has promulgated a set of **Global Stewardship Principles** for their investor members, including those for the "integration of environmental, social and governance (ESG) factors."[6]
- The **United Nations' Environmental Program's Financial Initiative** has developed a program of reforms to promote **The Financial System We Need and Principles for Positive Impact Finance**.[7]

FUNDAMENTAL CHANGES IN GLOBAL SYSTEMS AND EFFICIENCY

If this trend toward systems-level concerns in finance is more than a passing fad, some fundamental change must be taking place that has caused it to surface now. Why might this change be arising? One place to look is to a possibly fundamental change in the role of efficiency.

The economic engines of society are now so efficient and we are so numerous, technologically sophisticated, globally mobile and interconnected—and have such a wealth of investable assets at our disposal—that we can

potentially create global disruptions in our environmental, societal, and financial systems on a scale and of a nature fundamentally different from before; for example, the looming disruptions of climate change and the 2008 financial crisis.

Although fundamental historical shifts can be difficult to see when one is in their midst, numerous factors differentiate today's world from yesterday's. Among them are:

- Growth of the world's population from approximately 2.5 billion in 1950 to 7.3 billion as of 2017, and on its way to nine billion plus by century's end, placing increasing demands on natural resources;
- Revolutions in information technology and telecommunications making virtually frictionless global communications a reality;
- Improvements in transportation reducing the cost of world travel and transportation of goods to negligible levels;
- Advances in scientific knowledge and its applications making disruptive innovation in manufacturing, data analysis, healthcare services and agriculture among others commonplace;
- Lifting out of extreme poverty of billions of citizens around the world with their legitimate aspirations for ever-higher standards of living; and
- Aggregation of huge pools of Investable assets worldwide cumulatively in the $250 trillion range.

These developments have created a "hyper-connected" world in which economies in general and finance are peculiarly dependent of the smooth functions of interlocking systems the disturbance of any one of which can cause global disruption—whether technological (e.g. hacking or breakdowns in the Internet), environmental (e.g. instability in the global climate), or societal (e.g. social unrest from worldwide youth unemployment).

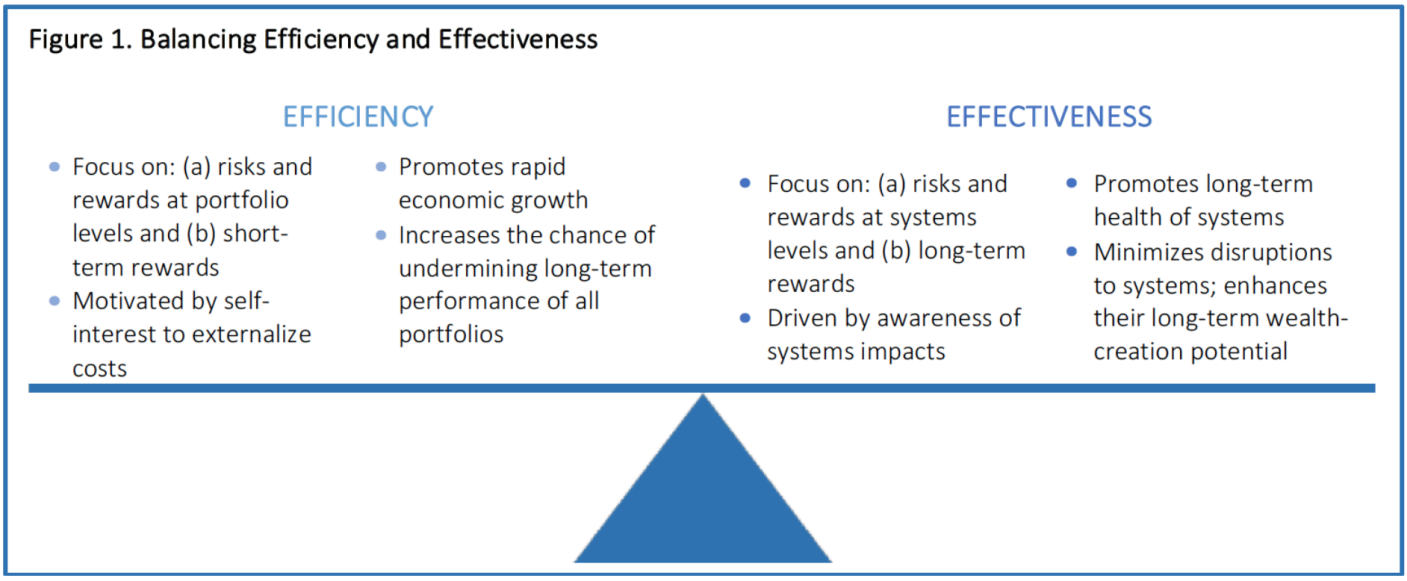
It is therefore important for finance to understand its appropriate role in maintaining and improving these systems and to acknowledge that the efficiency of its investments has the potential to unintentionally contribute to their disruptions.

Since it is also the efficiency of these systems that plays a role in their development, what is necessary is an intentional balance between the economic progress that efficiency brings and efficiency's ability to undermine that same progress (see Figure 1). "Creative destruction" has been a characteristic of economics for the past three centuries. The efficiency of those economic forces may have become so creative and powerful that what was destruction of inefficient relics of the past can now become a self-destructive undermining of parts of the very systems on which prosperity has been built.

MANAGING SYSTEMIC RISKS AND REWARDS WITH INTENTIONALITY

The scale on which finance, and economies in general, operate today is what has created the potential for global disruptions. As the ecological economist Herman Daly has pointed out, the dramatic increase of the scope of our

Figure 1. Balancing Efficiency and Effectiveness



activities relative to the limits of Earth's environmental resources and resiliency is one factor in accounting for this phenomenon.

In an era when labor and capital were generally in scarce supply, efficiency in their allocation was of crucial importance. Within the past 50 years, however, both the supply of labor (i.e. population growth) and capital (i.e. increased global prosperity with a corresponding growth in investable assets) have become plentiful. Relative to the size of limited environmental systems, the efficiency of economic and investment activities now has a disproportionate impact. Similarly, given the interconnected nature of the global societal and financial systems, the potential for finance to cause disruptions has been magnified.

Daly argues that the efficient market mechanisms that are the source of this problem cannot be relied upon to be its sole solution. Just as efficient markets are not tools well-suited to address social justice in the distribution of wealth, they are also not well-suited to address issues of scale. "Economists have recognized the independence of the goals of efficient allocation and just distribution." He observes that economists are:

> in general agreement that it is better to let prices serve efficiency, and to serve equity with income redistribution policies. Proper scale is a third, independent policy goal and requires a third policy instrument. This latter point has not yet been accepted by economists, but its logic is parallel to the logic underlying the separation of allocation and distribution.[8]

Put differently, too much of a good thing—efficiency, now at a global scale—can push us into the realm of the problematic, an observation that echoes the wry remark attributed to the economist Kenneth Boulding that "Anyone who believes in indefinite growth in anything physical, on a physically finite planet, is either mad or an economist." Some combination of regulation and voluntary action by market participants is necessary to contend with the challenge of balancing the benefits and drawbacks of efficiency.

Investors therefore find themselves in the difficult situation of having to seek the ideal point at which their efficient allocation of assets still functions positively, but without harming or otherwise disrupting fundamental systems. Or, in Daly's precise economic language: "The rule is to expand scale (i.e., grow) to the point at which the marginal benefit to human beings of additional man-made physical capital is just equal to the marginal cost to human beings of sacrificed natural capital."[9]

The scale of our efficient economy can now also cause many of our other crucial societal systems, including that of finance, to become fundamentally unstable in ways previously unimaginable.

Global Environmental Systems. The scale and efficiency of our use of fossil fuels have tipped our environmental systems beyond such a point. We currently locate, extract, and burn more than 90 million barrels of oil a day, not to mention our use of coal, natural gas and other fossil fuels. These natural resources bring tremendous economic benefit without which much of the progress since the late 19th century would not have been possible. But this very efficiency is now threatening to destabilize what have been the Earth's relatively stable environmental conditions over the past 10,000 years, conditions that have made our civilizations possible.

Just as we had to face the unpredictable consequences of the potential destruction of the Earth's protective ozone layer from our globally efficient use of chlorofluorocarbons, we must contend with the far more complex task of phasing out fossil fuels to avoid equally problematic uncertainties. The underlying problem, however, remains the same: the problems posed by the impacts of scaling up in a populous, interconnected global economy.

Scientists point out similar challenges on other environmental fronts as well. The Stockholm Resilience Centre (SRC), for example, frames the question in terms of "planetary boundaries" beyond which unpredictable catastrophic changes take place. Beyond a certain point, our efficient activities run the risk of fundamentally changing the nature of the Earth's environmental systems—nine of them, according to SRC—in ways that we cannot predict, but that will disrupt the relatively benign environment in which we have lived for the past 10,000 years.[10]

Global Societal Systems. Our efficient economic system is creating numerous interrelated challenges that threaten to provoke a destabilizing rise in populist-driven nationalism. These include inequality in wealth distribution to a degree rarely seen before; structural unemployment—particularly among the young—that appears to be more

than temporary; and winner-take-all industries where a handful global behemoths dominate global markets and take the lion's share of profits.

Erik Brynijolfsson and Andrew McAfee contend in their book ***The Second Machine Age*** that the efficiencies of the digital economy have contributed substantially to these developments. "Digital goods have enormous economies of scale, giving the market leader a huge cost advantage and room to beat the price of any competitor while still making a good profit." These "winner-take-all" markets, with their concentrations of unequally distributed wealth can be found particularly in the telecommunications, media, entertainment, and sports industries. The driver of this growing inequality is "exponential, digital, and combinatorial change in the technology that undergirds our economic system."

Moreover, automation made possible by digitally based information technology leads to a form of unemployment that may not be as temporary and easy to correct as in previous eras of technological advance.

> The argument that technology cannot create ongoing structural unemployment, rather than just temporary spells of joblessness during recessions, rests on two pillars: 1) economic theory and 2) two hundred years of historical evidence. But both of these are less solid than they first appear.[11]

Brynijolfsson and McAfee point out that economic theory holds that historically the demand for the new goods and services created by technological advances leads to increased consumption that creates at least as many new jobs as it displaces. At some point, however, as Keynes pointed out in his essay "Economic Possibilities for Our Grandchildren" consumers should have enough goods and services at their disposal to lead "the good life."[12] Moreover, technology may now be changing so rapidly that those displaced by its disruptions can never catch up with its advancements. Finally, the artificial intelligence at the heart of today's disruptive revolution can be produced and replicated so cheaply that it will eventually drive the cost of labor to next to nothing; human labor may be "no longer needed in today's economy even at zero price"[13] at least for an ever-increasing number of goods and services.

Responsible investors are attempting to contend with the difficult challenges of equal access for the historically underserved to digital technology (bridging the digital divide), healthcare (Access to Medicines Index), financial services (microfinance) and mobile telecommunications. But the siren call of efficiency that technological advances now bring throughout all aspects of the economy is difficult, if not impossible to resist, because the benefits of these efficiencies are so great. It is, however, equally difficult, if not impossible, to predict the nature and extent of the global disruptions to current social orders they may set in motion.

Global Financial Systems. Scale and efficiency also pose challenges in our financial systems. The efficiency of the early 2000s in "robosigning" and packaging mortgages into diversified fixed-income securities was among the root causes of the 2008 financial crisis. Generally, the financial community places faith in the efficiency of markets to accurately pricing securities. In the words of Amar Bhidé, however, this is a bit like "driving blindly." As he argues in his book ***A Call for Judgement***, "the absolutist prescription to forsake judgment" in assessing financial transactions because one has faith in the efficient pricing of securities has led us

> to blindly trust market prices, [which] not only puts those who follow it at risk, but also undermines the pluralism of opinions that help align prices and values... Forsaking case-by-case judgment, like littering or not voting, is unsustainable en masse: If everyone eschews judgment, who will make market prices even approximately right, or ferret out the offerings of thieves and promoters of worthless securities? Paradoxically, the efficiency of securities markets is a public good that can be destroyed by the unqualified faith of its believers.[14]

Similarly, Stephen Davis, Jon Lukomnik and David Pitt-Watson, in their book ***What They Do with Your Money***, argue that what appear to be innovative financial services creating efficiencies in a complex system have now become at best a drag on the economy and at worst a destabilizing wild card, a system that they believe is "built to fail, at least if success is defined as efficiently promoting our interest."[15]

The tools that finance has developed to increase the liquidity and therefore the potential efficiency of its operations at a certain point begin to create inefficiencies in the economy. A study by Stephen Cecchetti and Enisse Kharroubi, for example, found that in both developed and developing economies "the level of financial development is good only up to a point after which it becomes a drag

on growth" and that in developed economies "a fast-growing financial sector is detrimental to aggregate productivity growth."[16] The paper points out that financial intermediaries provide needed efficiency at the early stages of economic growth by reducing transaction costs and "improving the distribution of capital and risk across the economy." But it concludes that "as is the case with many things in life, with finance you can have too much of a good thing."[17] They account for this counterintuitive phenomenon on the grounds that a boom in financial services draws needed resources away from other sectors and thereby hurts overall development.

Wally Tubeville, in his paper "Towards a Performance Framework for a Sustainable Financial System" written in conjunction with the UNEP Inquiry: Design of a Sustainable Financial System and the public policy organization Demos, points out that to create a system sustainable in the long term, we must employ "a principle that is separate from efficiency and that principle is effectiveness. Effectiveness measures the performance of [financial] intermediaries in prioritizing allocation of investment resources to uses that benefit society most"[18] (emphasis in original). Without concern for the effectiveness of decision-making, "a highly developed financial system may be more efficient than one that is less developed, but may also be less effective."[19]

If these challenges are one of the ways the 21st century will differ from the 20th, then one can expect finance will need to change as well. If they are not, then current investment practice may remain adequate to our needs.

INTENTIONALITY IN PRACTICE: THE TEN TOOLS

Investors concerned with potential risks to these three systems—environmental, societal, and financial—and hoping to preserve and enhance their potential rewards, must intentionally balance the powerful tools of efficiency with the effectiveness (i.e. the systems-level impacts) of potential policies and practice.

Intentionality does not come naturally to the financial world and the tools for its implementation are poorly developed. It is therefore crucial to catalyze research and create a vocabulary and typology of these tools that can help long-term investors act effectively in the incorporation of systems-level considerations alongside the efficient management of their portfolios.

Building on the findings from the "Tipping Points 2016" report, TIIP hopes to initiate through this report a dialogue on how such tools can best be defined and implemented. Aspects of the ten tools here will be familiar given that in many ways those investors most concerned with environmental and social impacts have already taken tentative steps in this direction. By naming and describing these tools with greater precision, and by elaborating what best practice looks like in action, TIIP seeks to shed light on the vehicles that can facilitate progress toward the effective management of systems-level risks and rewards in the context of efficient investment disciplines.

THE TEN TOOLS OF INTENTIONALITY

TIIP has identified ten tools that institutional investors with long-term investment horizons can use to manage risks and rewards at environmental, societal, and financial systems levels (see Figure 2).

These tools provide an effective complement to the disciplines of efficiency that portfolio management impose. In doing so, they help manage the risks and rewards that inevitably arise at environmental, societal and financial systems levels. Given the ever more complex world of a populous and prosperous 21st century and the growing power and influence of finance in that world, investors need to manage these potential risks and rewards with greater intentionality.

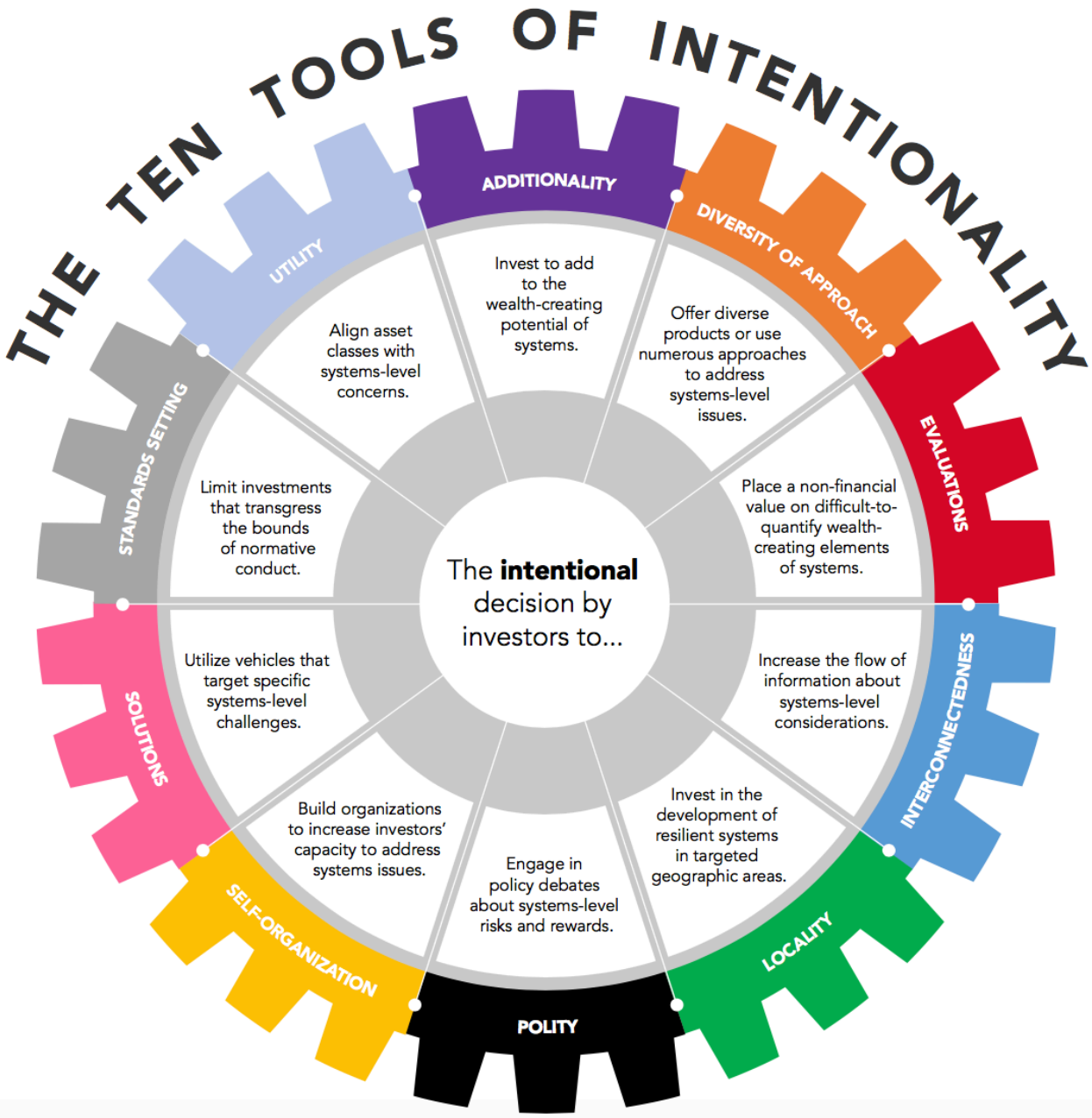
In their varied approaches, the tools help address numerous of the unintended, potentially negative consequences of efficient financial activity that have become increasingly important for long-term investors in recent years. For example:

- **Additionality** can help address capital gaps and market failures that often arise in today's investment practice;
- **Diversity of Approach** acknowledges the broader context in which individual investments take place;
- **Evaluations** allows for assessments of wealth-creating potential at systems levels in terms other than today's market price;
- **Interconnectedness** and **Self-Organization** help contend with the challenges of collective action in a fiercely competitive industry;
- **Locality** acknowledges the interrelations among investments within geographic regions;
- **Polity** identifies regulatory levers particularly effective at systems levels;
- **Solutions** leads to amelioration of key challenges within large-scale environmental, societal and financial systems;
- **Standards Setting** creates a "race to the top" rather than to the bottom when it comes to societal norms; and
- **Utility** assures that investors in asset classes focus on the societal purposes for which they were created as well as their performance relative to purely financial benchmarks.

The following descriptions of each tool provide a basic definition, a sense of how each tool can work successfully with others, and a discussion of the reasons why efficiency alone will not typically lead investors to pursue these approaches and why intentionality is necessary to achieve their effective ends.

Each of the descriptions also includes examples of how investors implement the tool. See the next section on "The Ten Tools in Action: Water" to learn the shape of these tools when they are applied to the issue of water. See also Appendix A for a complete list of the investors that TIIP has identified as using each tool.

Figure 2. The Ten Tools of Intentionality



1. ADDITIONALITY

WHAT IS ADDITIONALITY?

Additionality is the intentional decision to pursue investments that provide access to finance to the underserved and address unmet environmental or social needs. Through this approach, investors seek to enhance the resilience and stability of overarching environmental, societal, and financial systems by addressing social inequalities and social and environmental market failures and, in doing so, increase opportunities for the investment market.

HOW DO INVESTORS IMPLEMENT ADDITIONALITY?

Additionality investors:

- ✓ Recognize the market potential of underserved regions and segments of the population.
- ✓ Promote healthy growth by identifying a diverse array of unrecognized and underfunded social and environmental challenges that fill capital gaps in the marketplace.
- ✓ Understand how these markets and opportunities have the potential to produce competitive returns.

Investors that have incorporated Additionality into their practices include:

- The UK-based impact investment fund **Bridges Funds Management**, which intentionally targets opportunities that create jobs, improve skills and promote healthcare in historically underserved communities while emphasizing sustainable living. It has invested in companies that provide skills training for disadvantaged youth, energy services for low- and moderate-income communities, and programs that promote healthy lifestyles and obesity reduction.
- The Dutch development financial institution **FMO**, which invests in projects that "add to the market by providing services and financial products that the market either does not provide at all, or does not provide on an adequate scale or on reasonable terms because of perceived risks."[20] In low-income countries, for example, it invests in banks and microfinance institutions promoting social inclusion, as well as in energy services and infrastructure projects.

Investors sometimes compliment their use of Additionality with the tools of Solutions and Locality. In using Additionality, investors commonly target specific regions (Locality) or clients facing notable social or environmental challenges for which investments in products and services (Solutions) help to address these issues and enhance the wealth-creating potential of local systems.

WHY DO INVESTORS USE ADDITIONALITY?

Efficiency at the portfolio level can misdirect investors into overinvesting in parts of the economy already well-served through considerations of short-term profit generation, thereby contributing to boom and bust cycles. By intentionally addressing social and environmental capital needs that might otherwise go unfulfilled, additionality investors can reduce economic instabilities and promote "healthy" growth. This in turn diminishes rather than accentuates economic inequalities and funds a diversity of enterprises that serve a broad spectrum of societal needs.

Additionality in practice means the cultivation of new markets that currently lie uncultivated and the filling of gaps addressing social and environmental needs in economies. Pursuit of this pathway toward balance and stability at a systems level is increasingly compelling in the complex world of the 21st century where even local instabilities and apparently inconsequential investments can cause global disruptions.

2. DIVERSITY OF APPROACH

WHAT IS DIVERSITY OF APPROACH?

Diversity of Approach is the intentional decision to utilize a diverse range of investment tools to address complex systems-level environmental and social concerns. For asset owners this means adopting a broad variety of approaches to addressing single systems-level considerations. For asset managers it means creating multiple investment options for clients concerned with the systems relevant to their investment objectives, increasing investors' influence on complex systems through multiplicity of initiatives.

HOW DO INVESTORS IMPLEMENT DIVERSITY OF APPROACH?

Diversity of Approach investors:

- ✓ Recognize complexity within and between systems that are relevant to investment.
- ✓ Seek to maximize their positive influence on systems by adopting a diverse range of initiatives to help manage risks and rewards at this systems level.
- ✓ Seek impact across a range of systems by serving a variety of clients with a diverse set of systems-level concerns and offering varied approaches to addressing these concerns.

Investors that have incorporated Diversity of Approach into their practices include:

- Asset owner and sovereign wealth fund the **New Zealand Superannuation**, which has adopted a diversity of approaches to address the complex challenges associated with the single issue of climate change. It uses a variety of investment practices, including: integration of climate-related factors into investment risk assessments; direct investments in alternative energy, sustainable agriculture and infrastructure; sponsorship of financial industry research on climate change scenarios; production of white papers on the topic; and engagement with corporations to improve their climate-related policy.
- Asset manager and large diversified financial services firm **Morgan Stanley & Co**. To serve a variety of clients with responsible investment concerns related to social and environmental systems, Morgan Stanley has created product lines using four distinct approaches: Values Alignment (standards setting that involves divesting from certain industries or from companies failing to meet broadly accepted industry norms); Environmental, Social, and Governance (ESG) Integration (incorporating ESG factors into stock valuation or determination of best-in-class rankings); Thematic Exposure (funds focusing on particular environmental or social challenges and investing in companies with solutions funds to specific aspects of these problems); and Impact Investing (funds often stressing small-scale investments that produce quantifiable positive social and environmental impacts along with their financial returns).

Investors sometimes compliment their use of Diversity of Approach with the tools of Solutions and Standards Setting. Solutions shares the goal influencing positively the outcomes of complex environmental and societal systems. Standards Setting addresses a variety of environmental and societal challenges that in their diversity create a kind of mosaic of approaches to the preservation and enhancement of stable, sustainably-functioning systems.

WHY DO INVESTORS USE DIVERSITY OF APPROACH?

Efficiency at the portfolio level tends to pursue a single solution to a complex problem. Reliance on a single tool to address a complex environmental, societal and financial systems-level challenge can create unbalanced or inadequate dynamics. There is no single solution, for example, to the complex set of dilemmas posed by climate change and no single

intervention can assure fair labor practices in a globalized labor market. It is not sufficient for all investors to focus on a single systems-level challenge while ignoring all other systems and their interrelationships.

Only by intentionally acknowledging the need for a diversity of approach is it possible to begin to contend with the complexity of systems-level issues. Succumbing to the allures of efficient solutions, single-minded in their focus, does provide the flexibility required to maximize benefits and minimize the risks at these systems levels. Investors recognizing the increasing complexity of the global economy within which they operate should embrace the demand for a diversity of approaches.

3. EVALUATIONS

WHAT IS EVALUATIONS?

Evaluations is the intentional decision to value the difficult-to-price aspects of environmental, societal and financial systems that generate potential long-term wealth creation, societal and environmental value, and investment opportunities. Using this approach, investors think beyond quantifiable price and evaluate the potential of these aspects of systems to provide the stability and predictability necessary to create a fertile field of such opportunities.

HOW DO INVESTORS IMPLEMENT EVALUATIONS?

Evaluations investors:

- ✓ Recognize that systems-level sources of long-term wealth creation and societal and environmental value often cannot be easily assigned a price.
- ✓ Seek to identify the environmental, societal and financial systems-level characteristics that, although difficult to quantify, generate the stability and predictability necessary for successful long-term investment.
- ✓ Report on their evaluations-based investment policies and practices in terms other than short-term price.

Investors that have incorporated Evaluations into their practices include:

- The **California Public Employees' Retirement System (CalPERS)**, which believes that three forms of capital create long-term value and are the source of investment opportunities—physical capital (environmental), human capital (social), and financial capital (governance)—and that the sustainability of each is directly related to, and critical for, the long-term sustainability of its funds. It includes this assertion in its investment beliefs statement and is a co-founder of the Human Capital Management Initiative.
- The Australian pension plan **Health Employees Superannuation Trust Australia (HESTA)**, which in 2014 adopted a Reconciliation Action Plan that outlines its initiatives to effect reconciliation with Australia's Aboriginal and Torres Strait Islander peoples, with a focus on increasing the quality of healthcare services and employment. HESTA states that it "understands the benefits of learning more about Aboriginal and Torres Islander culture, values and beliefs, as well as ensuring [its] employees have the confidence to deliver culturally responsive services."[21] For HESTA the advantages accrue at a difficult-to-value systems level—reconciliation of deep societal divides—and at the same time are relevant to client service.

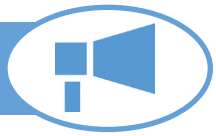
WHY DO INVESTORS USE EVALUATIONS?

Efficiency at the portfolio level often can lead investors to collapse all types of value into a single price and pursue the "business case" for consideration of environmental, societal or financial systems-level issues, disproportionately

emphasizing the short term. To incorporate systems-level considerations that are difficult to value, investors must intentionally adopt evaluation techniques that might not be as easily quantifiable as price or as in making an immediate business case. Instead, the value of these considerations is in their ability to provide sources of systems-level stability and predictability that can enhance long-term wealth creation. Investors' ability to evaluate their contribution to systems-level stability will become increasingly important as the powerful sources of efficiency in investment become less predictable.

To make such evaluations, skilled investors will intentionally develop the measurement tools and reporting vocabulary necessary to capture the long-term value of systems-level characteristics. These evaluations—expressed in terms other than price—can serve as an effective counterbalance to the disciplines of market price.

4. INTERCONNECTEDNESS



WHAT IS INTERCONNECTEDNESS?

Interconnectedness is the intentional effort by investors to increase the flow of information and communications about environmental, societal and financial systems among peers and with clients and the public at large. Through Interconnectedness, investors not only seek to increase the amount, but also the effectiveness of these information flows on systems. In doing so, this approach recognizes the importance of having a shared knowledge base to manage common-pooled sources of wealth creation and in avoiding a "tragedy of the commons."

HOW DO INVESTORS IMPLEMENT INTERCONNECTEDNESS?

Interconnectedness investors:

- ✓ Share knowledge useful in the management of systems-level risks and rewards.
- ✓ Promote forums for communications among peers on issues with systems-level implications.
- ✓ Provide leadership in recognizing the importance of this mutually beneficial systems-level knowledge for all investors.

Investors that have incorporated Interconnectedness into their practice include:

- The **California Public Employees Retirement System (CalPERS)**, which assembles academics and compiles research to develop a systems database for the Sustainable Investment Research Initiative (SIRI) and to inform future systems-related decision-making. SIRI facilitates scholarly reviews of systems-related research, convenes researchers to discuss environmental, social and governance (ESG) factors and related issues, and builds and manages a public online database of 700+ studies on sustainable investing.
- The Canada-based asset manager **Northwest & Ethical Investments (NEI)**, which publishes and posts on its website occasional papers providing background on the ESG issues on which it focuses. Recent publications have included papers on "food system sustainability," transiting to a low-carbon energy system, and executive compensation. These papers, among others, outline the firm's perspective on these issues and related investment risks; detail firm engagement activities and partnerships; and discuss its views on future trends. NEI also communicates its positions to governmental agencies and standards-setting organizations regularly and posts these communications on its website each year. In addition, NEI reports publicly on the focus list of companies that it engages with, which includes details on the goals and progress of its initiatives with each company each year.

Investors sometimes compliment their use of Interconnectedness with the tool of Self-Organization. The interconnected processes of data-sharing and public communications serves a similar purpose as that of Self-Organization in that both aim to strengthen the collective capabilities of the financial industry for contending with systems-level challenges.

WHY DO INVESTORS USE INTERCONNECTEDNESS?

Efficiency in portfolio management dictates competitiveness between investors. This tendency, if not intentionally balanced, can prevent investors from sharing mutually beneficial baseline knowledge helpful in preserving and enhancing systems fundamental to the success of all investors.

Investors that use Interconnectedness have an increased understanding of, and skills in, the management of environmental, societal and financial systems-level risks and rewards. As increasing numbers of investors develop these skills, they increase the potential for enhanced market-level returns to all investors.

5. LOCALITY

WHAT IS LOCALITY?

Locality is the intentional decision to make investments that strengthen the environmental or societal systems within a given geographic area—be that a city, state, region or country. Such investments can simultaneously generate economic growth within a region and enhance its resilience and sustainability through support of interrelated enterprises. This approach seeks competitive short-term returns that also build a foundation for future investment opportunities in the long term.

HOW DO INVESTORS IMPLEMENT LOCALITY?

Locality investors:

- ✓ Have a deep understanding of a specified geographic area, including the issues and themes that are crucial to local sustainable development.
- ✓ Identify opportunities for promoting local prosperity and strengthening local economies, culture, and ecology, while generating competitive returns.
- ✓ Consider both the short-term and long-term implications of a project and these same implications for the broader community within which a project takes place.

Investors that have incorporated Locality into their practice include:

- **Caisse de dépôt et placement de Québec**, which manages the public and private pension and insurance funds for more than 30 organizations in Quebec. Its dual mission, mandated by its enabling legislation, is to achieve "optimal return on capital within the framework of depositors' investment policies while at the same time contributing to Québec's economic development."[22] Among other things, it purchases Québec goods and services and promotes sustainable development and has invested in a diverse set of interrelated office buildings, convention centers, and public transportation systems in Montreal.

- Impact investment firm **Threshold Group** which focuses on the "place-based" aspects of its investment program by identifying opportunities for "strengthening the entire economic and social ecosystem"[23] in the Pacific Northwest and greater Philadelphia, where it has offices. Threshold aims to preserve and enhance social and environmental systems on a regional level and coordinates investments across a network of local organizations that are collectively committed to such goals as responsible economies, equitable communities and a sustainable environment. It has invested in a community development financial institution that serves those in Oregon and Washington that have historically lacked access to banking, and in an impact fund that invests in, and sustainably manages, timberlands in the Pacific Northwest.

Investors might compliment their use of Locality with the tools of Additionality and Interconnectedness. Locality investors focus not simply on a geographic region but on the health and sustainability of the overall society within that region. This holistic approach is compatible with understanding how regionally focused investments can fill gaps in—and add to—the economy or serve those currently underserved. In addition, building regional resilience often involves promoting locally specific data sources and mutually supportive, locally-based relationships, central components of Interconnectedness.

WHY DO INVESTORS USE LOCALITY?

Efficiency at the portfolio level might lead investors to focus narrowly on the short-term opportunities of stand-alone investments without due consideration of regional dynamics, trends, and opportunities. This local context, fully understood, can become a source of diversified and resilient economic opportunities that might not arise if efficiency alone—focused narrowly on isolated investment vehicles—is the only guiding principle. Appropriate consideration of local circumstances is necessary for investments to be sustainable in today's increasingly interrelated world—a consideration that undivided attention to efficiency does not necessarily provide.

Investors can cultivate an in-depth knowledge of the regions in which they invest, be they areas where they have a physical presence (i.e., office locations) or those far away. To the extent that the drive for efficient allocation of assets can be hampered by a reliance on historical data—that is, the assumption that future performance will resemble that of the past—locality investors have an advantage in their ability to use knowledge of local contexts to develop forward-looking scenario analyses involving difficult-to-anticipate risks or rewards with relative ease. For long-term investors, the short-term disciplines of efficiency do not always align with substantial opportunities for the creation of stable, long-term wealth generation within local contexts.

6. POLITY

WHAT IS POLITY?

Polity is the intentional engagement by investors in public policy debates with the goal of creating stronger, more resilient financial, environmental or societal systems. This approach seeks to use the rules and regulations established by government to effectively enhance the environmental social and financial systems creating a rising tide for all investors and devising market mechanisms that facilitate investors' ability to positively impact these systems.

HOW DO INVESTORS IMPLEMENT POLITY?

Polity investors:

- ✓ Communicate clearly about the public policy considerations of systems-level issues such as climate change, financial system reporting, and mandated disclosure of environmental, social and governance (ESG) data.
- ✓ Take a leadership role in promoting public policy reform.
- ✓ Recognize that resources allocated to Polity have the potential to alter the basic "playing field" on which investment is conducted in ways that can benefit all asset owners and managers.

Investors that have incorporated Polity into their practice include:

- The U.K. based insurance company **Aviva Investors**. Aviva believes that its fiduciary duty includes "putting pressure on policy makers to address key sustainability challenges within our capital markets and our broader economy" and describes itself as "tireless advocates for new policy measures that support more sustainable capital markets."[24] In 2014, Aviva published A Roadmap to Sustainable Public Markets, in which it called for collaborative action in

developing suggestions on "how public policy makers could move the capital markets onto a more sustainable basis" and recommending a series of capital market reforms.

- Central banks, including the **Bank of England**, which are among the investors utilizing Polity to contend with interrelationship between climate change and financial stability. As part of its leadership of the Financial Sustainability Board and the G20 Green Finance Study Group, the Bank of England has helped to develop a variety of specific policy recommendations for regulations and other signals that central bankers can send to the financial community to promote management of the risks to the stability of economy of various climate change scenarios.

Investors sometimes compliment their use of Polity with the tools of Interconnectedness and Self-Organization. Public policy can promote the disclosure of standardized data useful in assessing systems-level impacts, as well as encourage peer-to-peer communications on systems-level issues of common concern. Public policy can also establish rules that enhance financial market frameworks, facilitate the creation of products with positive systems-level impacts, and promote collective action addressing systems-related challenges.

WHY DO INVESTORS USE POLITY?

Efficiency in portfolio management alone will not naturally drive investors to consider which environmental, societal and financial industry public policy issues will strengthen systems and can, in the long run, create "rising tides" for all investors. Moreover, conventional wisdom asserts establishing ground rules and preserving and enhancing systems are governments' responsibility, not that of the financial markets. The latter, the argument goes, ought only to use the one tool they know best: efficiency. The world, however, has grown sufficiently complex that it is now naïve to assume that the roles of government and finance can so easily be disentangled, and efficiency has become so powerful a force that it needs to be directed toward intentionally positive social and environmental investment outcomes and away from those that are unintentionally negative.

Investors can employ Polity to promote the creation of a limited number of governmentally mandated levers that can help investors support the sustaining of environmental, social and financial systems vital to their long-term returns.

7. SELF-ORGANIZATION

WHAT IS SELF-ORGANIZATION?

Self-Organization is the intentional decision by investors to create on-going organizational structures that build the capacity of the investment community to address systems-related considerations and strengthen the overall resilience of the financial system. This approach seeks to assist the industry in the development of its members, individually and collectively, to effectively influence the systems within which they operate.

HOW DO INVESTORS IMPLEMENT SELF-ORGANIZATION?

Self-Organization investors:

- ✓ Recognize the need for investors' concern with the stability and resilience of environmental, societal and financial systems to participate in industry-led capability-enhancing organizations.
- ✓ Understand the long-term rewards that accrue to members and their portfolio from these organizations' activities.
- ✓ Take a leadership role in the creation and management of such organizations.

Investors that have incorporated Self-Organization into their practice include:

- The central bank of the Netherlands, **De Nederlandsche Bank (DNB)**, which is a self-proclaimed "catalyzer" (or self-organizer) of investors around the linkages between the environmental, societal and financial systems and investors' integration of sustainability into their operations. DNB has organized collaborations such as the Platform for Sustainable Finance and the Sustainable Finance Lab, which convene Dutch banks, pension funds and others to develop solutions to sustainability challenges and systemic environmental risks.

- The U.S.-based responsible investment specialist firm **Trillium Asset Management**, which has played a leading role in the founding of organizations that have contributed to the advancement of incorporating systems-level considerations into investment. In the mid-1980s, it was a founder of US SIF—originally the Social Investment Forum—which became the model for other Social Investment Forums around the world. Under Trillium's leadership, the Ceres Principles were promulgated in the late 1980s, from which came the environmental advocacy organization Ceres and the spin-off from that organization: the Global Reporting Initiative.

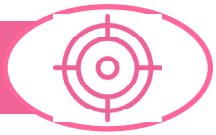
Investors sometimes compliment their use of Self-Organization with the tools of Interconnectedness and Polity. Industry organizations can often provide leadership in connecting investors through information and communications to environmental and social issues of mutual benefit, and in influencing public policy in similar ways.

WHY DO INVESTORS USE SELF-ORGANIZATION?

Competition among investors can prevent them from pursuing opportunities to organize for collectively beneficial purposes. The creation and ongoing maintenance of industry-led organizations requires substantial commitments of time and resources from its members, the rewards from which are often long-term and initially difficult to assess.

One of the primary benefits of Self-Organization for investors concerned about systems is that it provides at least a partial solution to the collective action dilemma. Questions of collective action and the related matter of free-riding arise inevitably for long-term investors concerned with the management of risks and rewards at environmental and societal systems levels. Since no one investor can effectively impact these complex systems alone, collaborative efforts are essential. When only a few investors take the initiative, all others can benefit at their expense. The intentional creation of industry-led organizations and participation in collaborative efforts can help in such situations.

8. SOLUTIONS



WHAT IS SOLUTIONS?

Solutions is the intentional decision to pursue investments that can solve societal and environmental challenges in ways that support the stability and enhancement of environmental, societal and financial systems. This approach seeks to identify investment opportunities that not only profit from the most pressing systems-level challenges of the day but also that resolve them positively. A Solutions approach can fundamentally alter the nature of systems, creating versions of these systems with more positive dynamics and more extensive investment opportunities.

HOW DO INVESTORS IMPLEMENT SOLUTIONS?

Solutions investors:

- ✓ Acknowledge the need to contend with the greatest environmental, societal and financial systems-level challenges of the day.

- ✓ Seek investments that are not only profitable, but can also change the dynamics of systems in positive ways.
- ✓ Have a clear vision of the most important aspects of alternative systems.

Investors that have incorporated Solutions into their practice include:

- The Dutch pension fund manager **PGGM**. Among PGGM's six core investment approaches is "investing in solutions" for sustainable investment in four target areas: climate change, water scarcity, healthcare, and food security. Its "investing in solutions" portfolio focuses on "one or a cluster of issue areas where social or environmental need create a commercial growth opportunity for market-rate or market-beating returns." Its investments share four features: they "contribute to 'financial ambition' with regular risk and return expectations"; they are "intended to support positive impact on at least one of the selected themes"; the impact created is "substantial relative to a baseline or relevant benchmark;" and, "impact is measured, managed and communicated."[25]

- The U.S.-based asset manager **Sonen Capital**. Sonen tracks the impacts of its investment across all asset classes against nine of the United Nations Sustainable Development Goals (SDGs). For example, it reports that in 2016 all four of its asset allocation strategies—public equities, fixed income, real assets and global multi-asset strategies—had positive impacts with relation to SDG 7: access to affordable, reliable, sustainable and modern energy, while its real assets strategy was the one primarily having impact with relation to SDG 15: protect, restore and promote sustainable use of terrestrial ecosystems.

Investors sometimes compliment their use of Solutions with the tools of Additionality, Locality, and Standards Setting. Both Additionality and Solutions aim to address currently unmet social and environmental challenges; Solutions portfolios are often defined with regards to challenges within a given local region. In addition, they commonly reflect investors' standards for avoiding investments in those industries responsible for the systems-level challenges they seek to address.

WHY DO INVESTORS USE SOLUTIONS?

Efficiency at the portfolio level can lead investors to exacerbate, rather than ameliorate, systems-level challenges. An environmentally themed "water fund," for example, might focus on privatization of water supplies in a world of water scarcity without seeking to address the problem of access to water for the economically disadvantaged. Or a "low-carbon" fund might invest in the promotion of nuclear power around the world without contending with the challenges of nuclear power plant safety, nuclear waste disposal, or the proliferation of nuclear weapons.

By seeking to resolve, rather than profit from, crucial environmental, societal and financial systems-level challenges, investors work to build a solid foundation from sustainable systems that will provide a long-term source of future investment opportunities.

9. STANDARDS SETTING

WHAT IS STANDARDS SETTING?

Standards Setting is the intentional decision by investors to establish standards that discourage investments in corporations, industries and countries with practices that violate broadly accepted standards or norms, or to contribute to the development of such standards. This approach aims to avoid crises of trust in the financial community that can arise when its members take actions that undercut societal, environmental or financial systems-level norms. At the same time, it seeks to lend legitimacy to financial institutions through the implementation of higher standards. In doing so these standards can help strengthen the overall systems themselves and assure their long-term viability as a source of wealth creation.

HOW DO INVESTORS IMPLEMENT STANDARDS SETTING?

Standards Setting investors:

- ✓ Communicate broadly on issues they believe are fundamental to the stability, viability and legitimacy of environmental and societal systems, avoiding those that violate broadly accepted norms and favoring those that support them.
- ✓ Establish positive standards or principles for industries on issues relating to environmental and societal behavior that can promote informed discussion and that increase support within the investment and corporate communities for policies that support the health of the systems within which they operate.
- ✓ Create a "level playing field" of normative behavior that encourages competition based on a "race to the top" rather than to the bottom that simultaneously generates an increasing array of viable investment opportunities.

Investors that have incorporated Standards Setting into their practice include:

- **Norges Bank Investment Management**, the manager for Norway's sovereign wealth fund. In consultation with its Council of Ethics, Norges incorporates "internationally recognized standards" into its investment process, which have led it to divest from companies in the tobacco and weapons industries, as well as those causing severe environmental damage. In addition, in 2015 Norges participated with the Organization for Economic Co-operation and Development standard-setting initiative relating to the extractives industry and the stability of the financial markets, and has responded to various proposals for financial market regulation internationally.

- **TIAA**, the U.S.-based asset management firm. Since the promulgation of the Sullivan Principles for labor practices under apartheid South Africa in the 1970s, investors have participated in the development of numerous similar codes for social and environmental conduct. Some focus on industries (e.g. palm oil, cocoa, apparel), others on specific issues (e.g. internet censorship, child labor). TIAA has adopted broadly recognized assessment standards for its investments in farmland and real estate. For farmland, it works from the United Nations Principles for Responsible Investment's Guidelines for Responsible Investment in Farmlands, and for real estate it draws on standards developed by the U.S. Department of Energy, U.S. Environmental Protection Agency, U.S. Green Building Council, and Building Owners and Managers Association International.

Investors sometimes compliment their use of Standards Setting with the tools of Solutions, Polity, and Diversity of Approach. The setting of positive standards can be aligned with solutions to societal and industry-specific challenges. Engaging in public policy initiatives can also be an effective route to addressing the environmental and societal challenges that Standards Setting contends with. In addition, those investors providing a diversity of investment approaches to clients typically include products based in one way or another on the setting of standards.

WHY DO INVESTORS USE STANDARDS SETTING?

Efficiency in portfolio management alone can lead investors to inadvertently make investments that jeopardize public trust in the financial markets. Recently, finance and banking have been among the least trusted American business sectors. Investors can undermine the foundational trust in financial systems by maximizing profits while ignoring societal norms, and by investing in such questionable activities as the manufacture of anti-personnel weapons or corporations operating without basic standards on child and bonded labor, or investing in companies that abuse their customers, employees or communities in the name of profit. Maintaining trust between finance and society, especially as asset management increasingly becomes a fiduciary activity, is ever more important in today's complex and interconnected world.

Skilled managers can align their investments with certain standards, just as managers with an investment style or regional focus can limit their universe, while managing the risk and reward characteristics of their investment portfolios. Efficiency in portfolio management alone often cannot achieve this dual alignment with standards and financial goals. Without this, our financial systems cannot earn the trust of public opinion or bear the weight of crises of confidence.

10. UTILITY

WHAT IS UTILITY?

Utility is the intentional decision to maximize the alignment of the specific investments within a portfolio's asset classes with the societal functions that these asset classes were designed to serve. This approach assumes that the characteristics of, and market for, each asset class differ because they serve distinct societal functions. For example, investors use public equities to actively participate in various ways in sharing in the private wealth generated by large corporations; fixed income typically provides low-risk opportunities to allocate assets to a range of government initiatives that create those public goods not easily served by private markets; venture capital allows high-risk investments in disruptive products and services; and so on. Utility seeks to enhance the effective functioning of asset classes within the overall financial system—a system that depends on a diversity of differently structured financial products to serve a variety of social and environmental needs.

HOW DO INVESTORS IMPLEMENT UTILITY?

Utility investors:

- Understand the differing social and environmental ends for which various asset classes and their markets have been designed.
- Intentionally select individual investments that are aligned with these asset class-specific purposes and when appropriate to act to enhance this alignment.
- Benchmark the performance of their investments against the appropriate social and environmental functioning of the asset class in which they are investing.

Think Outside of the Box Asset Management (TOBAM), is an investor that has incorporated Utility into their practice. TOBAM advocates for an "anti-benchmark" approach to investment. This approach runs contrary to the current trend toward passive management in equities and to defining active managers' investment goals as beating passive benchmarks. It asserts that active management's benefit to society arises through its intentional allocation of assets to productive purposes that contribute to long-term value-creation—in effect, a systems-wide benefit. TOBAM views the most important job of an investor as making their asset-based benchmarks go up, not primarily as "beating" the benchmark. By also asserting that environmental, social and governance issues should be a fundamental consideration for active managers, TOBAM effectively elevates these issues to the systems level.[26]

Investors sometimes compliment their use of Utility with the tool of Standard Setting. Investors consider the utility of asset classes to help align them with specific investment opportunities within that asset class. One of the strengths of the public equities markets, for example, is that it allows investors to address the issues of standards setting for large, global corporations. As owners of these firms through equity investments, investors can use Standards Setting to address issues such as human rights, as TOBAM has done. Similarly, through investments in real estate, investors can influence issues relating to the built environments by using standards such as LEED and BREEAM.

WHY DO INVESTORS USE UTILITY?

Efficiency in investment is increasingly measured in performance relative to benchmarks that consist solely of the aggregated financials of individual securities. These performance benchmarks are similar across all asset classes in that they are aggregated sets of abstract financial figures that fail to capture the asset classes' societal purposes. Because investment goals are most often defined relative to these benchmarks, asset owners and managers ignore their ability

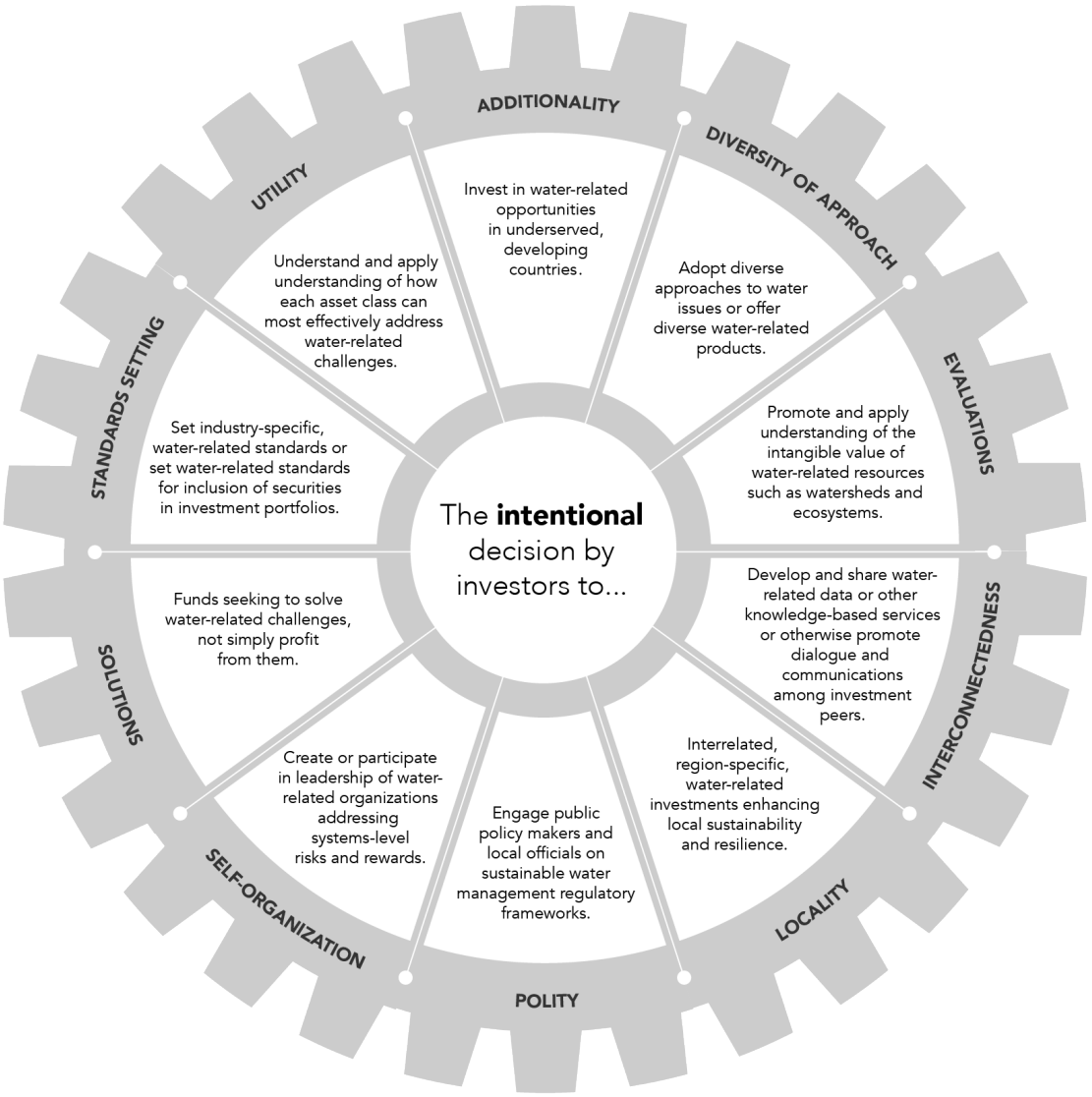
to choose securities within asset classes that align with their societal purposes. Trusting in the forces of competition to produce societally beneficial outcomes can result in globally disastrous outcomes. Intentional consideration of the utility of asset classes can help investors focus on goals beyond simply "beating the market."

By aligning the systems-level issues on which they have chosen to focus with the unique societal functions of individual asset classes, investors can enhance their systems-level impacts. Although performance against financial benchmarks will remain an ongoing consideration, understanding the utility of asset classes allows for the creation of benchmarks relating to environmental, societal and financial systems—the performance against which can then be balanced against performance relative to price-based benchmarks.

THE TEN TOOLS IN ACTION: WATER

In an effort to make the findings contained in this paper as practical and actionable as possible for investors, TIIP has illustrated below how the Ten Tools of Intentionality might be appplied to the particular issue of water (see Figure 3). A related scenario exercise is featured in a toolkit developed by the Ceres' Investor Water Hub that illustrates how an institutional investor, in this case a Foundation with a Board of Trustees, could implement a coordinated set of investment policies and practices that would seek to address and positively impact water-related risks and rewards at both portfolio and systems levels. The resources contained in Ceres's toolkit as well as in the application of the Ten Tools of Intentionality below can help institutional investors understand how they might develop a coherent strategy for positively impacting financial performance in both the short and long term, while at the same time positively impacting water-related systems in ways that enhance their resiliency and increase future opportunities for wealth-creating investments.

Figure 3. The Ten Tools of Intentionality: Water



In addition to the Tools of Intentionality and their potential use as outlined above, investors can incorporate into their current key investment activities certain strategies that would also serve to address water-related issues at a system level. Investors can put these strategies into effect through use of investment belief statements, security selection and portfolio construction, engagement, targeted investment programs and manager selection. These activities are not new to investment. Most are already well-established as part of mainstream portfolio management. Many organizations, for example:

- ✓ Have formal investment beliefs statements addressing issues such as the efficiency of the market, the relationship between risk and reward, and the value of diversification. These investment beliefs statements are sometimes stand-alone documents and are sometimes included in an investment policy statement;
- ✓ Employ security selection techniques that involve disciplines such as investment style (e.g. value or growth), themes (e.g. trends in technology or consumer taste), or regional focus (e.g. emerging markets);
- ✓ Are active investors engaging with portfolio companies on their business strategies and models;
- ✓ Create funds targeted to particular sectors (e.g. health care, energy); and
- ✓ Set guidelines for their manager selection and monitoring processes (e.g. buy/sell discipline, style drift).

When focused on water as a system-level consideration, these key investment activities might include:

- ✓ Adjusting an Investment Beliefs Statement to specify that a belief that environmental systems-level issues such as water can have a material effect on portfolios and on the entire investment universe from which those portfolios are constructed;
- ✓ Instructing active managers in Public Equities and Fixed Income to include water risks and rewards in security valuation models and include a description of what effect, if any, the inclusion of these considerations has on security selection in quarterly and annual reports;
- ✓ Instructing active managers in Real Estate to monitor water usage in related properties and report on their findings as to its materiality as to their profitability;
- ✓ Instructing Private Equity Managers to report the degree to which they believe water is a material issue for each of their investments and, when material, what policies they have in place for managing the issue;
- ✓ Developing water-related proxy voting guidelines, and initiate an engagement program to address water issues as they relate to companies or other portfolio holdings; and
- ✓ Incorporating requirements in Requests for Proposals that potential external managers have water-related expertise and that current managers report regularly on their own management of water-related risks and rewards at both portfolio and systems levels.

Together these initiatives at both the portfolio and systems levels—and using both the Tools of Intentionality and key investment activities—create a coherent strategy for positively impacting financial performance in both the short and long term, while at the same time positively impacting water-related systems in ways that enhance their resiliency and increase future opportunities for wealth-creating investments.

INTENTIONALITY AND NON-FINANCIAL CORPORATIONS

To date, much of TIIP's research—including the Tipping Points 2016 report on which this report builds—has focused on institutional investors; but non-financial corporations are also important systems-level players. Indeed, the ability of asset owners and managers to assess the impacts of their investments at systems levels depends, to a certain extent, on their ability to understand how the corporations in which they invest have or have not taken systems-level considerations into account.

TIIP will explore non-financial corporations' intentional embrace of systems-level approaches over the coming year in the Aligning Long-Term Planning and Systems (ALPS) Project, in partnership with the CECP's Strategic Investor Initiative (SII). In the meantime, TIIP has observed that many corporations are sending clear signals that they are intentionally managing their impacts at environmental and societal systems levels to mitigate risks and create value over the long term.

Fundamental to these signals is the language of "purpose" as a value driver. Researchers at KKS and Generation Investment recently highlighted this phenomenon when they examined how companies are going beyond profits to signal their commitment to society and the environment:

> "Many companies are now putting social purpose at their core. They are using the power of business to create a positive impact on communities and the environment and at the same time generate financial value. Purpose defines a reason for the existence of the business, which goes beyond simply making a profit. Pursuing purpose is not a corporate afterthought or a new marketing campaign which will be soon forgotten. Purpose places social and environmental considerations at the centre of making strategic business decisions which underpin long-term profitability. It is what keeps employees engaged. It is what customers are loyal to. It is what investors invest in.'"[27]

In the context of systems-level considerations, corporate purpose can be thought of as a proxy for intentionality. Both focus on generating social and environmental value as well as financial returns, and each keeps the long term in sight. Three emergent examples of such corporate-driven efforts are corporations integrating circular economy, zero-waste initiatives into their business model; corporate venture capital initiatives; and corporations adopting a Benefit Corporation legal structure.

Companies like Renault, for example, are adopting "circularity" in their business models. Renault is transforming old car parts into like-new or better-than-new condition—all to be used in new cars—through its groundbreaking "re-manufacturing" plant. The facility is the most profitable of Renault's operations, and uses just 20 percent of the energy and 30 percent of the materials required by traditional automotive plants, according to its former COO.[28]

Renault is among a new wave of businesses that have adopted the principles of a circular economy, which shifts away from the traditional linear way of production (take, make, and waste) to one that is circular in nature (reduce, reuse, and recycle). This change in approach promotes growth and the development of clever ways to use fewer limited (and costly) resources like energy, land, and materials—consciously re-designing business models, products, and services so that they are optimally restorative and regenerative.[29] In a circular economy, products are meant to cycle through the economy many times, which means less waste and more opportunities to sell and resell a product.

If a company recycles its own parts and generates its own supply of renewable energy, it becomes more self-sufficient, resilient, competitive, and usually more profitable. In fact, according to an analysis by the Ellen MacArthur Foundation and McKinsey & Co., a relatively small increase in circularity could save European manufacturers $630 billion by 2020. Expanded globally, such savings would easily reach into the trillions.

Given its promise, the circular economy represents a key strategy in an emerging spectrum of corporations that are increasingly embedding systems-level considerations into their business models. Beyond the pioneering production techniques like those of Renault, at least two other major trends—corporate venture capital (CVC) and legal structuring—are discernable ways that corporations are integrating intentionality-driven policies and practices.[30]

CVC is not new, but it is gaining momentum as corporations, having been in a more defensive posture since 2008, look to make use of their growing cash

reserves. CVC in the traditional sense helps companies harness external factors, trends or ideas for business growth by investing in new models for value creation, which can then be tested and later transferred into the core business once they are perfected or cloned.[31] Intel Capital is a leading example of a company that has put CVC into action; it has utilized the classic model of CVC by financing start-ups that build an ecosystem for the flagship products of the semi-conductors specialist.[32]

Familiar names like IKEA, Patagonia, Cisco, Starbucks and adidas are also utilizing CVC to great effect in generating business growth, but are now doing so from a sustainability perspective.[33] In this way, CVC "focused on impact combines a corporation's traditional venturing goals of generating a financial return and developing synergistic capabilities, access and/or markets with a focus on providing environmental or social impact."[34] It plays an increasingly important role in the social economy while "future proofing" businesses and the communities in which they operate.[35]

The research by KKS and Generation Investment highlights yet another key emerging strategy employed by corporations: changing their legal form and/or undergoing certification to clearly and intentionally convey their purpose-driven nature.[36] For instance, one of the number of corporate forms to have emerged in recent years is the Benefit Corporation (B-Corp) designation, which is a for-profit corporation that must have the purpose of creating "general public benefit" and that may also identify one or more specific public benefit purposes.[37]

The reason companies choose to signal their purpose in this way "lies in understanding the nexus of purpose, authenticity, trust and value" that collectively drive customer, employee and investor choices.[38] Method, Kickstarter, and Plum Organics (owned by Campbell Soup Company) are a few of the more widely-known companies that carry the B-Corp designation.[39]

This experimentation with production techniques, CVC and legal structures begs the question: why now? A combination of skyrocketing deficits, uncertain financial markets, and staggering (and growing) societal and environmental need have thrust the importance and urgency of systems-level considerations to the forefront; across all sectors, new opportunities to develop a more prosperous future have emerged as a result. In 2012, 93 percent of corporate CEOs responding to an Accenture survey indicated that sustainability would be critical to the future success of their companies.[40] These executives also believed that a tipping point would be reached that fully meshes sustainability with core business within a decade, fundamentally transforming principal business capabilities, processes, and systems throughout global supply chains and subsidiaries.[41]

However, a 2013 follow-up to the Accenture survey captured a tension whereby many executives reported that they had "…found themselves stuck on their ascent" to sustainability, "unable to scale sustainability at the pace required to address global challenges."[42] Respondents to the 2013 survey "described a plateau beyond which they cannot progress without radical changes in market structures and systems, driven by a common understanding of global priorities."[43]

Breakthroughs achieved by companies like Renault, Intel Capital, and Kickstarter in the intervening years indicate that corporations have found ways forward to engage in systems-level activities, or are at least pursue related activities. How these corporations have begun to take systems-level considerations into account—and the corresponding challenges and opportunities they are experiencing—will be increasingly important inputs for investors as they attempt to determine if and how much their investments impact the health of global systems and, in turn, their portfolio returns.

CONSIDERATIONS FOR ADOPTING INTENTIONALITY

Each of the tools of intentionally can support investors' pursuit of effective investment in a unique and valuable way, yet barriers to their widespread adoption persist. This section summarizes these strengths, acknowledges the challenges, and provides a summary of other considerations relating to the use of the tools of intentionality to bridge the gap between the management of risk and reward at the portfolio and systems levels.

STRENGTHS

As investors increasingly recognize the need to act with intentionality to balance efficiency in maximizing self-interested returns with maintaining the resilience of global systems, the tools of intentionality will grow increasingly important. But, identifying which tools to use and why can be a difficult task.

We have identified the core strengths of each tool to help guide investors in determining which align with their intentionality goals and objectives; please also see the "WHY" sections of the preceding section for additional info on the usefulness of each tool for achieving intentionality goals.

- **Additionality** diminishes, rather than accentuates, economic inequalities and funds a diversity of enterprises that serve a broad spectrum of societal needs;
- **Diversity of Approach** makes it possible to begin to contend with the complexity of systems-level issues;
- **Evaluations** serves to develop the measurement tools and reporting vocabulary necessary to capture the long-term value of systems-level characteristics;
- **Interconnectedness** increases understanding of, and skills in, the management of systems-level risks and rewards;
- **Locality** enhances investors' abilities to use knowledge of local contexts to develop forward-looking analyses involving complex interactions and difficult-to-anticipate risks or rewards with relative ease;
- **Polity** focuses on the creation of governmentally mandated levers that can help investors support and sustain systems vital to their long-term returns;
- **Self-Organization** provides at least a partial solution to the collective action dilemma;
- **Solutions** seeks to resolve, rather than profit from, crucial systems-level challenges, thereby building a solid foundation on sustainable systems that will provide a long-term source of future investment opportunities;
- **Standards Setting** maintains trust between finance and society, especially as asset management increasingly becomes a fiduciary activity; and
- **Utility** allows for the creation of benchmarks relating to systems—the performance against which can then be balanced against performance relative to price-based benchmarks.

CHALLENGES

Despite its clear strengths—and growing need to balance the pursuit of efficiency—the adoption of intentionality is not without its challenges. Key considerations in this regard include (a) the need for data, education, and measurement; (b) new thinking in performance assessment; and (c) addressing the free-rider problem.

Need for data, education, and measurement. Key challenges that are inhibiting widespread adoption of intentionality include varying quality and availability of systems-related data; the need to educate staff, clients, and other key stakeholders on the nature and materiality of systems-related considerations; and ability to measure and report on impact at industry or systems levels. While progress is being made on each of these fronts, these issues continue to hamper momentum.

As an increasing amount of research and analysis is conducted using the tools of intentionality as a measurement framework it will be possible to characterize more clearly the types of investors that are adopting which approaches, in what combinations, and their reasons for doing so. A clearer perception of these patterns will then be helpful in developing guidelines for implementation for investors contemplating their use.

Performance assessment. As the tool of Evaluations illustrates, to incorporate systems-level considerations that are difficult to value, investors must intentionally

adopt assessment techniques that might not be as easily quantifiable as price or in making an immediate business case. This continues to be a challenging proposition for investors skilled in portfolio-measurement techniques, but not in those at systems levels. Researchers, such as the Center for Applied Research at State Street, are seeking to make progress on this issue (see below).

Center for Applied Research ESG Survey

In March 2017, the Center for Applied Research at State Street published The Investing Enlightenment: How Principle and Pragmatism Can Create Sustainable Value through ESG. This study, based on surveys of 582 Institutional Investors and 750 retail investors, sought to answer the question, "How can we leverage the capital markets to improve not just risk-adjusted returns, but our society as a whole?"

It found among other things that 62% of the institutional investors surveyed believed that ESG [environmental, social and governance] investing "helps to foster a long-term investment mindset," but that 60% found that "lack of standards for measuring ESG performance" were a barrier to ESG integration

From this survey and related third-party research, emerged a model for ESG integration. To put this model into practice, investors need to "[m]ake ESG part of the investment lexicon" by incorporating ESG training into the organization and by educating financial advisors. In addition, "[p]erformance metrics and incentives structure need to reflect the long-term nature of ESG investing," through lengthening the time frames for performance evaluation and compensation decisions. In doing so, investors need to "[g]et the data and solutions you need" by engaging with corporations, participating in industry working groups and initiating communications programs. And "[i] nvestment decision should be based on the material ESG issues" determined by sector portfolio managers and analysts while considering the perspective of corporate boards of directors.

Free-riders. As the tool of Self-Organization highlights: questions of collective action and the related matter of free-riding arise inevitably for long-term investors concerned with the management of risks and rewards at environmental and societal systems levels.

Since no one investor can effectively impact these complex environmental and societal systems alone, collaborative efforts are essential. When only a few investors take the initiative, all others can benefit at their expense. Understanding how players in the highly competitive investment field can also act collaboratively to create level playing grounds is a considerable challenge.

ADDITIONAL CONSIDERATIONS

Beyond the strengths and challenges to adopting intentionality—and the peculiarities of individual tools—there are additional factors that investors might need to contend with when planning to implement the tools. These considerations primarily relate to (a) measuring the effectiveness of strategies, (b) determining how to report on systems-level impacts, and (c) determining ways to pursue collaborative action.

Measuring the effectiveness of intentionality strategies. With the growth of investors embracing and implementing intentionality strategies, the opportunities for investors to learn from one another as to what does and does not work will increase, as will the ability of investors to distinguish between what is being done well and what is not.

Insights like this will be hugely beneficial for asset owners attempting to choose among promising asset managers, and for asset managers looking to distinguish themselves from their peers. Better measurement of effectiveness will also ultimately improve how and in what ways investors can better influence systems-level concerns.

Reporting systems-level impacts. Investors have developed a variety of methods for reporting on the impact of individual portfolios on environmental, social, and governance factors. This lays the groundwork for deeper and broader reporting that accounts for the influence (alignment and progress) of investor decision making on systems-level issues. Investors like Sonen Capital, for example, are making headway in this direction by reporting on the impacts of its investment against nine of the United Nations Sustainable Development Goals (SDGs). Sonen's approach provides but one illustration of the potential for investors to convey their influence on systems.

Pursuing collaborative action. For long-term investors to address the free-rider question and increase their potential for influence at the systems-level, collective action in various forms will be necessary. Several investor organizations with common concerns have recently acted in this way with systems-level goals in mind. These include the Investor Network on Climate Risk under the leadership of Ceres in the United States, which has provided a model for similar organizations globally; the Principles for Responsible Investment, which has recently taken up system-level reform of the financial industry as a major theme; the Interfaith Center on Corporate Responsibility, which has coordinated investor shareholder actions for many decades in the United States and is representative of a growing number of organizations around the world providing shareholder engagement services; and the International Corporate Governance Network, which has developed a set of stewardship principles for institutional investors that include attention to environmental and social issues.

Despite these developments, investors' ability to act collectively and the effects of these collective actions remain poorly documented and understood. Investors must determine when collective actions by asset owners and managers, operating in their highly competitive industries, can be taken realistically and with maximum effect.

BOX. CONSIDERATIONS FOR ENGAGING STAKEHOLDERS

As part of this identification and examination of the opportunities and challenges for investors as they put the tools of intentionality into practice, TIIP sought to answer the question: **What will motivate key financial industry players to adopt systems-level considerations?**

In doing so, TIIP examined three key stakeholder groups within the investment community:

- **Asset owners**: Pension funds, sovereign wealth funds, endowments, etc.
- **Asset managers**: Diversified financial service companies, impact and sustainability investors, etc.
- **Gatekeepers**: Investment consultants, outsourced chief investment officers (CIOs), etc.

Where possible, TIIP attempted to address the following considerations:

- Engagement strategies that are effective with one group (i.e. CIOs) might not work with other groups (i.e. gatekeepers).
- The appropriate messaging to each group, and the format that messaging should be delivered in, needs to be clear, simple and practical.
- The reasons why these groups are not already incorporating systems-level thinking and intentionality strategies need to be addressed.

The analysis incorporates desk research and targeted interviews with leading thinkers and practitioners from throughout the financial industry. While more research is needed, the following preliminary findings emerged about aspects of systems-level messaging that might resonate with various types of stakeholders:

Asset owners with mission-related organizations have a desire for investment frameworks centered on values, performance measurement, and implementation of systems-level considerations.

Although analytic tools exist to measure risk and return of a select few approaches, there is no single comprehensive reporting tool for institutional investors to measure the value that systems-level considerations bring across a variety of asset classes and investment policies and practices.

Asset managers are increasingly integrating systems-level considerations into their investment and organizational frameworks. Where asset managers have additional opportunities is in positioning themselves as thought-leaders in their respective asset classes. With stronger communication on their systems-level approaches to investment, asset management firms have the potential to gain a greater market share of institutional investor mandates.

For gatekeepers, pursuing systems-level considerations requires rethinking their role in the investment advisory space, and stronger collaboration between research hubs and field consultants around education. Because the current consulting business model calls for serving a broad range of clients with a wide range of environmental and societal concerns, incorporating systems-level considerations is challenging. By rethinking their role and improving education, gatekeepers could help to ensure that field representatives are aware of and have access to central home office resources and knowledge.

For all three actors, greater communication and shared vocabulary emerged as a key theme in the findings. Through an intellectual framework built on stronger messaging and collaboration, investors will have a greater ability to identify the risks and rewards related to systems-level approaches.

It is incumbent upon the key actors in these three groups to identify common goals, values and understanding to accelerate consideration of systems-level approaches. And for those organizations that have already embarked on the path towards systems-level considerations, it is imperative that they continue to articulate and communicate the roadblocks and facilitating aspects of the journey to better equip their peers that are in the early stages of this process.

CONCLUSION

Investors are beginning to contend with the dual challenges of managing the efficient allocation of assets at the portfolio level and managing the impact of their investment decisions on the environmental, societal, and financial systems within which they operate to preserve and enhance these systems' wealth-creating potential. These same investors are increasingly discovering that balancing efficiency with effectiveness is imperative for maintaining the resilience of these global systems and critical to the long-term absolute returns of their investments.

The tools of intentionality described in this report provide investors with a way to operationalize their intent to create environmental and social benefit along with financial returns; to influence systems and direct their policies to bridge the gap between the management of risk and reward at the portfolio and systems levels.

To be sure, these tools are far from fully developed or articulated, and a whole host of challenges related to data availability, performance assessment, and free-riders need to be addressed. But promising signs of investors deepening their embrace of systems-thinking by adopting the tools of intentionality—and the concept broadening to influence corporate behavior—demonstrates that progress is indeed being made.

While the road ahead is promising, striking the careful balance between effectiveness and efficiency will be tricky. The risks of business-as-usual no longer add up; whereas the potential rewards for investors and society are limitless.

ACKNOWLEDGEMENTS, AUTHOR INFORMATION, AND ABOUT TIIP

ACKNOWLEDGEMENTS

For their helpful comments and suggestions on various drafts of this paper, TIIP would like to thank Chris Pinney, Jon Lukomnik, Jim Hawley, Mirtha Kastrapeli, Stephanie Potter and Monika Freyman. For its financial support for this and related TIIP projects, we would also like to thank the High Meadows Institute.

AUTHOR INFORMATION

The authors of this TIIP report are Steve Lydenberg, William Burckart and Jessica Ziegler.

Steve Lydenberg. Mr. Lydenberg is TIIP's Founder and CEO. He also serves as Partner, Strategic Vision of Domini Social Investments where he provides strategic vision and direction to guide the firm's policies, procedures, and daily practices. Mr. Lydenberg previously served as the firm's Chief Investment Officer and was a co-founder of the Domini 400 Social Index, the first index to utilize social and environmental standards. In addition, Mr. Lydenberg is the Founding Director of the Initiative for Responsible Investment (IRI) at the Kennedy School of Government at Harvard University, which was established to provide institutional support for catalytic activity for responsible investment, broadly construed, with a strong focus on creating a foundation of research activity around the field. He has published widely on responsible investment and corporate social responsibility and is a CFA charter holder.

William Burckart. Mr. Burckart is the President and COO of The Investment Integra on Project (TIIP). He has been at the forefront of impact investing and has contributed to the field through groundbreaking research, including leading a multi-year field building effort focused on the financial services industry in collaboration with the Money Management Institute; managing the production of (and is a contributing author to) the New Frontiers of Philanthropy: A Guide to the New Tools and Actors that Are Reshaping Global Philanthropy and Social Investing (Oxford University Press: 2014), and was involved in the writing of the Status of the Social impact investing Market: A Primer (UK Cabinet Office: 2013) that was distributed to policymakers at the inaugural G8-level forum on impact investing. Mr. Burckart is a visiting scholar of the Federal Reserve Bank of San Francisco, serves on the Global Advisory Council of Cornerstone Capital Group, and is a founder or co-founder of two impact investment advisory firms (Burckart Consulting and Impact Economy LLC).

Jessica Ziegler. Ms. Ziegler is the Associate Director for Research at TIIP, where she oversees and directs the execution of all TIIP research projects. Ms. Ziegler has extensive experience in research design, data collection and rigorous qualitative data analysis. She comes to TIIP from Mathematica Policy Research—an industry-leading public policy research firm—where she spent eight years conducting rigorous social policy evaluations. Ms. Ziegler has authored more than a dozen analytic reports on the implementation, costs and effectiveness of federally-funded workforce development, family support and education programs; her reports are used by foundations, non-profits and federal, state and local policymakers to inform policy reform and program improvements. Ms. Ziegler holds a Master of Public Policy from Johns Hopkins University and a Bachelor of Arts in Policy Studies from Dickinson College.

ABOUT TIIP

TIIP helps institutional investors understand the big picture, or "systems-level," context of their portfolio- level decisions. This is important because "systems-level" events, such as economic crises, ecosystems under stress, and societies in turmoil can disrupt the best-laid plans of investors and cost them dearly. Even seemingly "local" issues are now having much greater impact than they once did as the world becomes increasingly interconnected. TIIP designs, provides and maintains data and analytics that enable institutional investors to make this important connection between portfolio-level decisions systems-level considerations. TIIP's research portal and database of investor profiles, market analysis, and practical guidance provides a way to better match investors, benchmark systems strategies, and optimize program development. Investors leverage TIIP's data and analytics to solve program inefficiencies, enhance impact measurement, and boost absolute returns. Learn more at www.tiiproject.com.

APPENDIX A: USE OF THE TOOLS OF INTENTIONALITY

Table A.1. Use of Tools of Intentionality by Investors Profiled by TIIP

Investor	Additionality	Diversity	Evaluations	Locality	Inter-connectedness	Polity	Self-Org.	Solutions	Standards	Utility
Development finance institutions										
Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.	✓									
Overseas Private Investment Corporation	✓	✓								
Diversified, specialized financial services institutions										
Amundi		✓					.		✓	
Arabesque Asset Management Ltd					✓				✓	
Bank of America Global Wealth and Investment Management		✓			✓					
BlackRock Inc.		✓								
Breckinridge Capital Advisors										✓
Morgan Stanley & Co. LLC		✓			✓					
PGGM				✓			✓	✓	✓	
The Abraaj Group				✓						
Think Outside the Box Management									✓	✓
TIAA							✓		✓	
UBS		✓			✓					
Wells Fargo Private Bank+		✓			✓					
Endowments										
Hampshire College							✓		✓	
Jessie Smith Noyes Foundation									✓	
The F.B. Heron Foundation					✓		✓		✓	
Insurance companies										
Aegon Asset Management		✓							✓	
Allianz Societas Europea		✓			✓			✓	✓	
Aviva Investors					✓	✓				
AXA Investment Managers					✓				✓	
Pension plans										
British Columbia Investment Management Corporation							✓			
Caisse de depot et placement de Quebec		✓		✓	✓					
California Public Employees' Retirement Systems			✓		✓				✓	
California State Teachers' Retirement System		✓							✓	
Comité syndical national de retraite Bâtirente Inc.							✓		✓	

Investor	Additionality	Diversity	Evaluations	Locality	Inter-connectedness	Polity	Self-Org.	Solutions	Standards	Utility
Environment Agency Pension Fund		✓					✓			
Établissement de retraite additionnelle de la fonction publique									✓	
Health Employees Superannuation Trust Australia			✓						✓	
New York State Common Retirement Fund				✓	✓					
PFA Pension									✓	
Stiching Pensioenfonds ABP									✓	
The Church Commissioners for England^									✓	
The Second Swedish National Pension Fund					✓					
VicSuper Pty Ltd									✓	
Washington State Investment Board						✓				
Wespath Investment Management						✓			✓	
Responsible, impact investment services institutions										
Arjuna Capital					✓					
Bridges Fund Management*	✓				✓		✓			
Calvert Investment Inc					✓		✓		✓	
Circularity Capital LLP							✓	✓		
Domini Impact Investments LLC					✓	✓		✓	✓	
Northwest & Ethical Investments					✓	✓			✓	
Sonen Capital					✓			✓		
Threshold Group				✓	✓					
Trillium Asset Management					✓		✓		✓	
Veris Wealth Partners LLC					✓				✓	
Sovereign wealth funds										
Ireland Strategic Investment Fund	✓			✓						
New Zealand Superannuation		✓			✓		✓		✓	
Norges Bank Investment Management					✓				✓	

Source: Investor profiles compiled by TIIP in 2016 and available in **Tipping Points 2016: Summary of 50 Asset Owners' and Managers' Approaches to Investing in Global Systems.** Profiles complied with publicly available information from investor website and a survey conducted by TIIP in winter and spring 2016.

[+]Formerly Nelson Capital Management, LLC.

[^]Also an endowment.

*Formerly Bridges Ventures LLP.

Table A.2. Examples of Additionality + in Practice

Investor	Nature of services provided	Use of Additionality
Bridges Fund Management	Responsible, impact investment services	Invests in creating jobs, increasing spending in local economies, and improving access to healthcare in historically underserved communities while also promoting sustainable living; assesses upfront the potential for its investments to add value to local systems; refers to investments as "additional" when, if not for Bridges' initiative, they would not have been undertaken and this value would not have accrued to the community.
FMO⁺	Development finance institution	Chooses investments where it can "add to the market by providing services or products that the market either does not provide or does not provide on an adequate scale or on reasonable terms."[1]
Ireland Strategic Investment Fund	Sovereign wealth fund	Makes investments additional to a sustainable Irish economy only when they do not "displace" other economic activity, nor are a "deadweight" on the economy by replicating benefits created through other means.
Overseas Private Investment Corporation	Development finance institution	Focuses largely on providing finance in developing countries and emerging markets in which conventional financial institutions might be reluctant or unable to invest.

Notes:
⁺FMO is short for Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.
Sources:
[1]FMO. Annual Report 2015. March 21, 2016. Accessed from http://annualreport.fmo.nl on August 17, 2016.

Table A.3. Examples of Diversity of Approach in Practice

Investor	Nature of services provided	Use of Diversity of Approach
Aegon Asset Management	Insurance company	Allows individual investment units to adopt different approaches to meet client demand; to serve the United Kingdom ethical investment market, for example, its capital management subsidiary offers "deep green" funds and its Dutch insurance division includes additional sustainability standards in its investments.
Allianz Societas Europea	Insurance company	Explores a range of policies and practices to address climate change, including: developing insurance offerings and services that offer incentives for customers to adopt low-emissions cars; helping corporate and other customers in managing climate related risks; offering advisory services and lending to promote energy-efficient real estate; creating funds emphasizing "green bonds" and alternative energy; making substantial investments in renewable energy (approximately US$2.7 billion through 2015); ending its investments in coal-based businesses; and collaborating on academic research on climate change and advocating for industry and governmental action on the issue.
Amundi	Diversified, specialized financial services	Offers a variety of customized products to clients that aim to promote responsible finance that respects human values and clients' interests, including providing customized portfolio construction and proxy voting and creating a family of specialized high-impact funds.
Bank of America Global Wealth and Investment Management	Diversified, specialized financial services	Allows interested clients to select from a range of impact investment products and values-based investment approaches one that best meets their needs; approaches range from integrating systems-related issues within core market portfolios to directing capital toward impact-focused investment opportunities, and include socially responsible, sustainable, thematic, and impact first investment opportunities.
BlackRock Inc	Diversified, specialized financial services	Offers various investment products that incorporate either standards setting, ESG integration, or impact investing approaches.
Caisse de dépôt et placement de Québec	Pension plan	Employs a diversity of approaches to draw attention to and advance various systems-level issues in Quebec, including: supporting an academic program on sustainable development; providing funds for local entrepreneurship programs to develop expertise in small- and medium-sized business development; participating in research initiatives to enhance systems-related disclosure; and promoting public dialogue on responsible investment and stewardship in general.

California State Teachers' Retirement System	Pension plan	Recognizes that its assets will contribute to and be affected by climate change and, as such, pursues a diversity of approaches to addressing this issue, including: participating in a study of the projected effects on portfolio performance across asset classes under various climate change scenarios; querying some 45 fossil fuel companies on their management plans under possible scenarios for energy demand, gas price and stranded assets with a coalition of investors coordinated by Ceres; surveying external managers annually as to their level of incorporation of climate change in their investment processes; and allocating funds to a low-carbon public equities index.
Environment Agency Pension Fund	Pension plan	Pursues a diversity of approaches to managing the risks and rewards of climate change, including: reducing the level of carbon intensity of its investments across all asset classes; supporting research and education on the importance of managing the uncertainties of climate change throughout the investment community; and collaborating with others to support public policy initiatives that have the potential to reduce the scope of certain climate change related uncertainties.
Morgan Stanley & Co. LLC	Diversified, specialized financial services	Through its Impact Platform, provides clients with the option to pursue any of four different approaches to responsible investment: values alignment, ESG integration, thematic exposure, and impact investing.
New Zealand Superannuation	Sovereign wealth fund	Utilizes a range of approaches focused on managing the potential risks and rewards of climate change, including: integrating climate-related factors into investment risk assessments; investing in alternative energy, sustainable agriculture and infrastructure; sponsoring financial industry research on climate change scenarios; producing white papers on the topic; and engaging with corporations to improve their climate-related policies.
Overseas Private Investment Corporation	Development finance institution	Operates six impact investment funds, each with a different focus on promoting development in emerging markets.
UBS	Diversified, specialized financial services	Offers products incorporating portfolio screening, socially responsible investment, and impact investment.
Wells Fargo Private Bank	Diversified, specialized financial services	Offers a variety of a customized portfolio management services through integration of "the four pillars of faith-based investment": values, sustainability, impact and engagement.

Table A.4. Examples of Evaluations in Practice

Investor	Nature of services provided	Use of Evaluations
California Public Employees' Retirement System	Pension plan	Believes that three forms of capital create value in the long term: physical capital (environmental), human capital (social), and financial capital (governance); and that the sustainability of these capitals is directly related to—and critical for—the long-term sustainability of its funds.
Health Employees Superannuation Trust Australia	Pension plan	Implements a Reconciliation Action Plan that outlines how it will affect reconciliation with Australia's Aboriginal and Torres Strait Islander peoples, with a focus on increasing the quality of healthcare services and employment and in alignment with its goal of increasing equity between Aboriginal and Torres Islander peoples and non-Aboriginal peoples. The advantages of this approach accrue at a systems level—reconciliation of a deep societal problem—and at the same time are relevant to client service.

Table A.5. Examples of Interconnectedness in Practice

Investor	Nature of services provided	Use of Interconnectedness
Allianz Societas Europea	Insurance company	Conducts research and publishes information on systems-related topics, including a joint research project with the University of Cologne to assess the effect of European windstorms and to identify ways to mitigate their impact on investment portfolios; convenes discussion panels and sponsors TEDx talks on systems issues including climate change and its impact on future generations.
Arabesque Asset Management Ltd	Diversified, specialized financial services	Makes publicly available ESG and Global Compact scores for 4,000 plus companies through its S-Ray product.
Arjuna Capital	Responsible, impact investment services	In joining in the filing of a 2014 shareholder resolution with ExxonMobil, became one of the first investors to ask companies to disclose its strategic planning considering long-term-related scenarios—in this case, scenarios related to the effects of climate change on its business strategies.
Aviva Investors	Insurance company	Commissions research to aid in the understanding of ESG issues, including its 2014 report "Carbon Constraints Cast a Shadow over the Future of the Coal Industry" and a 2015 report that examined the value at risk from climate change and strategic response to climate change.
AXA Investment Managers	Insurance company	Disseminates white papers addressing general aspects of responsible investment, including: impact investment and its characteristics; the application of ESG standards to sovereign debt; investing in ways that address climate change; board diversity; ESG and impact integration into smart beta credit portfolios; ESG integration into smart beta equity strategies; and climate change and green bonds strategies.
Bank of America Global Wealth and Investment Management	Diversified, specialized financial services	Convenes the Impact Measurement Symposium each year, which studies issues relating to impact investing and impact measurement in the context of goals-based wealth management.
Bridges Fund Management	Responsible, impact investment services	Publishes papers, member of key industry groups and task forces, and active participant on panels and in conferences; develops and disseminates field guides that reflect practitioner experience.
Caisse de dépôt et placement de Québec	Pension plan	In 2015, organized a conference focused on the long term as a key approach to responsible investment. Partnerships with universities; to support the needs of the financial community, has endowed chairs at Université du Québec à Montréal and Université Laval and supported the creation of a Sustainable Investment Professional Certification Program at Concordia University.
California Public Employees' Retirement System	Pension plan	Maintains a database of more than 700 scholarly studies related to sustainable investing, including those analyzing its relationship to financial performance (called its Sustainable Investment Research Initiative); helped develop the Diverse Data Source database, which includes profiles of professionals for review by companies seeking diversity on their boards of directors; co-founded the Human Capital Management Initiative, which developed tools for assessing corporations' human capital management practices.
Calvert Investments Inc	Responsible, impact investment services	Publishes thought leadership and research-driven opinion papers (e.g. white papers) on a variety of systems-related topics; in 2016, for example, began publishing a series of position papers—the Calvert-Serafeim Series—to "enhance knowledge concerning responsible investing and advance approaches to responsible businesses."[1]
Domini Impact Investments LLP	Responsible, impact investment services	Staff publish columns, blogs and articles and speak at conferences on a range of systems-related topics; recent publications and speeches have covered issues including investments tied to nations suspected of genocide, integrated reporting and sustainability ratings, corporation transparency on political spending, and the spring 2016 engagement season. Domini's leaders testify at public forums regarding fossil fuel divestment and speak at related events, such as those organized by the Financial Stability Board Task Force on Climate-related Financial Disclosures.
Morgan Stanley & Co. LLC	Diversified, specialized financial services	Its Institute for Sustainable Investment sponsors programs and research that seek scalable financial solutions that drive social and environmental impact.

New York State Common Retirement Fund	Pension plan	In 2014, wrote to 18 companies inquiring about how, operationally, they applied their non-discrimination policies in countries with anti-gay laws, and wrote to companies in its portfolio that were sponsors for the Winter Olympics in Sochi, Russia, requesting them "to speak out against a recent anti-gay Russian law."
New Zealand Superannuation	Sovereign wealth fund	Sponsors financial industry research on climate change scenarios and produces white papers on the topic.
Norges Bank Investment Management	Sovereign wealth fund	Funds empirical and theoretical academic research on key issues relating to responsible investment, the effectiveness of institutional investors' engagement efforts, and climate change.
Northwest & Ethical Investments	Responsible, impact investment services	Publishes occasional papers providing background on the ESG issues on which it focuses; recent publications have included a July 2016 paper "Farm to Fork" on "food system sustainability," "Transitioning to a Low-Carbon Energy System" and "Making Progress on the Executive Compensation Issue."
Sonen Capital	Responsible, impact investment services	Contributes thought pieces to various publications, takes leadership roles within industry organizations, and leads and conducts studies on various dimensions of the impact investing market; recent publications cover topics such as: investing in water-related challenges and solutions and investing in sustainable agricultural activities such as reducing food waste and reducing food crop production for non-food uses.
The FB Heron Foundation	Endowment	Maintains a knowledge hub on its website with responsible investment resources for foundations.
The Second Swedish National Pension Fund	Pension plan	Collaborated with representatives from the venture capital industries in eleven countries to develop a reporting framework for investors to incorporate into their reporting requirements (because such transparency is "essential for a well-functioning financial market"[2]); is otherwise aware of the limited availability of climate change data that can help investors achieve impact at a systems level and is turning its attention to the question of how improved communications can better help investors address the challenges of climate change.
Threshold Group	Responsible, impact investment services	Provides thought leadership in the impact investing field through: development of a scoring system for the measurement of investments' impacts; a carbon-emissions assessment scheme useful in making divestment decisions; providing impact investment advisory services; and creating a means to facilitate communications among clients.
Trillium Asset Management	Responsible, impact investment services	Was the first to file a shareholder resolution calling for companies to add sexual orientation to their nondiscrimination policies; has successfully advocated for the implementation of sexual orientation and/or gender identity and expression nondiscrimination policies with numerous companies including the likes of Johnson & Johnson, McDonalds and Wal-Mart.
Veris Wealth Partners LLC	Responsible, impact investment services	Collaborates with organizations contributing to the building of the field such as Envestnet, which through its PMC Impact Investing Solutions platform, offers financial advisors tools to serve investors seeking opportunities for aligning investments with positive-impact values. Publishes on its website information relating to gender-lens investing, climate change and fossil fuels in investment, and general information on socially responsible investment funds.
UBS	Diversified, specialized financial services	Publishes papers on systems-related topics and partners with academics on the development of social impact metrics.
Wells Fargo Private Bank	Diversified, specialized financial services	Publishes white papers on sustainability issues such as fossil fuel divestment and food scarcity; its CIO has promoted a base of academic research on the relationship between responsible investment and portfolio performance through the creation and management of the Moskowitz Prize.

Sources:
[1] www.calvert.com. Accessed on July 12, 2016.
[2] www.ap2.se. Accessed on August 8, 2016 and August 9, 2016.

Table A.6. Examples of Locality in Practice

Investor	Nature of services provided	Use of Locality
Caisse de dépôt et placement de Québec	Pension plan	Invests in Quebec's economic development per its legislative mandate.
Ireland Strategic Investment Fund	Sovereign wealth fund	Is in the process of shifting its investment portfolio from a conventional approach to one more targeted toward the Irish economy.
New York State Common Retirement Fund	Pension plan	Operates three programs targeted to economic development in New York State: the In-State Private Equity Investment Program; the New York Business Development Corporation; and an affordable housing program in conjunction with the Community Preservation Corporation.
PGGM	Diversified, specialized financial services	Invests approximately 10% of its assets in the Dutch economy, including support for Dutch small- and medium-sized enterprises.
The Abraaj Group	Diversified, specialized financial services	Invests primarily in developing markets where it seeks to create "long-term, sustainable and systemic change in the economic and social landscape." In Peru it invests, for example, in Acurio Restaurants, whose chef is a supporter of native foods, local farmers and sustainable fisheries. Abraaj also seeks to build societal and cultural infrastructure in the regions in which it invests through support to arts, youth, entrepreneurship and innovation organizations.
Threshold Group	Responsible, impact investment services	Increasing its focus on the "place-based" aspects of its impact investment program through opportunities in the Pacific Northwest region where it is headquartered and other regions such as greater Philadelphia where it has a substantial presence; seeks to preserve and enhance social and environmental systems on a regional level by coordinating investments across a network of local organizations collectively committed to such goals as responsible economies, equitable communities and a sustainable environment.

[†]FMO is short for Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.

Table A.7. Examples of Polity in Practice

Investor	Nature of services provided	Use of Polity
Aviva Investors	Insurance company	Advocates for policies that support longer term, more sustainable capital markets; aims to correct "market failures" such as a lack of corporate disclosure on ESG risks and climate change—at a national-, European Union-, and United Nations-level—to improve long-term policy outcomes.
Domini Impact Investments LLC	Responsible, impact investment services	In 2015, engaged the United States Department of Labor regarding recent guidance and regulations that it felt stifled domestic socially responsible investment opportunities.
Northwest & Ethical Investments	Responsible, impact investment services	Pursues engagements with policymakers and organizations to "promote change on a broader scale"; communicates its positions to governmental agencies and standards-setting organizations regularly; and posts these communications on its website each year.
Washington State Investment Board	Pension plan	Has actively communicated with the Securities and Exchange Commission, advocating increased disclosure on various systems-related considerations including oil and gas companies' exposure to carbon-asset risks and disclosure on nominations to corporate boards in general to help it assess diversity concerns (e.g. through a series of letters to the SEC in 2015 on issues including lack of reporting by oil and gas companies on carbon asset risks); has also written letters to state officials and policymakers on issues ranging from CEO-to-worker pay disclosure rules to proxy voting policies and various financial regulations, among others.

Wespath Investment Management	Pension plan	Believes that engagement in public policy issues can ultimately impact its portfolios positively. Public policy engagements on climate change in 2014 and 2015 included, for example: signing a joint letter with United Methodist Church organizations in the lead-up to the 2015 COP 21 treaty negotiations urging adoption of a formal 2-degrees Celsius temperature increase limit; signing a statement in advance of the May 2015 meeting of the finance ministers of the Group of Seven urging national action to address climate change risk; and writing to 29 U.S. state governors urging them to support alternative energy programs and lower carbon emissions.

Table A.8. Examples of Self-Organization in Practice

Investor	Nature of services provided	Use of Self-Organization
Aviva Investors	Insurance company	Founding member of the Corporate Human Rights Benchmark, which ranks the human rights performance of the world's largest publicly listed companies.
Bâtirente[+]	Pension plan	Founding signatory of the United Nations Principles for Responsible Investment and served on its Advisory Council for three terms.
British Columbia Investment Management Corporation	Pension plan	Founding member of the United Nations Principles for Responsible Investment and participates in several of its committees.
Bridges Fund Management	Responsible, impact investment services	Co-founded The MBA Impact Investing Network & Training, which teaches business and graduate students about impact investment.
Calvert Investments Inc.	Responsible, impact investment services	Founding signatory of the United Nations Principles for Responsible Investment and an early signatory of the Montreal Carbon Pledge in 2014.
Circularity Capital LLP	Responsible, impact investment services	Co-founder of FinanCE, a working group focused on identifying and reporting on how finance can support the circular economy.
Environment Agency Pension Fund	Pension plan	Founding member of, and active participant in, the Investor Group on Climate Change.
Hampshire College	Endowment	Played leadership role in forming the Intentional Endowments Network; is part of the Network's executive leadership; promotes dialogue on the responsible management of college and university endowments.
New Zealand Superannuation	Sovereign wealth fund	Founding member of the United Nations Principles for Responsible Investment where it is currently a member of the Research and Policy Committee.
PGGM	Diversified, specialized financial services	Founded finanCE, a working group focused on identifying and reporting on how finance can support the circular economy; has partnered with the European Commission and a network of institutional investors on climate change issues.
The F.B. Heron Foundation	Endowment	Co-rounded More for Mission and PRI Makers Network, organizations that encourage responsible investment by foundations and that merged and are known today as the Mission Investors Exchange.
TIAA	Diversified, specialized financial services	Co-founded the Investments Leaders Group, a University of Cambridge-based group that advises businesses and policymakers on sustainability.
Trillium Asset Management	Responsible, impact investment services	Co-founded US SIF (originally the Social Investment Forum); created a set of environmental principles for American corporations originally called the Valdez Principles, subsequently renamed the Ceres Principles, and which provided the basis for the creation of Ceres (the sustainability advocacy organization serving both corporations and investors and for which Trillium served as an incubator).

[+]Bâtirente is short for Comité syndical national de retraite Bâtirente Inc.

Table A.9. Examples of Solutions in Practice

Investor	Nature of services provided	Use of Solutions
Allianz Societas Europaea	Insurance company	Develops and offers insurance products and financial services for customers focused on climate change mitigation and adaptation through its Green Solutions platform.
Circularity Capital LLP	Responsible, impact investment services	Invests in circular economy approaches that are recoverable and improvable by design.
Domini Impact Investments LLP	Responsible, impact investment services	Manages the Domini Impact Portfolio, which targets companies that can mitigate and addresses significant social and environmental challenges through innovation and access in the issues: (1) addressing climate crisis, (2) access to health care, (3) organic and non-GMO food, (4) affordable communication and educational technologies, (5) access to financial products and services and (6) affordable housing and transportation.
PGGM	Diversified, specialized financial services	Has allocated a substantial portion of its assets to a "solutions" fund that invests in the areas of climate change, food, water and healthcare.
Sonen Capital	Responsible, impact investment services	Pursues thematic investing, which includes investments that "focus on projects, goods and services, and how these goods and services relate to specific social or environmental challenges" and that are "highly targeted exposures that help address issues such as climate change, resource scarcity or the needs of low-income communities"[1]; many align with the U.N.'s Sustainable Development Goals.

Sources:
[1] Sonen Capital. 2015 Annual Impact Report. Accessed on June 28, 2016 from http://www.sonencapital.com/wp2015/wp-content/uploads/2016/04/15AIR.pdf.

Table A.10. Examples of Standards Setting in Practice

Investor	Nature of services provided	Use of Standards Setting
Aegon Asset Management	Insurance company	Sets minimum standards for its investments based on "broadly accepted international frameworks" related primarily to human rights and to production of anti-personnel weapons; individual units can develop additional policies within these broad standards.
Allianz Societas Europea	Insurance company	Excludes from investment companies involved with controversial weapons and those with coal-based business models.
Amundi	Diversified, specialized financial services	Excludes manufactures of anti-personnel and depleted uranium weapons and serious, repeated violations of the Global Compact principles.
Arabesque Asset Management	Diversified, specialized financial services	Excludes companies that violate core principles of the Global Compact.
AXA Investment Managers	Insurance company	Excludes companies that manufacture anti-personnel weapons or that increase the chances of nuclear-weapons proliferation; does not invest in tobacco products or in indexed funds based on food-related commodities; assesses the environmental and human rights practices of palm oil firms before investing.
Bâtirente[+]	Pension plan	Sets and adheres to standards relating to the rights of communities relative to corporations and the obligations of corporations to support communities through their fair share of taxes.
California Public Employees' Retirement System	Pension plan	Excludes specific investments and companies that do not align with its sustainable investment interests or as otherwise required by law; does not invest in: (a) tobacco stocks and bonds, (b) companies with business activities in Sudan (except humanitarian activities), (c) companies with business activities in Iran related to three sectors: nuclear, defense, oil and gas, and (d) assault weapons manufacturers; does not invest in individual companies in emerging markets that abuse human rights or have poor labor practices.
California State Teachers' Retirement System	Pension plan	In response to the shooting at Sandy Hook Elementary School, divests from firearms companies that manufacture weapons that are illegal in California.

Calvert Investments Inc.	Responsible, impact investment services	Typically precludes companies that manufacture certain types of goods/provide certain types of services or have otherwise undesirable business practices (e.g. tobacco, alcohol, gambling, firearms and ammunition, child labor, and animal abuse); has participated in the Sustainable Stock Exchanges Working Group, which recently published guidance on ESG standards for listing companies.
Domini Impact Investments LLC	Responsible, impact investment services	Excludes from all investment corporations with substantial involvement in the production of certain harmful and addictive products (tobacco, alcohol, and gambling) or the production of nuclear or military weapons or civilian firearms; nuclear power plant owners; substantial owners and producers of oil, natural gas or coal reserves; major producers of synthetic pesticides and agricultural chemicals; and for-profit companies substantially involved in the operation of prisons.
ERAFP^	Pension plan	Excludes industries such as weapons, gambling and tobacco on "moral grounds" and will not invest in the sovereign debt of countries whose judicial systems sanction capital punishment; has adopted a high-level set of material ESG factors in ranking best-in-class companies within their industries, including human rights, labor relations, biodiversity, greenhouse gas emissions, and ethical conduct, among others.
Hampshire College	Endowment	Avoids companies with major human rights, labor rights or diversity concerns and emphasizes companies providing or researching socially and environmentally beneficial products and services, and avoids countries with records of human rights violations.
Health Employees Superannuation Trust Australia	Pension plan	Restricts investments in companies with certain thermal coal involvements across all its fund offerings as well as companies involved in the manufacture, distribution, or sale of tobacco products.
Jessie Smith Noyes Foundation	Endowment	Divested fossil fuel companies and provides investment managers with inclusionary and exclusionary screening criteria.
Northwest & Ethical Investments	Responsible, impact investment services	Excludes from its Ethical and NEI funds involved in tobacco, nuclear and weapons industries.
Norges Bank Investment Management	Sovereign wealth fund	Incorporates "internationally recognized standards" into its investment process; divests for reasons including the manufacture of tobacco and weapons, causing of environmental damage, and financial risks posed by social and environmental practices.
New Zealand Superannuation	Sovereign wealth fund	Excludes companies involved in the tobacco, cluster bombs and nuclear weapons industries, as well as a limited number of other firms primarily for environmental concerns; excludes the sovereign debt of countries subject to certain international sanctions.
PFA Pension	Pension plan	Adheres to a "norms-based" screening approach: screens prospective opportunities and existing portfolios to identify potential human rights, labor or environmental violations of internationally recognized standards.
PGGM	Diversified, specialized financial services	Developed an ESG index that incorporates 70 ESG criteria; excludes investments in manufacturers of cluster bombs and anti-personnel weapons.
Stichting Pensioenfunds ABP	Pension plan	Excludes from investment companies that: (a) are suspected of violating national or international laws, (b) produce weapons such as cluster bombs and chemical and biological weapons (per the U.N. Non-Proliferation Treaty), and (c) violate the U.N. Global Compact, and does not purchase bonds from countries subject to U.N. Security Council arms embargo.
The Church Commissioners for England	Pension plan; endowment	Excludes investments in weapons, firearms, tobacco, gambling, high-interest-rate lending, human embryonic cloning, and alcohol producers failing to meet responsible marketing and retailing standards.
The F.B. Heron Foundation	Endowment	Invests 100% of its assets "for mission," particularly in companies with a strong emphasis on community development, for which it developed a community development index.
TIAA	Diversified, specialized financial services	Has participated in the setting of ESG standards for investments in farmlands and real estate.
Think Outside the Box Asset Management	Diversified, specialized financial services	Applies the Norges Bank Investment Management ethical exclusionary principles to its investment portfolio.
Trillium Asset Management	Responsible, impact investment services	Excludes from investment companies with significant involvement in producing, marketing, or distributing firearms, tobacco, gaming, nuclear power, pornography, or military weapons systems.

Veris Wealth Partners LLC	Responsible, impact investment services	Includes negative exclusionary screening regarding issues including controversial business practices (e.g. military or tobacco).
VicSuper Pty Ltd	Pension plan	Does not invest in tobacco.
Wespath Investment Management	Pension plan	Excludes companies substantially involved in industries it views as not aligned with the Church's values (e.g. alcoholic beverages, tobacco products, weapons, gambling, adult entertainment or the operation of privately operated corrections facilities).

Notes:
[†]Bâtirente is short for Comité syndical national de retraite Bâtirente Inc.
^ERAFP is short for Établissement de retraite additionnelle de la fonction publique.

Table A.11. Examples of Utility in Practice

Investor	Nature of services provided	Use of Utility
Breckinridge Capital Advisors	Diversified, specialized financial services	Used fixed-income investments to engage with governments on environmental issues such as climate change and water scarcity.
Think Outside the Box Asset Management	Diversified, specialized financial services	Advocates active management and criticizes indexers whose goal is to simply match the market, arguing that the investors role is to "make the benchmark go up."

ENDNOTES

[1] Peter Bernstein. **Capital Ideas: The Improbable Origins of Modern Wall Street** (Hoboken, New Jersey: Wiley & Sons) 2005: 120-121.

[2] Burckart, William, Steve Lydenberg and Jessica Ziegler. **Tipping Points 2016: Summary of 50 Asset Owners' and Managers' Approaches to Investing in Global Systems.** The Investment Integration Project. 2016. http://3do1ba1rp8zu3wnh9b3b8d2l.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/TIIP-and-IRRCi_FINAL_State-of-Industry_11-2-16_FINAL.pdf

[3] Adam Smith, **The Wealth of Nations** (New York: The Modern Library) Paperback edition, 2000: 484-485.

[4] See the website of the Global Impact Investing Network at https://thegiin.org/impact-investing/need-to-know/#s1 Accessed on January 5, 2017.

[5] Principles for Responsible Investment. **Sustainable Financial System: Nine Priority Conditions to Address.** https://www.unpri.org/explore/?q=nine+priority+conditions&hd=on&hg=on&he=on&sp=rel&sc=rel&se=rel&ptv=&tv=70%2C Accessed on April 21, 2017.

[6] International Corporate Governance Network. **ICGN Global Stewardship Principles** 2016:16 http://icgn.flpbks.com/icgn-global-stewardship-principles/#p=1 Accessed on April 21, 2017.

[7] The United Nations' publication **The Financial System We Need: Aligning the Financial System with Sustainable Development** (October 2015) is available at http://unepinquiry.org/publication/inquiry-global-report-the-financial-system-we-need/ (accessed on April 21, 2017) and part of an extensive series of related publications on sustainability and the financial system available at http://unepinquiry.org/?s=&post_type=publication.

[8] Herman E. Daly. Beyond Growth: The Economics of Sustainable Development (Boston: Beacon Press) 1996: 51.

[9] Op. cit: 51.

[10] Johan Rockström and Mattias Klum. **Big World Small Planet: Abundance within Planetary Boundaries** (New Haven, Connecticut: Yale University Press) 2015:64).

[11] Erik Brynjolfsson and Andrew McAfee. **The Second Machine Age: Work, Progress and Prosperity in a Time of Brilliant Technologies** (New York: W.W. Norton & Company) 2014:175-6.

[12] John Maynard Keynes. **Essays in Persuasion** (New York: W.W.Norton & Co.) 1963: 358-373. Available at http://www.econ.yale.edu/smith/econ116a/keynes1.pdf Accessed on April 21, 2017.

[13] Brynjolfsson and McAfee, op. cit.:179.

[14] Amar Bhidé. **A Call for Judgment: Sensible Finance for a Dynamic Economy.** (Oxford: Oxford University Press) 2010:116.

[15] Stephen Davis, Jon Lukomnik and David Pitt-Watson. **What They Do with Your Money: How the Financial System Fails Us and How to Fix It** (New Haven, Connecticut: Yale University Press) 2016:5.

[16] Stephen E. Cecchetti and Enisse Kharroubi. "Reassessing the Impact of Finance on Growth" Bank for International Settlements Working Paper No 381:iii. July 2012.

[17] Ibid, 1

[18] Wally Turbeville. **Towards a Performance Framework for a Sustainable Financial System** (New York: Demos; UNEP Financial Initiative) November 2016:26.

[19] Ibid, 19

[20] FMO. **Annual Report 2015**. March 21, 2016. Accessed from http://annualreport.fmo.nl on August 17, 2016.

[21] HESTA. **HESTA Reconciliation Action Plan.** ***Pg. 2.*** Accessed on June 1, 2016 from https://www.hesta.com.au/content/dam/hesta/Documents/Reconciliation-action-plan.pdf.

[22] Caisse de dépôt et placement de Québec—Enabling legislation. Available at http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/C-2 Accessed on April 21, 2017.

[23] Threshold Group "Invest NW: Place-based Portfolio Solution. Available at https://www.thresholdgroup.com/media/23827/1058_invest-nw-2-pager_0615_r1.pdf Accessed on April 21, 2017.

[24] Aviva Investors. **Responsible Investment Annual Review 2014:4-5.**

[25] PGGM "Investing in solutions (Beleggen in apossigen in Dutch)" Powerpoint presentation. February 2016.

[26] Hugh Wheelan "Anti-benchmark, Pro-ESG" **ESG Magazine.** Spring 2016. Available at http://www.tobam.fr/anti-benchmark-pro-esg/ Accessed on April 21, 2017.

[27] George Serafeim, Sakis Kotsantonis, Bronagh Ward, and Daniela Saltzman, "The Value of Corporate Purpose: C Corps, B Corps, & Benefit Corporations", Generation Foundation and KKS Advisors: 4, 13, advance copy.

[28] Jamie Butterworth and William Burckart, "There's a new industrial revolution underway", **Quartz**, accessed on April 18, 2017: https://qz.com/428534/renault-and-ibm-and-phillips-have-figured-out-how-to-make-recycling-profitable/

[29] Ibid

[30] William Burckart, Steve Lydenberg, and Jessica Ziegler, "Tipping Points 2016: Summary of 50 Asset Owners' and Managers' Approaches to Investing

in Global Systems", **The Investment Integration Project (TIIP)**. New York, NY: November 2016, accessed on April 18, 2917: http://tiiproject.com/tiiping-points-2016/

[31] William Burckart, "Making Impact Easier: How impact investing can put capital providers and seekers on the road to more investible deals", **Next Billion**, accessed on April 18, 2017: http://nextbillion.net/making-impact-easier/

[32] Ibid

[33] Maximilian Martin, "Driving Innovation through Corporate Impact Venturing: A Primer on Business Transformation," **Impact Economy** (2014): 21; "A Framework for Action: Social Enterprise & Impact Investing," **United National Global Compact** (2012): 18, accessed on April 18, 2017: http://www.unglobalcompact.org/resources/173

[34] Volans, "Investing in Breakthrough: Corporate Venture Capital", **Volans** (2014), accessed on April 18, 2017: http://archive.volans.com/wp-content/uploads/2014/05/BreakthroughCVC.pdf

[35] Volans, "Investing in Breakthrough: Corporate Venture Capital", **Volans** (2014), accessed on April 18, 2017: http://archive.volans.com/wp-content/uploads/2014/05/BreakthroughCVC.pdf

[36] George Serafeim, Sakis Kotsantonis, Bronagh Ward, and Daniela Saltzman, "The Value of Corporate Purpose: C Corps, B Corps, & Benefit Corporations", Generation Foundation and KKS Advisors: 13, advance copy.

[37] Ibid; The report defines "general public benefit" as "material positive impact on society and the environment, taken as a whole, as assessed against a third-party standard, from the business and operations of a benefit corporation."

[38] "Ibid, 4

[39] Ibid, 13

[40] "UN Global Compact, "Accenture Release Findings of Largest CEO Research Study on Corporate Sustainability," UN Global Compact", accessed April 18, 2017, URL: http://www.unglobalcompact.org/news/42-06-22-2010

[41] Ibid

[42] UN Global Compact-Accenture, "The UN Global Compact-Accenture CEO Study on Sustainability 2013," **Accenture** (2013), accessed on April 18, 2017, URL: https://www.unglobalcompact.org/docs/news_events/8.1/UNGC_Accenture_CEO_Study_2013.pdf

[43] Ibid