TIIP THE INVESTMENT INTEGRATION PROJECT

(Re)Calibrating Feedback Loops

Guidance for Asset Owners and Institutional Investors Assessing the Influence of System-level Investing

The Investment Integration Project
December 2023

Disclosures

The Tipping Point Fund on Impact Investing provided support for this research.

Design and illustration by April L. Smith.

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For more on antitrust and sustainability considerations, please see Denise Hearn, Cynthia Hanawalt, and Lisa Sachs, "Antitrust and Sustainability: A Landscape Analysis," Columbia Center on Sustainable Investment and Sabin Center for Climate Change Law (July 2023).

Table of contents

Table of contents

Figures and Tables

December 2023

The past year has brought record cross-sectoral labor unrest, fires and flooding that have devastated communities, cities, and countries, and war and conflict on multiple fronts that have destabilized entire economies and sectors. These are all systems under stress that are approaching their tipping points. The consequences take the form of climate litigation, workers upending manufacturing, and an even more complicated renewable energy landscape. These challenges are global, systemic, and accumulating. Multi-stakeholder efforts are imperative, and investors and the financial community hold incredible potential for influence. Systems are under stress and they will continue to be, unless the very feedback loops that underpin them are recalibrated.

System-level investing approaches can help to guide aspects of this recalibration. In response to market demand, TIIP launched the Build the Market Initiative in 2021 with the goals of: guiding investors in adapting conventional investment approaches and leveraging advanced techniques to better manage systemic social and environmental risks and rewards; encouraging widespread adoption of system-level investing throughout the global financial system; and facilitating broader industry reform, away from a near-exclusive focus on the short-term and toward incorporation of systemic social and environmental considerations.

TIIP has been executing a series of interrelated projects as part of this initiative, each of which aims to develop the principles and shared infrastructure pivotal to building a financial sector (including asset owners, managers, advisors, consultants, associations, regulators, and policymakers alike) that embraces system-level investing. To jump-start the effort, TIIP conducted the Industry Needs Project to determine (a) whether and how much the financial industry knows about system-level investing and (b) how to encourage and support widespread adoption of the approach. One of the primary findings was that an industry-wide embrace of system-level investing will depend, in large part, on ensuring that investors have access to frameworks for assessing their impact on systemic issues. This includes guidance on good governance, investment management, effective due diligence, meaningful reporting, and the data to support these processes.

In response to this finding, TIIP applied for funding from the Tipping Point Fund on Impact Investing (TPF) to launch the *(Re)Calibrating Feedback Loops* project. The goal of this project is to provide guidance to investors using sustainability and impact measurement frameworks to better understand the impact of their investments on society and the environment, as well as their broader influence on the social and environmental systems that make profitable investment possible and that promote global well-being. This report builds on TIIP's early thought leadership on system-level investing and related impact measurement and due diligence.[i] It is also aligned with TPF's mission of creating and supporting public goods that are critical to the continued growth and fidelity of the impact investing market.

[i] See, for example, TIIP's reports on Assessing System-Level Investments: *A Guide for Asset Owners (2020), Sustainable Investment Products and Due Diligence: Insights from Industry Experts (2020), Measuring Effectiveness: Roadmap to Assessing System-level and SDG Investing (2018), and Portfolios* and *Systemic Framework Integration: Towards a Theory and Practice (2015).*

This project supports TPF's leadership role in enabling the development of tools and resources related to impact measurement, management, standardization, and data interoperability. To do so, the report offers:

- A reintroduction to system-level investing and why it is essential for managing systemic social and environmental risks and rewards;
- Considerations for assessing the progress of system-level investing approaches including guidance for investors to align their actions with system-level goals; and
- Recommendations for the industry to continue building the marketplace for system-level investing including a call to action for data providers to help investors leverage information that is essential for assessing system-level progress.

The report's examples related to climate change and its two case studies on the systemic social issues of income inequality and racial inequity aim to focus investors on the relationship with, and the concerning impacts on, long-term investment returns. With these case studies, TIIP builds on its commitment to further cast a light on connections between systemic issues and investments. [ii]

We hope you find this guide to be a valuable resource, and we look forward to accompanying you on the system-level investing journey that lies ahead.

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[ii] See, for example, TIIP's reports on *Introduction to Racial Inequity as a Systemic Risk: Why Investors Should Care and How They Can Take Action (2023), Systemic Stewardship: Investing to Address Income Inequality (2022), Confronting Income Inequality: Practical guidance for how investors can address income inequality through action on labor relations, workers' rights, and financial and political equity (2021), Addressing systemic social risk: A roadmap for financial system action (2020)*, and *Why and How Investors Can Respond to Income Inequality (2018).*

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Lenora Suki, Senior Advisor and Consultant of Renaissouk LLC, and Chair of the project working group, helped bring together an incredible range of perspectives that served as the brain trust for the project. Her steady hand ensured that the framework and recommendations that resulted would resonate with those that identify as system-level investors as well as the broader financial community that ultimately needs to be mobilized to drive the progress envisioned here.

Ellen Carey Maginnis, a member of the working group and whose efforts to advance the practice of impact measurement and management (IMM) are potentially too numerous to list, played a pivotal role in refining TIIP's thinking. She also took pains to ensure that the framework would be aligned with—and additive to—several of the IMM innovators identified throughout this report.

Speaking of IMM innovators, the authors are indebted to the individuals and organizations that have made—and continue to make—important contributions to the field and whose work the authors hope to have reinforced. These include the Predistribution Initiative, the United Nations-backed Principles for Responsible Investment (PRI), Impact Frontiers, the Impact Management Platform, and Jon Lukomnik and James Hawley, to name just a few.

The authors would be remiss if they did not also acknowledge Steve Lydenberg and Mike Musuraca. Steve, TIIP's founder, is the author or co-author of nearly all of TIIP's reports (many of which are referenced throughout this report). Mike, a founding member of TIIP's Advisory Council, has been a driving force and co-author behind TIIP's research and guidance related to income inequality. The same could be applied to the members of TIIP's Racial Equity Working Group. The research they helped to develop served as a key component of the analysis contained here. The better the ideas, the more likely it was to have come from one of them.

Last but certainly not least, our sincere appreciation goes to the project working group and the many folks that offered their time for focus groups, one-on-one interviews, and reviews of drafts of the report. There is still much work to be done, but your collaboration and dedication suggest the path forward is bright indeed.

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Executive Summary

Systemic challenges require system-level solutions

The social and environmental challenges of the 21st century are new, different, and fundamentally destabilizing. Many of these challenges are systemic in nature; they are complex, interconnected global issues with multiple contributing factors—from climate change to income inequality and racial injustice. They affect entire economies and societies, threatening the global financial system and long-term investment returns across all asset classes. The systemic nature of these social and environmental challenges requires solutions that can fundamentally shift the paradigms of environmental, social and financial systems.

Emerging thought leadership in the industry indicates that systemic risks are increasingly important to consider as part of investment best practice. The work of CFA Institute, Jon Lukomnik and James Hawley, Duncan Austin, Impact Management Platform, UN Principles for Responsible Investing (PRI), and the Global Sustainable Investment Alliance (GSIA)—to name a few—are helping to shift the perspective beyond modern portfolio theory. These thought leaders insist that idiosyncratic, portfolio-level approaches to risk and reward are limited in scope and fail to consider externalities and system dynamics. Expanding the aperture to include systemic risks is paramount to robust management of risks and opportunities as well as differentiation in an increasingly competitive world.

As market participants, investors make decisions that can affect the economy as a whole, drive benchmarks up and down, and when it comes to their social and environmental impacts, can tip the scales either toward crisis or stability. Investors need to understand the relationship between their actions and the health of the social, financial, and environmental systems that they depend on for financial success. System-level investors recognize these risks and rewards and understand that they can adopt policies and practices and take actions that will help enhance the well-being, stability, and predictability of systems—and more, that it is in their interest to do so.

System-level investors can act as a filter for systemic risks, in which they have the potential to influence the impacts that enterprises have on systems and the dependencies of those enterprises on systems. When investors leverage the power of capital allocation to address systems under stress, the financial community has the potential to lessen the impacts of systemic risks, improve the performance of their portfolios, and enhance the health and resilience of environmental and social systems. That said, investors are one of many actors in the multi-stakeholder ecosystem that must align to mobilize their respective resources and capabilities to recalibrate the feedback loops that drive systems. From policymakers to corporates, public and private capital, civil society to central banks, the nature of systemic challenges is that they permeate and are perpetuated by all of their component pieces and players—components that, if changed across multiple dimensions, can help to shift the paradigms of those systems.

The bridge to system-level progress needs reinforcing

Significant progress in recent years on the development of industry standards and frameworks for measuring social and environmental impacts has focused on the individual investment and portfolio levels. Herein is what this report seeks to tackle:

What is the relationship between the standards and goals set by investors at a portfolio level and the overarching indicators of progress at a system level? In what ways and to what extent does the management of portfolio-level risks and rewards translate into system-level progress? In what ways and to what extent do system-level developments affect portfolio-level performance?

As a starting point, when seeking to assess progress on systemic issues, using a principles-focused framework can make space for the considerations that are core to analyzing system-level progress. These include:

- A system-level approach should be applied consistently throughout the investment process;
- Qualitative considerations are a critical complement to quantitative analysis;
- Systems have inherent worth that is greater than the sum of their parts; and
- Investors must balance the short and long term.

With those tenets in place, investors can begin to assess system-level progress in terms of determining whether there have been changes in feedback loops based on certain indicators of system health and resilience. System-level considerations can be layered onto industry standards and frameworks for impact measurement because the core components remain steadfast: setting measurable goals and objectives; clearly articulating a strategy to achieve those goals; putting policies and processes in place to execute on that strategy; defining responsibilities and governance structures to monitor activities; tracking the resulting performance and adjusting processes accordingly. A system-level approach expands the context of these activities by elevating the end goal, evaluating behaviors more explicitly in the context of system-level challenges, adjusting behaviors as needed, and constantly iterating so that all activities are advancing efforts in the same direction.

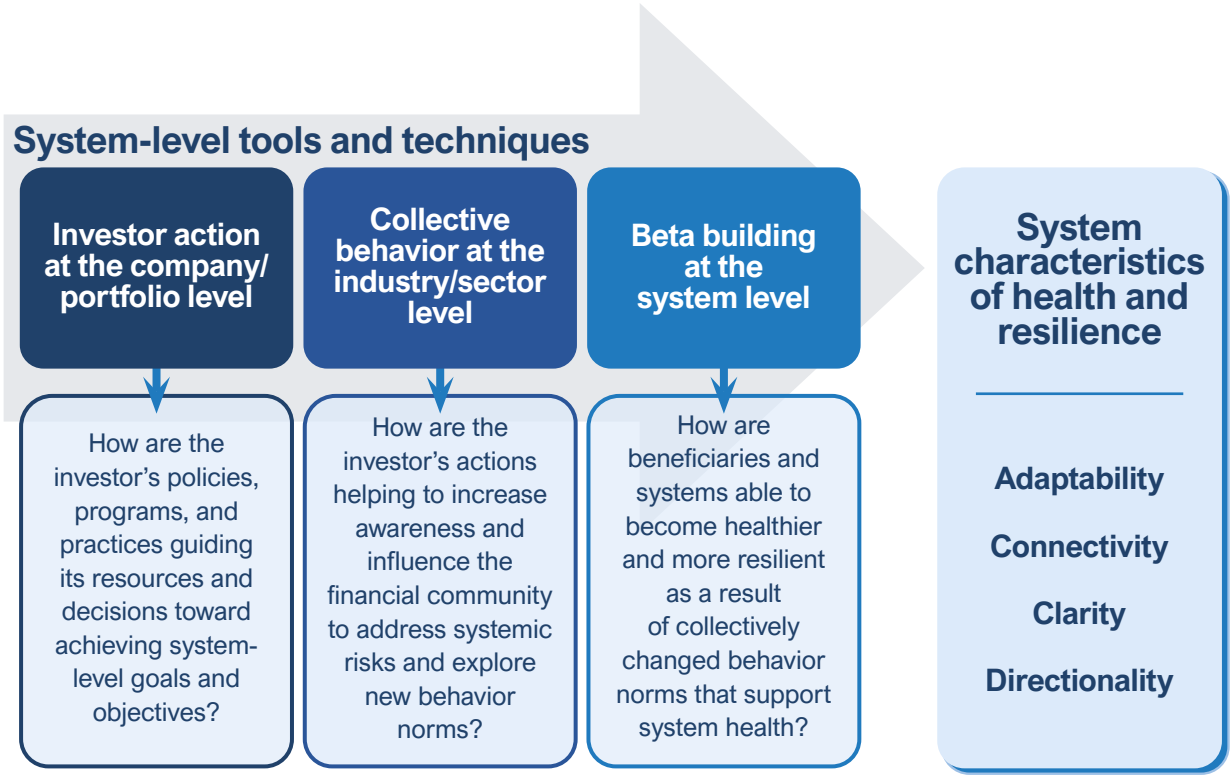
For system-level investors that have set a goal to influence the health and resilience of underlying systems, assessing their role in advancing system-level progress means looking at:

- How their own activities work to address a systemic issue;
- How they are influencing others in the financial community to address a systemic issue; and

- How certain actions may accelerate the shift of fundamental paradigms of a system (as described in the graphic below).

The purpose of analyzing investor actions in the context of system-level progress is therefore rooted in the investor's portfolio and influence on investees, as well as the investor's efforts to leverage their clout to alter the behavior of other investors, thereby fueling collective action of the financial community to achieve progress toward system-level goals.

Investors can take different types of actions to achieve system-level goals [iii]



There are a range of actions that investors can take to achieve progress toward system-level goals. The guidance that follows is designed to help investors consider the types of actions they can take to improve the stability of underlying systems. An essential component of this is ensuring that the investor's policies, programs, and practices are aligned with their overarching system-level goals—do all actions work in the direction of a healthier and more resilient system?

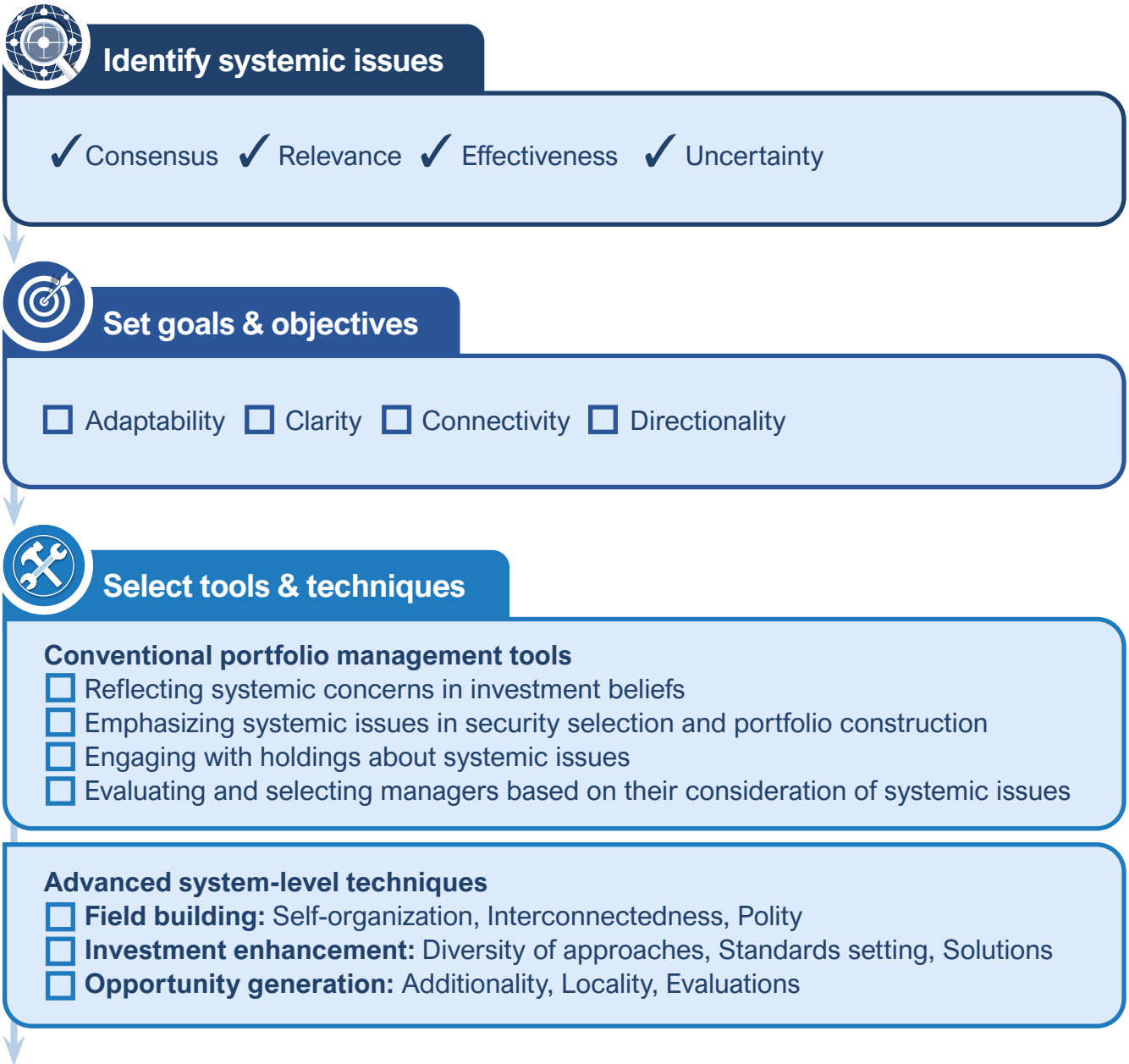
[iii] A note about our usage of the term beta: In the context of investment, beta is traditionally defined as a measure of the volatility/undiversifiable/systematic risk of "a security or portfolio compared to the market as a whole (usually the S&P 500)." Put another way, "[s]tocks with betas higher than 1.0 can be interpreted as more volatile than the S&P 500." For this report, we are borrowing Lukomnik and Hawley's definition of "beta activism," which includes a focus on the real economy and that discourages companies from creating negative social and environmental externalities that ultimately impact the resilience of the overall market.

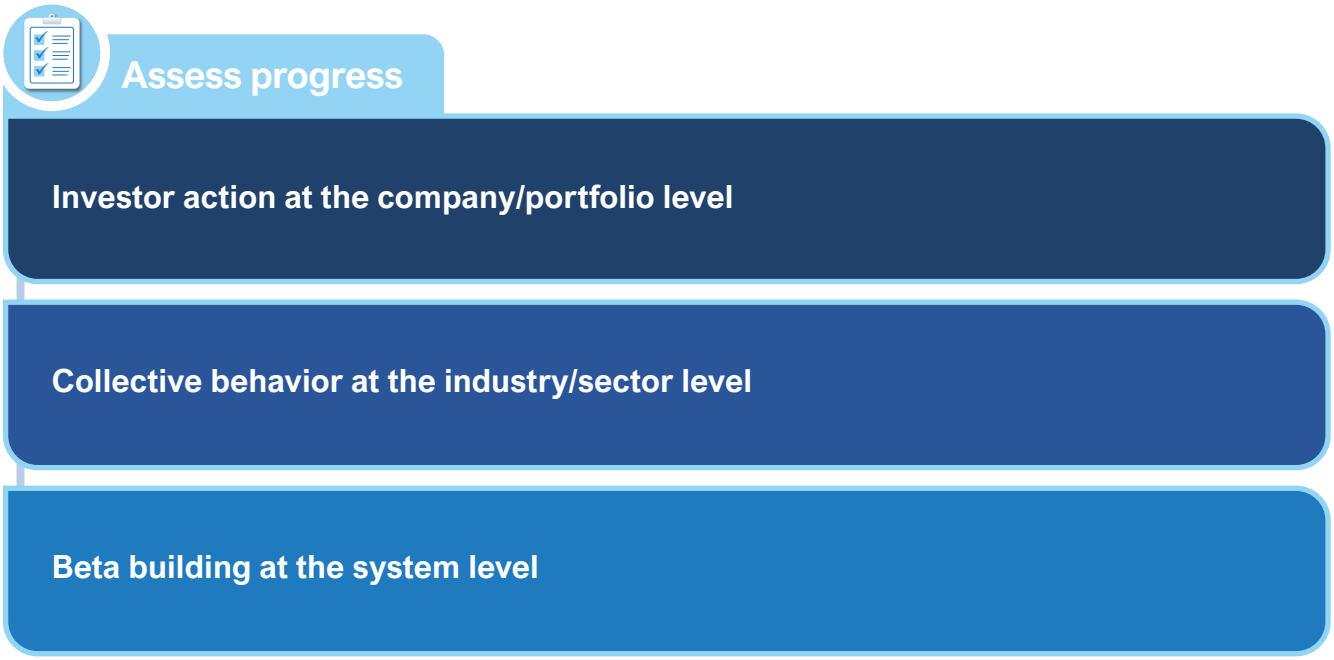
Importantly, these actions are not mutually exclusive, but rather, they are complementary. Company/portfolio-level and industry/sector-level actions can be the seeds for system-level progress. If adopted by a mass of investors or if instrumental in changing investor behaviors, these actions can create significant shifts in system dynamics.

Investors can adopt a system-level investing approach

To put a system-level investing approach into practice, investors should outline their system-level goals, strategies, and expected outcomes using a logic model or something like it (e.g., a theory of change, theory of value creation, results chain, investment thesis, or impact thesis). Such models are beneficial for informing and tracking activities aligned with the investor's objectives and should cover four areas:

Developing a systems-aligned logic model





When applied, the various dimensions relate to:

Identifying systemic issues: Choosing the systemic issues of focus aligned to the investor's priorities, expertise, capabilities, and resources, guided by the criteria of consensus about the issue, relevance to investors, potential effectiveness of investor action, and uncertainty about potential outcomes;

Setting goals and objectives: Setting specific, achievable, clearly-articulated goals and objectives for shifting dynamics toward those of healthy, resilient systems;

Selecting tools and techniques: Selecting realistic strategies and techniques that are aligned to the investor's capacities to make progress toward system-level goals and objectives; and

Assessing progress: Assessing progress made toward system-level goals and objectives at the company/portfolio level, industry/sector level, and system level.

For example, in the context of addressing the systemic issue of climate change, investors might set a goal to shift the paradigm for energy production to a diversity of sources to create a system capable of adapting to unanticipated system-level challenges. In analyzing system-level progress across different types of investor action, an investor might consider the following:

Considerations for assessing system-level progess related to energy production

Assess progress

Level of investor action	Considerations for assessing progress
Investor action at the **company/ portfolio level**	• Capital and other support provided to funds and companies providing solutions to climate change, in particular the energy system transition • Emissions tracking against portfolio- and investment-level goals (e.g., renewable energy generated, CO2 emissions avoided) • Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/opportunities • Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives • Progress tracking against system-level goals such as net zero commitments
Collective behavior at the **industry/ sector level**	• A substantial percentage of investors increasingly supply and demand climate change solutions-oriented funds and strategies • A substantial percentage of investors invest in a diverse range of renewable energy technologies across all asset classes • A substantial percentage of investors effectively reflect net zero commitments in their investment beliefs, portfolio construction, due diligence, and portfolio management • A substantial percentage of investors understand and support industry collaboration and regulatory changes to shift away from fossil fuels and advance the low-carbon transition
Beta building at the **system level**	• **Investors, corporations, and governments can adjust to shocks and major disruptions to the environment relating to climate change.** More diverse products, services, data, internal practices and external opportunities are available to help balance the system's function and adaptability to changing circumstances and external shocks. • **Asset owners can increase the potential effectiveness of their actions with multiple strategies.** Given the complexity of the current fossil-fuel-dependent economic system and its relationship to the global environment, multiple approaches and maximum mobilization of investors is needed. • **Considering additionality can help the least developed nations adapt to climate change and capitalize on opportunities to build a low carbon economy.** Financing from the private and public sectors can promote stability and resilience to climate change, while enabling economic growth with minimal reliance on fossil fuels.

This report includes a detailed illustration of the process by which investors can adopt a system-level investing approach through further elaboration of the climate change example described above, as well as case studies focused on income inequality and racial inequity. Importantly, these walkthroughs build on TIIP's foundational work on system-level investing and systemic social issues, with further guidance on how to analyze the progress of investor actions toward system-level goals.

Call to action

This report reinforces the opportunity for investors and field building organizations to continue working together to explore, test, and iterate on the practical implementation of system-level investing approaches. Establishing an ongoing community of practice around system-level investing will enable better industry alignment around the development and communication of key concepts, definitions, best practices, and interoperability of standards. With these efforts in progress, the financial community can evolve its understanding of systemic risks and how those risks affect portfolios, how to better manage those risks, and how to leverage their investments and investor influence to shift the paradigms of systems under stress. Here also presents an opportunity for industry associations to leverage the power of their member bases to identify signals of success where system-level investing actions are gaining momentum in shifting system dynamics.

In particular, the findings of this project reinforce the need for more robust data to be leveraged in the evaluation of system-level progress. Understanding the coverage of these data sources is a core part of identifying what is currently being measured, and critically, where there are gaps in data coverage, particularly as it relates to systemic risks. The implications for data providers as more progress is made on this front are coming into view, including further work in areas such as investor contribution, materiality, and pricing externalities.

Solving for the above, and applying the framework presented in this report, will contribute to increased interoperability of tools. It will also help the industry better fulfill the promise of system-level investing as a force for calibrating—or recalibrating as the case may be—the feedback loops between investors, the financial sector, and overarching social, financial and environmental systems. In doing so, investors will help to ensure that their investments intentionally support the health and resilience of crucial systems, reduce systemic risks, and promote opportunities for all.

Part I: Introduction [iv]

Expanding the aperture

Best practice in investment typically focuses on risks and rewards at the company and portfolio level. More than ever before, investors are adopting sustainable and impact investing to manage the risks that environmental and social challenges pose to investment, increase value over the long term, and express their beliefs. They are increasingly recognizing the social and environmental impacts of specific investments, designing their portfolios accordingly, and seeking Environmental, Social, and Governance (ESG) benefits alongside financial return. While sustainable investing widens the aperture of conventional investing to include environmental and social considerations, it remains relatively contained to individual investments and portfolios.

Modern portfolio theory assumes that systemic risks—those inherent in the market or in an asset class as a whole—are beyond the ability of investment professionals to influence or control. Managers therefore should not be penalized, or given credit, for portfolio losses or gains due to the "systematic" rewards or risks of the market as a whole, but only for their own "idiosyncratic" contributions to their portfolios' performance, positive or negative, relative to that of the market. Yet, fortifying the health of the systems that underlie the market is actually one of the greatest sources of overall absolute performance for investors. Hawley and Lukomnik claim:

> *Perhaps the biggest theoretical failing of modern portfolio theory is the assumption that the non-diversifiable risk of an investor's investments—the effects of market crises, global warming, political risk and other systemic issues—affect an investor's investments, but is unaffected by those same investments...The irony is that more than 90% of the variation of return an investor will receive is explained by the return from the risk profile of the universe of securities they are invested in and not by the stock selection undertaken by the asset manager. So you would think that affecting the overall risk of the market would be where the asset management industry would focus so as to have the biggest risk mitigation impact.*[1]

In the context of global social and environmental challenges, it is important to recognize the limitations of portfolio-level approaches that do not give ample weight to risks and rewards at a system level. As market participants, investor make decisions that can affect the economy as a whole, drive benchmarks up and down, and when it comes to their social and environmental impacts, can tip the scales either toward crisis or stability.

[iv] This section draws from the report "Portfolios and Systemic Framework Integration: Towards a Theory and Practice," authored by Steve Lydenberg (2015). For more of an elaborate treatment on the key points covered here, see https://tiiproject.com/wp-content/uploads/2016/11/TIIP_Portfolios_and_Systemic_Framework_Integration_Exposure_Draft.pdf.

Investors need to understand the relationship between their actions and the health of the social, financial, and environmental systems that they depend on for financial success. System-level investors recognize these risks and rewards and understand that they can adopt policies and practices and take actions that will help enhance the well-being, reliability, and predictability of systems—and more, that it is in their interest to do so.

Externalities cannot be ignored

Duncan Austin pointedly articulates that we are trapped in a system of externality- or consequence-denying capitalism such that billions of daily investment and consumption decisions ignore certain of their social and environmental consequences. While markets can be beneficial, they only are such if all costs are recognized. Thus, the core flaw in our socio-economic system is that our profits are not fully costed—it does not properly internalize large and known externalities.[2] He writes:

> *Externality-downplaying economics promotes various ideas – 'trickle-down', 'rising tide lifts all boats', 'win-win', 'green growth' etc. – that are all variants of the same basic attitude: whatever the problem, more growth is surely the answer. But if the measurement of growth is externality-denying, then the growth that is meant to solve problems may simply create more of those problems along the way. Externality-denying growth may rebound or backfire to become not the solution but the driver of various social and environmental harms.*[3]

With large externalities, the market system is no longer a good model of reality, and the authority of its externality-denying state invites social and environmental dysregulation and runway.[4] This can be visualized in a "fixing" Invisible Hand connected to a "failing" Unmentionable Foot:

Source: "The Unmentionable Foot," Both Brains Required, Duncan Austin and Matt Tweed.

A solely market-led approach that excludes externalities risks losing perception of the whole picture, in which participants can only see what is priced. Sustainable investing endeavors to illuminate certain social or environmental challenges that market pricing fails to recognize, but factoring in these considerations remains limited because they have yet to be regulated or formally priced as costs.[5] Pricing externalities will require measuring both pecuniary (immediate, monetary cost attributable to the externality) and non-pecuniary ('real' costs that are neither immediate nor have immediate costs) impact.[6] Putting a price on system-level sources of long-term wealth creation and societal and environmental value is often challenging, which is when qualitative assessment is a useful complement—identifying the environmental, societal and financial system-level characteristics that generate the stability and predictability necessary for successful long-term investment.

Related, reflecting this thinking in reporting disclosure and regulation will require an expanded definition of materiality that goes beyond the narrow focus of financial materiality, as there are multiple approaches to thinking about materiality. Where financial materiality refers to factors that influence enterprise value, impact materiality refers to factors that affect the economy, environment, and people. The concept of double materiality proposes a two-pillar approach that considers financial and impact materiality.[7] Further nuances included in definitions of dynamic and system-level materiality call for a shift away from causal, one-way relationships to more dynamic, feedback loops that better reflect the complexity of financial, environmental, and social systems. A more holistic definition of materiality and fiduciary duty is essential for investors to be more aware of thresholds for system stress, such that assigning value to externalities is a means for quantifying not only positive activities but also for positioning against thresholds that, if breached, threaten systems altogether.

While ignoring externalities poses potentially significant danger, it is also important to acknowledge that many participants benefit from these externalities and are incentivized to maintain their inefficiencies. For example, David Weil argues in *The Fissured Workplace* that large, global firms are adopting an increasingly common corporate approach called "fissuring" in which a number of business functions—such as manufacturing of products or components, human resource services, or security and janitorial work—have become price-oriented functions sub-contracted to low-cost third-party providers. According to Weil, this fissuring, based in part on an effort to reduce costs and utilize new technologies to ensure production quality and coordination, have driven an erosion in labor standards and a rise in income inequality.[8]

In many cases, fissuring leads to large, global producers and retailers becoming unaware of and uninterested in the identities of the subcontractors throughout their supply chains, breaking connections that would lead them to properly manage their labor practices. Systemic labor abuses can easily result in and increase exposure to corruption, potential entanglement in criminal regimes, and an inability to drive benefits to the most vulnerable workers—all conditions that exacerbate inequality. Striving for efficiency above all else at the portfolio level can often lead investors to collapse many types of value into a single price and pursue the "business case" for consideration of environmental, societal or financial system-level issues, disproportionately emphasizing the short term.

Specific to the financial sector, the financial crisis of 2008 clearly illuminated the way that systemic risks threaten investments—severely affecting the economies of most of the developed and much of the developing world and devastating the portfolios of managers worldwide. The crisis also provoked debate about the role of financial institutions as catalytic agents. Among the frequently cited contributing factors attributable to investors were excessive use of leverage, the creation of an unregulated shadow banking system, the aggressive marketing of complex and inadequately understood financial products, and poor risk management. Macroeconomic factors—such as the availability of easy credit because of low-interest policies by central bankers—were also arguably key contributing factors, but the investment community with its highly sophisticated practices played a crucial destabilizing role.

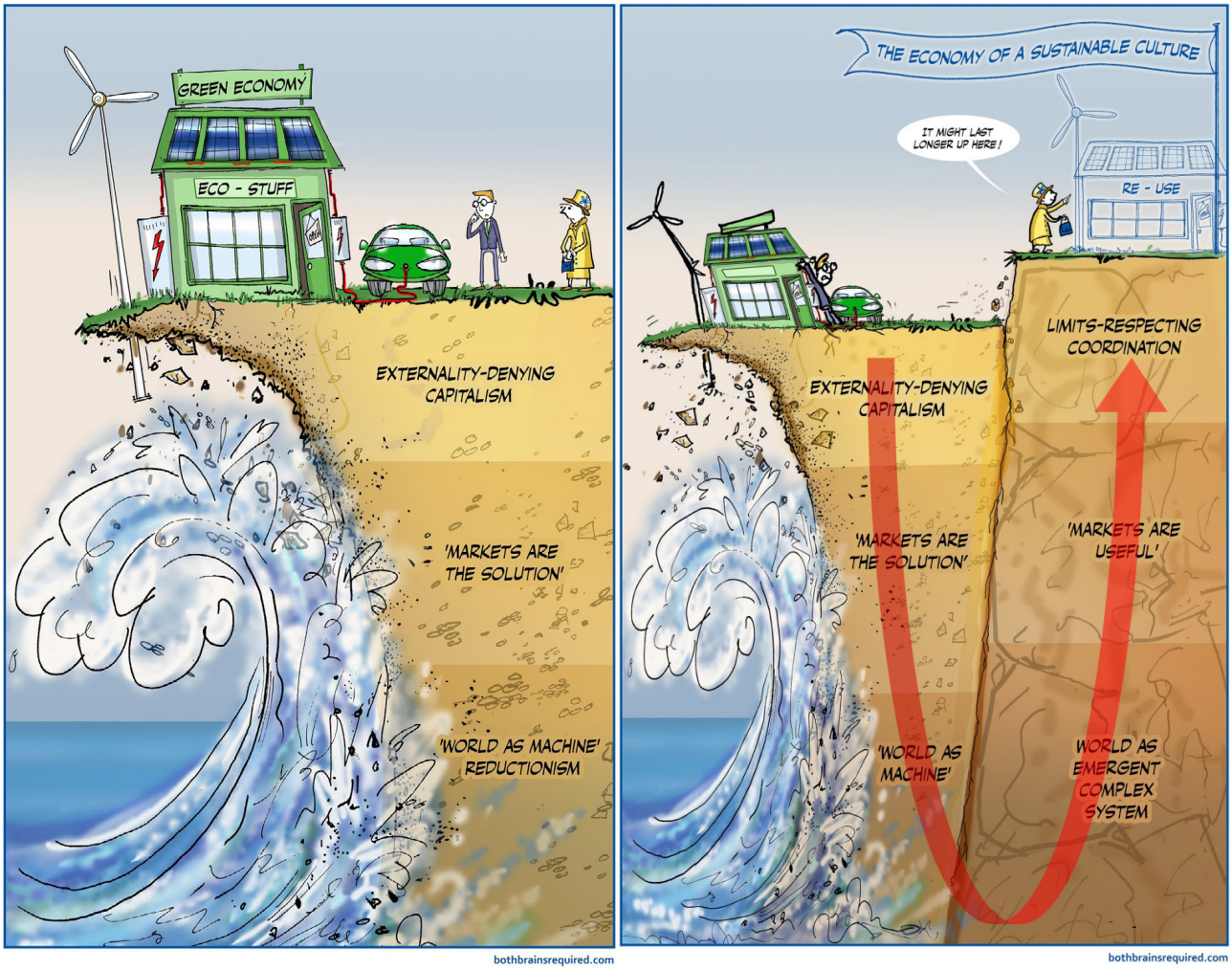
A similar case can be made for environmental and social systemic risks. In October 2015, for example, Preventable Surprises published *Institutional Investors and Climate-Rated Systemic Risk*. The report's authors, Howard Covington and Raj Thamotheram, found that a systemic risk to all portfolios due to general economic damage from climate change could result in a wide range of losses for institutional investors and that "investors should do what they reasonably can to prevent this outcome now." Using a "broad-brush view" and recognizing that estimates are highly uncertain of both what the actual increases in global temperatures would be by 2100 and what actual damages to the economy would result as a consequence, the authors found that "detailed analysis . . . suggests that the probability that warming by 2100 will be enough to produce damage of 50% [to the global economy] is 3%." At that level, they estimated "a portfolio value impairment of around 10%"—or a net overvaluation of $7 trillion to the world's equity markets at their current $70 trillion level. They also estimated the chances of damage to the global economy of 25 percent at 12 percent, with a corresponding overvaluation of all portfolios of five percent—which is, they point out, a material risk. To minimize such possibilities, the authors advocated "forceful stewardship" in order "to change company behavior directly." Forceful stewards are envisioned as "a group of investors who are willing to take first-mover role, propose resolutions and lobby other investors to support them," as well as to engage on public policy matters.[9]

Similarly, in 2014 the Cambridge Centre for Risk Studies published a report on the likely effects of social unrest—which it characterized as a systemic risk of increasing likelihood in the 21st century—on economic development and investment performance. Under three different scenarios of increasing severity, it projected the effects of social unrest on investment performance by asset class and in different geographic regions over a four-year period. For equity portfolios in the United States, it estimated hits of a negative 1.76 percent under the least severe of the three scenarios and of a negative 22.69 percent under the most severe.[10] "What is different and new about the episodes of civil disorder in the early 21st century" the report stated, "is their *systemic nature*: multiple countries simultaneously expressing dissatisfaction and seeking change." [emphasis added]

The report singles out youth unemployment among the millennial generation as a likely source of this systemic unrest. Lack of opportunity for many while small segments of the population accumulate great wealth has prompted high-profile concerns about inequality of income and opportunity around the globe.

Bridge to a new paradigm

A system-level approach to these environmental and social challenges requires an internalization of sustainability as a property of the whole, rather than of the parts. The bedrock on which we create lasting solutions must itself be made stable:



Source: "Crumbling Foundations," Both Brains Required, Duncan Austin and Matt Tweed.

Building this bedrock requires a bold yet transition-oriented approach, recognizing that investors continue to operate in existing paradigms. Investors and the financial community are just one component of a broader multi-stakeholder ecosystem—yet this also must not be reduced to a collective action problem. Systemic risks in and of themselves demonstrate the consequences of inaction should investors choose not to act in alignment with global imperatives to pursue climate mitigation and adaptation, financial well-being, racial justice, and more.

A system-level investing approach does not suggest that all participants jump ship to a new paradigm at once—rather, it recommends that we identify where cracks in the current foundation exist, introduce new models and habits that strengthen the foundation rather than put pressure on its cracks, and innovate on more holistic and top-down approaches to solving these environmental and social challenges at their core.

Leading investment groups continue to impel investors toward a system-level approach to sustainability assessment. Financial industry regulators, for example, have issued guidance for investors to address systemic risks. The Financial Reporting Council's UK Stewardship Code 2020, which went into effect January 1, 2020, directs investors to *"identify and respond to market-wide and systemic risks* to create "long-term value… leading to sustainable benefits for the economy, the environment, and society."[11] [Emphasis added]

PRI has asked its investor-members to pursue what it calls "Active Ownership 2.0," stressing the importance of investors' stewardship of their assets broadly and the crucial role of collaboration among investors in that stewardship. Regarding system-level challenge, PRI is explicit:

> *Systemic issues require a deliberate focus on and prioritization of outcomes at the economy or society-wide scale. This means stewardship that is less focused on the risks and returns of individual holdings, and more on addressing systemic or 'beta' issues such as climate change and corruption. It means prioritizing the long-term, absolute returns for universal owners, including real-term financial and welfare outcomes for beneficiaries more broadly.*[12]

Investors of all types are evaluating and adjusting the way they engage in stewardship.[13] The motivating factors for this change are many, but largely revolve around four key areas: value generation, increased demand for investor transparency and hands-on fiduciary duty, and a greater overall market focus on environmental, social, and governance considerations.[14] CFA Institute, GSIA, and PRI released guidance in November 2023 that seeks to harmonize definitions and establish the practice of stewardships as:

> *The **use of investor rights and influence** to protect and enhance overall long-term value for clients and beneficiaries, including the common economic, social, and environmental assets on which their interests depend… Investor influence does not constitute stewardship unless it is used to protect and enhance overall long-term value for clients and beneficiaries. Using influence to promote short-term performance or the performance of individual companies, industries, or markets, without regard to overall value, does not constitute stewardship.*[15] *[Emphasis added by TIIP]*

By taking what TIIP calls a broadly conceived "systemic stewardship" approach, investors can expand a traditional view of stewardship as the safe-guarding and nurturing of assets, to include the concept of investors' intentional commitments to preserve and enhance the fundamental social and environmental systems that underpin the wealth-creating potential of these assets. Systemic stewardship acknowledges investors' obligations to manage the financial worth of their portfolios but also calls on them to mitigate risks to underlying systems. This form of stewardship benefits all investors not through short-term wealth extraction at the expense of systems, but through intentional investments that protect all investors' long-term wealth-creating potential.

Managing System-Level Risks is Aligned with Fiduciary Duty[16]

By definition, system-level risks are non-diversifiable and result in cascading effects for the economy and financial system. In other words, system-level risks (such as climate change, biodiversity collapse or social instability) pose financially material risks to investor portfolios. Therefore, if certain systemic issues pose risks to achieving financial investment objectives, investors generally have a legal obligation to consider how it can mitigate that risk.

System-level risks, costs, and opportunities are often invisible to fiduciaries that focus exclusively on short-term returns or evaluate investments against a market-relative performance benchmark. And yet, system-level risks and their impacts can spread across portfolios and compound over time, potentially increasing risks and degrading returns. Fiduciary duty therefore includes the duty of impartiality to balance intergenerational risks and use longer time horizons that connect investment processes with the timelines of beneficiaries across multiple generations. Commentary on the proposed U.S. Department of Labor rules seeks to highlight such overlooked dimensionality of fiduciary duty.[17]

In addition to mitigation, investors can also participate in the creation of healthier systems over the long-term by addressing the drivers of these systemic risks. Approaches could include capital allocation, stewardship with investees or engagement with policy makers to reduce investment risk and pursue positive paradigm shifts in the functioning of underlying social and environmental systems.

Read more about investors' fiduciary duties to pursue sustainability outcomes in the Legal framework for impact work, a joint project between by PRI, UNEP FI, the Generation Foundation, and Freshfields Bruckhaus Deringer.

Toward a system-level investing approach

The social and environmental challenges of the 21st century are new, different, and fundamentally destabilizing. Many of these challenges are systemic in nature; they are complex, interconnected global issues with multiple contributing factors. They affect entire economies and societies, threatening the global financial system and long-term investment returns across all asset classes.[18]

The systemic nature of these social and environmental challenges requires solutions that can fundamentally shift the paradigms of environmental, social and financial systems. A system-level approach is a way for investors to more holistically understand their impact on underlying systems and determine how they can, both individually and as a collective financial community, strengthen these systems to achieve competitive returns, increase value over the long term, and support global sustainability. Whereas many sustainable investing approaches focus on environmental and social factors in so much as they relate to the performance of specific companies or portfolios, a system-level investing approach seeks to influence the health and resilience of systems themselves.

It can be helpful to think about system-level investing vis-à-vis conventional and sustainable investing. Conventional investment approaches focus on assessing risk and reward in the context of individual securities and diversifying investment portfolios to maximize returns. They do not intentionally consider environmental or social risks or the impact that investors have on environmental or social issues, instead leaving such issues to be sorted out through market efficiency and by governments.[19] Sustainable investment approaches integrate environmental and social considerations into security valuation and risk management, but typically only insomuch as these issues materially impact company or portfolio performance.[20] Whereas sustainable investors may ask, “What are the carbon emissions and working-condition consequences on our investment?”, system-level investors consider “What can we do to minimize the risks of climate change globally and prevent abusive labor throughout all supply chains?”

That said, there are range of investment approaches that blur the lines between these categories including ESG integration, responsible investing, and impact investing—all of which consider environmental and social considerations in addition to financial returns to varying degrees.[21] Universal ownership and beta stewardship bridge to system-level thinking in the context of whole-economy performance and long-term value creation as ethical obligations of an asset owner.[22] Despite the nuances, each of these approaches represents recognition of the concept that investments have an influence on the world at large and that systemic risks are not to be ignored. Together, they demonstrate that investing can be managed to benefit society and the environment while reducing risk. They also represent various on-ramps to system-level investing.[23]

Portfolio management should include systemic risks

Emerging thought leadership in the industry indicates that systemic risks are increasingly important to consider as part of investment best practice. The work of CFA Institute, Jon Lukomnik and James Hawley, Duncan Austin, Impact Management Platform, PRI, and GSIA—to name a few—are helping to shift the perspective beyond modern portfolio theory, insisting that idiosyncratic, portfolio-level approaches to risk and reward are limited in scope and fail to consider the nuances of externalities and system dynamics. Expanding the aperture to include systemic risks is paramount to robust management of risks and opportunities as well as differentiation in an increasingly competitive world.

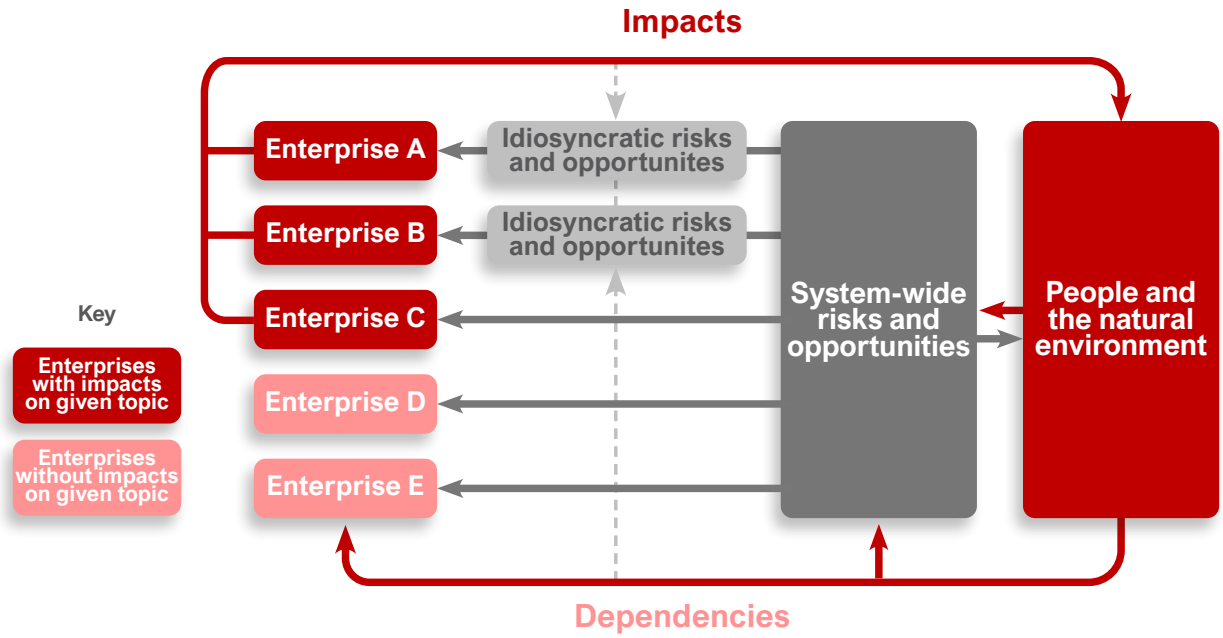
In a recent report titled *The Imperative for Impact Management*, the Impact Management Platform explicitly bridges the gap between portfolios and systems, arguing that impact management is a necessary starting point in the management of system-wide risk, in addition to entity-specific risk, and therefore should be practiced by all organizations. The Platform has garnered consensus around the definition of several key terms, which are essential for framing the interplay between portfolio- and system-level risk management.[24]

- **Impact management:** The process by which an organization understands, acts on and communicates its impact(s) on people and the natural environment, in order to reduce negative impacts, increase positive impact(s) and ultimately achieve sustainability and increase well-being.

- **Idiosyncratic risk:** Risks that are specific to individual entities. Idiosyncratic sustainability-related risks may arise from an entity's current or future impacts or dependencies (e.g., reputational, regulatory, operational risks) or they may result directly from system-wide environmental and social risks (e.g., physical and market risks).

- **System-wide risk:** umbrella term to denote (1) non-diversifiable risk originating from the market's systematic dependencies on environmental and social resources (also "systematic risk") as well as (2) any major disturbance in environmental and social systems that results in cascading effects for the economy and financial system (also "systemic risk").

Figure 1. Impacts (on a given topic) matter not only when they result in idiosyncratic risk, but also because they can contribute to systemic risks (and opportunities)



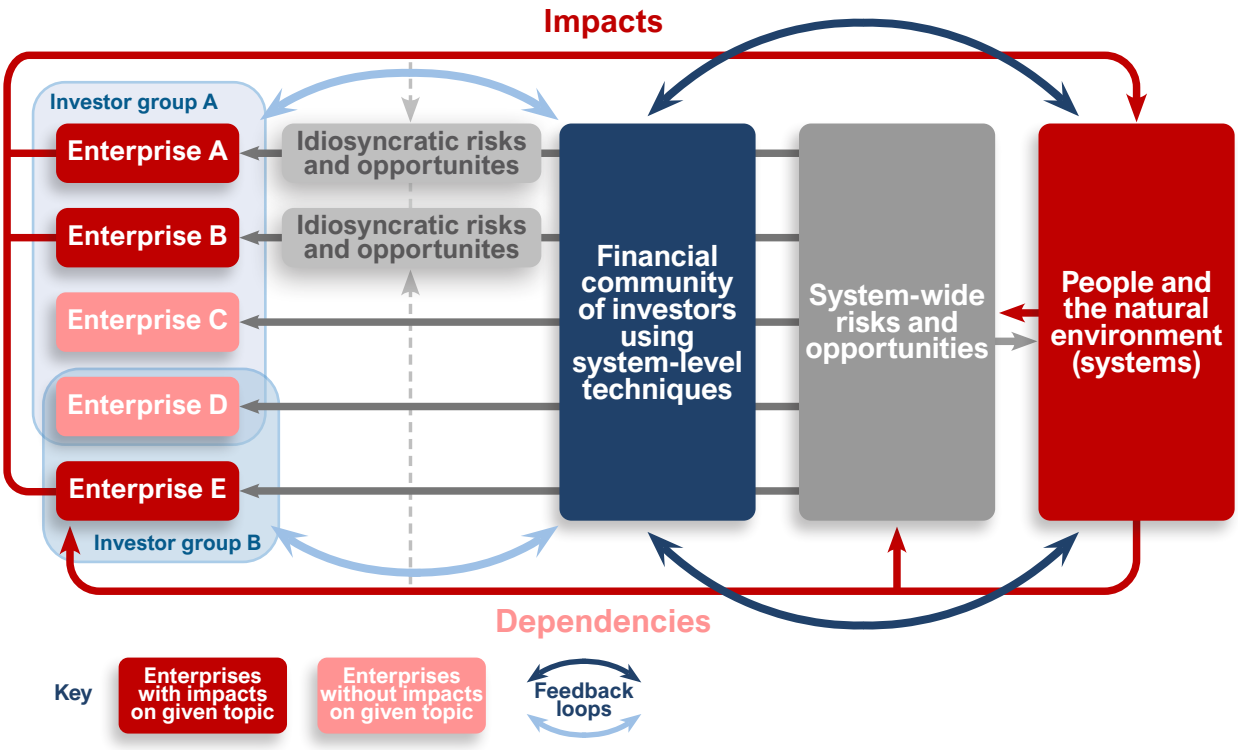
Source: The Imperative for Impact Management, Impact Management Platform.

The Platform notes that without adequate impact management, which starts with a thorough and holistic process of identifying potential impacts, investors may not be aware of the state and sustainability of their resources, and thus the risks and opportunities that may originate from them. The entire spectrum of potential impacts should be on the radar, even if they have not yet been deemed financially material:

> *What remains underappreciated is the fact that an approach that is exclusively focused on the management of idiosyncratic risk is also insufficient because impacts represent contributions to system-wide risks and opportunities, even when they do not (yet) pose quantifiable entity-specific risks. All economic activity as we know it is permanently embedded within and dependent on environmental and social systems, as many academic economists have pointed out. As a consequence, enterprises, investors and financial institutions depend on the viability and stability of these environmental and social systems for their sustained financial performance.*[25]

In short, the impacts generated by organizations give rise to idiosyncratic risks and contribute to the accumulation of system-wide risks. Thus, the mainstreaming of impact management that includes system-wide risks in addition to idiosyncratic risks is critical to securing sustainable environmental and social outcomes, and to optimize the market's capacity to manage risks and opportunities as a whole.[26]

Figure 2. Adaptation of the Platform's idiosyncratic and system-wide risk graphic to include investors and the financial community as critical actors and contributors



Source: Adapted from The Imperative for Impact Management, Impact Management Platform.

The above adaptation illustrates how system-level investors can act as a filter for systemic risks, such that they have the potential to influence the impacts that enterprises have on systems and the dependencies of those enterprises on systems.

This influence is due in large part to the substantial size of the financial services industry, in which investors hold responsibility as financial stewards, often managing capital on behalf of others. These institutions have a fiduciary duty to manage assets and can do so with a range of approaches. When investors adopt a system-level investing approach, they pursue an opportunity to expand the expectations of fiduciary duty as stewards of not only capital but also environmental and social health and well-being. This expanded lens dually recognizes the multi-stakeholder ecosystem in which investors are one component—from policy and voters, private and public capital, corporates and enterprises, civil society, and regulators and central banks. With system-level investors leading one vector of change, the financial community has the ability to lessen the impacts of systemic risks, improve the performance of their portfolios, and enhance the health and resilience of environmental and social systems.

On terminology, PRI similarly concludes that many investors recognize that financial returns depend on the stability of social and environmental systems—moreover, institutional investors have a responsibility to consider whether such system-level risks are relevant to their ability to meet their legal obligations and objectives and, if so, how they can mitigate these risks. PRI defines "sustainability outcomes" as those that:

- must be addressed for economies to operate within planetary boundaries, such as climate change, deforestation, and biodiversity loss;
- must be in place to drive inclusive societies, such as human rights (including decent work), diversity, equity, and inclusion; and
- are needed in corporate cultures to ensure sustainability performance, such as tax fairness, responsible political engagement, and anti-corruption measures.

This shift toward more holistic framing of investment risk and reward is significant. The shift in awareness and action to address systemic issues has been at the core of TIIP's work since its founding nearly a decade ago—developing market insights, tools, and resources to articulate and advance the theory and practice of system-level investing and demonstrate that systems under stress produce systemic risks. Fortunately, adopting a system-level investing approach will help investors recognize the impacts of systemic risks on their portfolios and provide guidance for adopting policies and practices to reduce these risks and create healthier systems in the long-term.

Part II: Considerations for Assessing System-Level Progress[v]

Core to evaluating system-level progress is determining whether there have been paradigm shifts across the four indicators of system health and resilience—adaptability, clarity, connectivity, and directionality (all of which are explored further in this report). However, given that these characteristics were delineated to reflect the dynamic, complex nature of systems, there is some inherent tension with the desire for precise, quantifiable attribution of investor action. Thus, this report offers guidance for investors to consider the different components that are needed to assess their role in advancing system-level progress.

Core tenets for assessing system-level progress

As a starting point, it can be helpful to use a principles-focused framework, which makes space for several considerations that are core to assessing progress at the system-level. Using a framework based on principles "provides guidance for making choices and decisions, is useful in setting priorities, inspires, and supports ongoing development and adaptation."[27]

Whereas accounting approaches are effective for verifying the financial stability of an organization, such approaches are not purpose-built for assessing an organization's impact on characteristics of social and environmental systems. Approaches such as impact-weighted accounts seek to bridge this divide by advocating for accounting statements that transparently capture external impacts.[28]

A principles-based approach includes assessing consistency of purpose, effectiveness of actions, and progress toward system-level social and environmental goals. There are four core tenets to keep in mind when evaluating system-level impacts:

1. **A system-level approach should be applied consistently throughout the investment process.** Investors must consider context beyond the output and outcomes of their portfolio holdings. To achieve consistency, and therefore results that are systemic and holistic, investors need to ensure the alignment of their objectives to their investment decisions and be able to track the progress of their actions.

2. **Qualitative considerations are a critical complement to quantitative analysis:** Systemic social and environmental challenges are full of uncertainty and unpredictability that go beyond portfolio-level risk controls and diversification. For these systemic impacts, qualitative judgement—and the flexibility to make adjustments based on those judgments—need to fill that gap.

[v] This section draws from the report "Assessing System-Level Investments: A Guide for Asset Owners," authored by Steve Lydenberg and William Burckart (2020). For more of an elaborate treatment on the key points covered here, see https://tiiproject.com/assessing_system_level_investments/.

3. **Systems have inherent worth that is greater than the sum of their parts:** The economic value of complex social and environmental systems plays out over long timeframes and is difficult to capture in a quantifiable price. Pecuniary and non-pecuniary impacts must be considered together when seeking to put a price on externalities.[29] Due to these interconnections, summing the value of individual parts of the system will not equal the worth of the system as a whole.

4. **Investors must balance the short and long term:** Investors must balance the short term with the long term to ensure a reasonable degree of alignment and stability within social and environmental systems. An optimal balance exists between system efficiency and effectiveness and flexibility and resilience—what ecological economists refer to as an "inherent push-pull tradeoff."

For more detail on each of these four tenets, refer to **Appendix B: A Principles-Based Framework for Evaluating System-Level Progress.**

Building on industry standards and frameworks

One of the primary components of sustainable investing (broadly defined) is tracking social and environmental progress at the company and portfolio level. Impact management best practices take it a step further and ask investors to track progress against their goals and objectives, report those outcomes to stakeholders, and make improvements where possible—requiring alignment between external impact and outcomes and internal processes and practices. Ensuring accountability and transparency of reporting requires that an investor has built robust infrastructure for aligning goals and objectives, investment strategy and activities, resulting impact performance, and communications.

A suite of standards and frameworks, disclosure guidelines, and metrics for company and portfolio level impact measurement have been developed to support these best practices. These efforts include ESG and sustainable investing frameworks from PRI and Institutional Limited Partners Association (ILPA); norms and consensus developed by the Impact Management Project and Impact Frontiers; and impact management standards including the Operating Principles for Impact Management (OPIM) and SDG Impact Standards. Together these tools have pushed the industry toward more holistic, consistent, and transparent approaches to sustainable and impact investing.

Supporting the aforementioned process-oriented frameworks are a number of disclosure frameworks and metrics for tracking environmental and social considerations including the Global Reporting Initiative (GRI), International Sustainability Standards Board (ISSB), IRIS+, and the UN Guiding Principles Reporting Framework; and corporate sustainability rating agencies such as KLD Research & Analytics and Innovest (both acquired by MSCI), Vigeo/EIRIS (acquired by Moody's), Trucost (now part of S&P Global), and Sustainalytics (owned by Morningstar).

These tools seek to provide quantifiable, comparable performance indicators for environmental and social factors that are aligned with global goals such as the SDGs and net zero. IRIS+, for example, which is managed by the Global Impact Investing Network (GIIN), helps investors "measure, manage, and optimize their impact" by providing "generally accepted Core Metrics Sets" accompanied by dozens of sustainability indicators applicable to a portfolio's holdings that can be rolled up into a portfolio impact score. Notably, best practices are also moving quickly to include verification by firms such as BlueMark, which conducts in-depth third-party assessments of an investor's reporting, intentions, and actions to evaluate their transparency and consistency, and provide peer benchmarking. Related, the International Auditing and Assurance Standards Board (IAASB) recently released the draft International Standard on Sustainability Assurance (ISSA) 5000 for public consultation, which will serve as a comprehensive, stand-alone standard for sustainability assurance engagements and will complement the work of several aforementioned standards.

Many of these frameworks have some degree of coverage of systemic issues—PRI's integration of systemic issues in reporting requirements for signatories; ILPA's integration of climate and diversity, equity, and inclusion (DEI) factors into their ESG framework; the SDG Impact Standards connecting internal processes and governance structures to the SDGs; ISSB's consolidation of SASB, TCFD, and CDSB reporting disclosures; the merger of The Taskforce on Inequality-related Financial Disclosures (TIFD) and Taskforce on Social-related Financial Disclosures (TSFD); various thematic filters in the IRIS+ metrics library; and more. And yet, as is aligned with current investment practices, these frameworks remain focused primarily on outcomes at the company and portfolio level. So, what will it take to augment these tools at the system level?

We propose that a system-level approach can be complementary to existing impact management tools because the core components remain steadfast: setting measurable goals and objectives; clearly articulating a strategy to achieve those goals; putting policies and processes in place to execute on that strategy; defining responsibilities and governance structures to monitor activities; tracking the resulting performance and adjusting processes accordingly.

A system-level approach expands the aperture across each of these activities by elevating the end goal, evaluating behaviors more explicitly in the context of system-level challenges, adjusting behaviors as needed, and constantly iterating so that all activities are advancing efforts in the same direction.

Part III: Introducing Further Guidance for Assessing System-Level Progress [vi]

Assessing progress at the system-level requires an expansion of context and guidance, not dissimilar from how impact management, which focuses on impact processes in addition to impact performance, expands the scope of impact measurement, which focuses primarily on impact performance or outcomes.

For system-level investors that have set a goal to influence the health and resilience of underlying systems, evaluating their role in advancing system-level progress means looking at how their own activities work to address a systemic issue; how they are influencing others in the financial community to address a systemic issue; and how certain actions may accelerate the shift of fundamental paradigms of a system.

By design, system-level investing goes beyond portfolios, individual investments, and individual investors. Thus, the goal of aligning an investor's actions to changes at the system-level is not necessarily attribution. Whereas impact management takes into account an investor's positive and negative impacts on end-stakeholders and the natural environment—with attribution possible for an investor's contribution to positive impacts[30]—assessing investor influence on broader financial, environmental, and social systems cannot endeavor toward such attribution. The purpose of assessing investor actions in the context of system-level progress is therefore rooted in the investor's portfolio and influence on investees, as well as the investor's efforts to leverage their clout to alter the behavior of other investors, thereby fueling collective action of the financial community to achieve progress toward system-level goals.

Aligning individual, collective, and system-level actions

Assessing progress toward system-level goals requires looking at changes in investor behavior and changes in system health. Recognizing the challenge of pricing externalities and system health writ large, investors can evaluate how they have helped to increase awareness of, and have mobilized collective action to address, systems under stress. In doing so, system-level investors can begin to see signals of how system dynamics might be shifting in response to momentum generated by collective action.

vi This section draws from the report "Measuring Effectiveness: Roadmap for Assessing System-level and SDG Investing," authored by William Burckart, Steve Lydenberg, and Jessica Ziegler (2018). For more of an elaborate treatment on the key points covered here, see https://tiiproject.com/new-report-measuring-effectiveness/

Assessing an investor's actions within their portfolio and organization, beyond their organization on the broader financial community, and across broader systems is at the heart of evaluating the alignment of their activities with system-level goals:

Investor action:
Are the investor's policies, programs, and practices guiding its resources and decisions toward achieving system-level goals and objectives?

While this report focuses on assessing system-level influence, the continued importance of portfolio-level impact measurement and management cannot be overstated. When done correctly, impact measurement and management can help to:[31]

- Assess quantifiable value for impact investors and their stakeholders;
- Mobilize more impact investment capital, thus increasing the aggregate impact of the approach; and
- Increase transparency and accountability toward stated impact goals and objectives.

Evaluating portfolio-level activities and quantifiable outcomes—positive outcomes that can be attributed to the investor—is a crucial building block to align impact outcomes with broader system-level goals and, ultimately, to assess investor influence on systems. Sustainable and impact investors, and many investors with long-term investment horizons (e.g., pension plans), share a commitment to ensuring that individual investments and portfolios "do no harm" to society or the environment and that their investments and portfolios proactively achieve positive social or environmental impact.

Collective behavior:
Are the investor's actions helping to increase awareness and influence the financial community to address systemic risks and explore new behavior norms?

Gathering momentum for collective behavior requires that many investors make substantial and consistent commitments to shifting the dynamics of systems under stress. Changes in system dynamics require inputs from multiple key stakeholders, including of course the massive potential for influence from the investment community.

This report offers a number of thresholds as indicators of progress at the industry/sector level. These thresholds use the phrase "substantial percentage of investors" to indicate a level sufficient to generate influence:

- **Ten percent signals recognition and legitimacy of the issue.** TIIP believes that if one out of ten of the largest AUM, and therefore most prominent and influential, investors uses techniques with the potential to bring about paradigm shifts at the system-level, these concepts and techniques will gain more recognition and legitimacy within the investment and broader communities. Although this recognition does not itself guarantee influence, it helps ensure the consideration of system-level issues among stakeholders.

- **One-third signals a change in culture or generally accepted practice.** TIIP believes that if one out of three of the largest AUM, and therefore most prominent and influential, investors uses techniques that can bring about shifts in systemic paradigms, the concepts embedded in those techniques and their use will become part of the overall culture of investments. Investors' potential for influence at the system level will be substantial and can create spill-over effects on both public and private stakeholders. However, commitment of the investment community to recalibrate system feedback loops will not yet be clear.

- **Two-thirds signals full realization of the potential for investor influence.** TIIP believes that if two out of three of the largest AUM, and therefore most prominent and influential, investors use techniques with the potential to bring about paradigm shifts in system-level characteristics, they will have a realistic potential to influence the recalibration of system feedback loops and thus characteristics of system health.

On tracking the momentum of collective influence, industry associations and initiatives are well-positioned to support and survey the progress of their members' efforts to increase the financial community's awareness and action on systemic issues. The Intentional Endowments Network (IEN), Interfaith Center on Corporation Responsibility (ICCR), and PRI, for example, have already made great progress advancing investor consideration of systemic risks in investment best practice. Industry associations and initiatives are particularly primed to leverage their network capabilities to evaluate industry-level progress on changes in investor behavior.

Beta building:
Are beneficiaries and systems able to become healthier and more resilient as a result of collectively changed behavior norms that support system health?

What investors can reasonably measure and manage is the alignment with their actions to system-level goals and their individual and collective potential for influencing the overall characteristics and progress indicators in relation to system-level challenges. By aligning all activities with system-level goals, investors can enable their investment portfolios to address systemic issues more effectively; build the capacity of the financial community to better manage externalities and develop new models for operating; and shift the dynamics of systems under stress to better support the environment, society, and economy.

The difference between measurement of the "impact" of holdings in a portfolio, and the measurement of the potential "influence" of investors' actions at the system level is that the former may be aligned with the goals of the SDGs (e.g., eradicating poverty) so that investors may report on its portfolio's contribution to a certain goal (e.g., number of jobs created for the homeless). However, investors typically don't measure impact relative to a system-level progress indicator (e.g., percentage of the population still below the poverty level). Investors committing their firms as a whole to system-level change—and working collaboratively with like-minded investors—can measure their potential for influencing shifts in systems' paradigms (e.g., toward a system that generates no extreme poverty) by establishing the legitimacy for their concerns, creating cultural change among their peers, and using the full weight of system-level investing techniques.

Multiple pathways for working toward system-level goals

A system-level investing approach proposes that actions are driven by what the system needs, rather than the other way around. Once the needs of the system are determined, and system-level goals are set accordingly, investors can then act in alignment with those goals.

Here the distinction between investor actions at the portfolio-level, sector-level, and system-level is useful. Take the example of an investor in a mining company. The investor recognizes that working conditions in the mining industry systematically contribute to poor worker livelihood and income inequality. There are multiple ways in which an investor can act on this:

- **Portfolio-level:** At a portfolio-level, the investor may engage with a mining company to improve their labor policies and practices to ensure the health and safety of its workers.

- **Sector-level:** At a sector-level, the investor may engage with or invest in multiple mining companies, or those with the greatest total market share, and collaborate with other investors and government to improve labor standards across those companies or the entire mining industry.

- **System-level:** At the system-level, the investor may engage with various stakeholders to assess the impact of working conditions in the mining industry on externalities: How does increased investment in and stability of the labor force help to strengthen the middle class?

The importance of distinguishing between portfolio, sector, and system level actions is to encourage investors to assess the outcomes of their actions relative to system-level progress. In addition to contributing to portfolio-level impact goals, investors should look for opportunities to expand their reach at the sector-level—for example, engaging intentionally with "bellwether" companies to start a ripple through the sector and incite changes in behavior across other market participants—in service of achieving progress at the system-level.

Actions that investors can take to achieve system-level goals

There are a range of actions that investors can take to achieve progress toward system-level goals. The guidance that follows is designed to help investors get ideas for the types of actions they can take to improve the stability of underlying systems.

Systems dynamics thinkers assert that those seeking to influence system-level change at a fundamental level can do so by shifting the paradigms within the systems themselves. In her work *Thinking in Systems: A Primer*, field pioneer Donella H. Meadows identified 12 leverage points—or types of influence—that system actors can achieve.[32] These leverage points can be usefully adapted into a subset of four characteristics of system health and resilience:[33]

System characteristics of health and resilience[34]

Adaptability: The environment, society, or the financial system's ability to adjust to shocks and major disruptions (high adaptability, or self-regulation, helps systems better adjust to unanticipated external shocks).

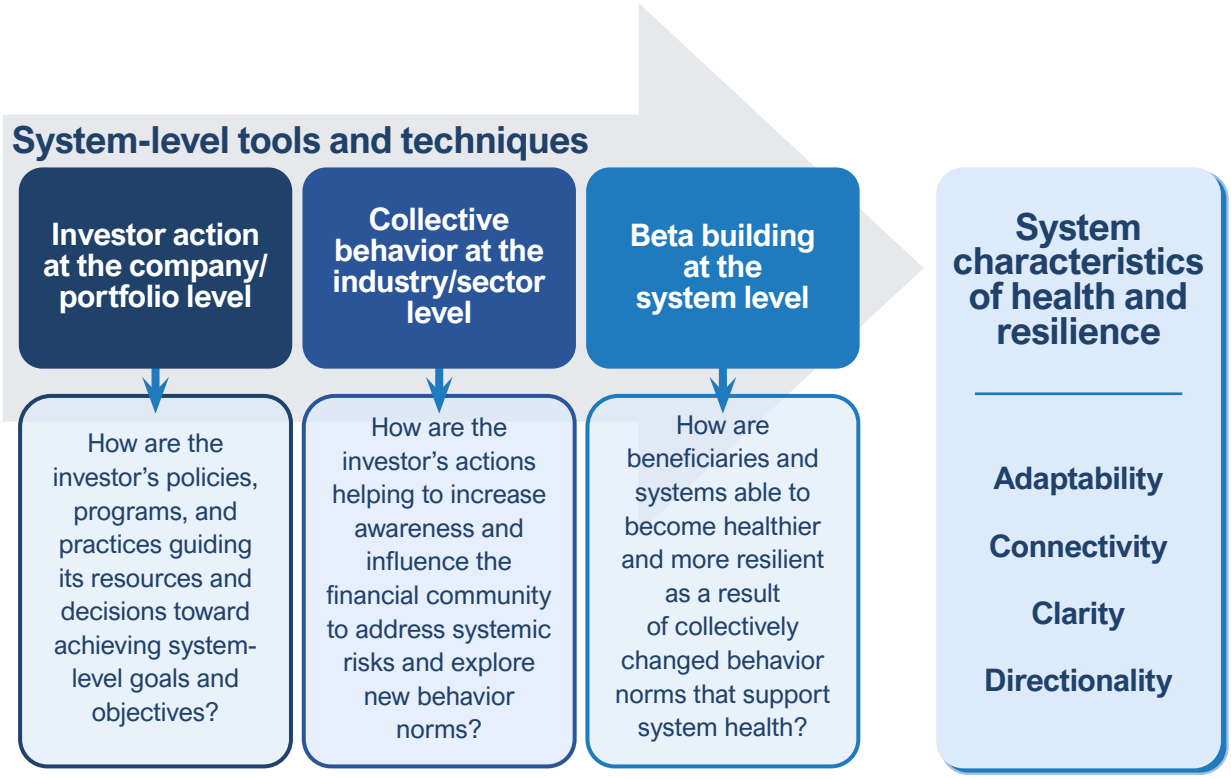
Clarity: The coherence, flow, access to, and transparency of information about and within a system (more information flows among actors and about system components—and their interrelationships—increase investors' ability to understand their influence and act accordingly).

Connectivity: The quality of interconnection between key stakeholders and dimensions of a system, addressing gaps and underserved components of a system (i.e., systems so structured have positive feedback loops that increase their health and resilience).

Directionality: Market incentives structured to encourage positive changes in stakeholder behavior (healthy systems are those in which influential actors enhance positive characteristics and align their actions with the systems' fundamental goals).

The specific ways that individual investors aspire to influence systems, their goals, and goal-setting processes will vary based on the systems and issues that they focus on, resource and capacity considerations, and stakeholders. Investors will be best set up for success if they are able to effectively leverage their resources and capabilities toward system-level goals, ideally in concert with the capabilities of others, to collectively recalibrate system feedback loops. An essential component here is ensuring that the investor's policies, programs, and practices are aligned with their overarching system-level goals—do all actions work in the direction of a healthier and more resilient system? Furthermore, the impact of an investor's actions will be amplified when they can gain momentum through collaborative efforts of the financial system. Aligning the actions of many investors with varying resources and capabilities to achieve system-level goals is what will recalibrate feedback loops to support stable systems.

Figure 3. Investors can take different types of actions to achieve system-level goals



The system-level investing tools and techniques that investors can use to advance system-level progress can be bucketed into four categories: conventional portfolio management tools extended to systemic issues, and techniques related to field building, investment enhancement, and opportunity generation. Certain of these tools and techniques are particularly well-suited to enhance certain system characteristics of health and resilience. These linkages between investment tools and techniques and system characteristics are demonstrated in more detail in Tables 1-4.

It is important to note that these actions are complementary and can build on each other. Company/portfolio-level and industry/sector-level actions can be the seeds for system-level progress which, if adopted by a mass of investors or if instrumental in changing investor behaviors, can create significant shifts in system dynamics. Across all of these actions, investors should consider multiple dimensions of their impacts on key beneficiaries and stakeholders in addition to their impacts on financial, environmental, and social systems.

Table 1. Conventional portfolio management tools in practice

Conventional portfolio management tools are well-understood as being useful for managing risks and rewards at the portfolio level, but they can also be useful in a system-level investing context: investors can reflect systemic concerns in investment beliefs, emphasize systemic issues in security selection and portfolio construction, engage with holdings about systemic issues, and evaluate and select managers based on their consideration of systemic issues.

Conventional portfolio management tools

Tools and techniques	Investor action at the company/portfolio level	Collective behavior at the industry/sector level	Beta building at the system level	System characteristics
Investment beliefs	Investor uses systemic risks as a lens to reduce risk and generate long term value. They pursue strong financial returns and positive impact through their investments (while also minimizing potential negative impacts).	Investor demonstrates how ESG/impact considerations should be managed at the sector level in order to address systemic issues. They champion the imperative to employ long-term, sustainable practices across the entire sector.	Investor believes that there is a synergistic relationship between social, environmental and financial systems which can pose threats or opportunities to investments, with a nuanced awareness of negative externalities. They intentionally leverage their strategic capabilities to address certain systemic issues and convince other stakeholders of their relationship with broader systems.	Adaptability Clarity Connectivity Directionality
Security selection and portfolio construction	Investor integrates environmental and social factors into security selection and portfolio construction when financially material to proactively identify companies with strong ESG/impact management and avoid those with poor performance.	Investor focuses its security selection and portfolio construction strategy on investees with strong environmental and social conduct that have the potential to model new standards of best practice for the sector or industry more broadly.	Investor sets standards or minimum thresholds for social and environmental conduct for whole industries based on problematic business models (e.g., fossil fuels) or issues (e.g., human rights), informing its behavior norms for involvement in industries based on their contribution to systemic challenges.	Adaptability Clarity Connectivity Directionality
Engagement (regarding value chains)	Investor encourages investees to conduct life cycle and supply chain assessments to inform their understanding of systemic risks.	Investor understands the value chains in the sector and invests at multiple nodes to address systemic challenges upstream and downstream.	Investor collaborates with other stakeholders in the sector or value chain to identify hurdles to addressing systemic issues (i.e., regulatory and policy hurdles). They help to develop necessary standards and financial incentives to address systemic challenges.	Adaptability Clarity Connectivity Directionality
Selection of managers	Investor has robust due diligence processes to assess a manager's ESG/impact management approach, including their understanding of and processes for addressing systemic risks.	Investor supports and implements emerging due diligence tools that address systemic risks in traditional manager selection processes (i.e., Due Diligence 2.0).	Investor expects manager to have a nuanced understanding of systemic risks that is underpinned by a specific strategy for addressing systemic issues at key leverage points.	Adaptability Clarity Connectivity Directionality

Table 2. Field building techniques in practice

Building organizations that can pool resources and act collectively, develop a shared knowledge base regarding systems' complexities, and work to assure alignment of investors' goals with those of government and other influencers of public policy and vice versa.

Field building

Tools and techniques	Investor action at the company/portfolio level	Collective behavior at the industry/sector level	Beta building at the system level	System characteristics
Self-organization (industry organizations)	Investor makes public commitments to sustainable investing and utilizes industry best practices and frameworks for ESG/ impact management.	Investor is an active participant in industry organizations and is a key contributor to the development of new tools and resources to advance the industry's understanding of systemic risks.	Investor plays a founding/leadership role in creating organizations, tools, and infrastructure to enhance the capability of the investment community to collaborate on how to address systemic challenges.	Clarity Connectivity Directionality
Self-organization (capacity/ resourcing)	Investor has clearly defined roles and responsibilities for ESG/impact management and proactively engages external expertise for specific functions such as due diligence or performance tracking.	Investor encourages its investees to leverage sector experts to assess their approach to addressing systemic issues. Investor forms partnerships with consultants/advisors that have deep expertise on these matters.	Investor works with industry experts and consultants to help expand the pool of service providers that offer expertise on addressing systemic issues.	Connectivity Directionality
Polity Self-organization	Investor clearly communicates expectations and works with investees to support their understanding and management of systemic risks, in particular reducing potential negative impacts.	Investor invests in and engages with multiple participants in a sector to enhance their understanding of and response to systemic risks, given that changing the behaviors of major players creates potential for amplified influence on other players.	Investor convenes various stakeholders across the investment community to discuss their system-level investing approaches and strategically expand the community's combined efforts to address systemic issues.	Clarity Connectivity Directionality
Polity	Investor adheres to disclosure and regulatory requirements related to ESG/ impact considerations to ensure reporting compliance across its portfolio.	Investor contributes to public consultation documents to inform and improve emerging disclosure and regulatory requirements for the industry, in particular to cover systemic risks.	Investors leads and actively participates in the development of emerging regulatory requirements, financial reporting, and ESG data requests that adequately respond to the magnitude and urgency of systemic risks.	Directionality
Interconnectedness (related to impact data)	Investor collects a mix of qualitative and quantitative ESG/impact data from its portfolio to assess progress toward impact goals.	Investor collects ESG/impact data aligned to industry goals and encourages the adoption of emerging best practices for impact reporting. They share data with sector and industry organizations for the creation of benchmarks and peer analysis.	Investor identifies gaps in data and helps to create the infrastructure for cataloguing and sharing consistent data and benchmarks that can be referenced by other investors. They share insights and lessons learned about how they leverage systemic risk data in investment decision making and management.	Clarity Directionality

^ Return To Table of Contents

Table 3. Investment enhancement techniques in practice

Leveraging firm resources across the investment process—investment policy and belief statements, investment strategy documentation, security selection and portfolio construction, engagement and activism, themed and targeted investments, and manager selection and monitoring—to exert influence on system dynamics.

Investment enhancement				
Tools and techniques	**Investor action at the company/portfolio level**	**Collective behavior at the industry/sector level**	**Beta building at the system level**	**System characteristics**
Solutions	Investor looks for business models that address specific social or environmental challenges and uses systemic risk as a tool for identifying unpriced risk in the portfolio.	Investor recognizes which systemic risks can hinder progress toward social or environmental goals. Their strategy evolves in response to systemic risks, excluding problematic sectors and business models or introducing new ones.	Investor uses systemic issues to identify systemic risks of financially attractive business models and minimizes or thwarts investments into business models that exacerbate those systemic risks. They support the creation or adoption of new business models that will support the transition to healthier and more resilient systems (i.e., circular economy).	Adaptability Connectivity
Standards setting	Investor utilizes industry best practices and standards to inform their ESG/impact management approach. Their investment policies limit investment in certain industries due to their association with environmental or social harm and seeks to invest in solutions.	Investor helps to develop and improve standards and norms for managing systemic risks in the sectors in which they operate. They advocate for additional investment parameters to be introduced based on the sector's specific systemic risks.	Investor helps to establish standards and norms for engagement and new standards of best practice in industries based on their contribution to the perpetuation of systemic risks.	Clarity Directionality
Diversity of approaches	Investor provides capital and strategic support to investees to help them manage systemic risks and meet impact goals.	Investor provides network support for investees to share and learn best practices for managing systemic risks in their sector.	Investor uses a diverse range of investment approaches simultaneously at key leverage points to maximize their influence addressing systemic risks. They also coordinate with other investors to create and amplify joint leverage and momentum of action.	Adaptability Connectivity Directionality

Table 4. Opportunity generation techniques in practice

Addressing disparities of opportunity among stakeholders within a system, locally as well as globally and using each asset class to enhance the value of environmental, societal and financial systems.

Opportunity generation				
Tools and techniques	**Investor action at the company/portfolio level**	**Collective behavior at the industry/sector level**	**Beta building at the system level**	**System characteristics**
Additionality (access to capital)	Investor provides capital to investees that would otherwise not be available, or at better terms than alternatives. Investor may also introduce the investee to new capital types or sources to expand their resources and capacity.	Investor collaborates with other investors in an investee's capital table or in the related sector to support the management of systemic issues. Investor may pool resources with other investors to increase collective clout and encourage more participants to address these systemic risks.	Investor designs financial products that intentionally address systemic issues in their definition and structure. Investor may link certain capital commitments to systemic risk management expectations for best practice.	Adaptability Directionality
Additionality (target beneficiaries)	In Investor identifies target beneficiaries of their portfolio and has a stakeholder engagement strategy or requires such of managers.	Investor strategically invests to target specific beneficiaries, in particular historically marginalized populations that are subject to enhanced symptoms of systemic issues in the sector.	Investor develops investment products specifically for historically marginalized communities and encourages investment in the development of models that address the systemic issues that affect them most acutely.	Adaptability Connectivity
Locality	Investor uses a place-based strategy to achieve their social and environmental impact goals, making sure to conduct fulsome research and engage a range of stakeholders to understand the dynamics of local economies.	Investor engages with local governing bodies and organizations to identify systemic challenges, understand previous interventions (both harmful and helpful), and co-create solutions for sustainable value-creation.	Investor makes interlocking investments in products and services at key leverage points within a geographic region to strengthen the long-term resilience of its local economy and system dynamics.	Connectivity
Evaluations	Investor collects a range of qualitative and quantitative data to establish a more holistic view of asset value over the course of the investment period.	Investor collaborates with investees and industry peers to share insights on value-creating and value-reducing activities of certain business models and sectors.	Investor augments quantifiable price with value assessments of negative externalities and natural, social, and human capital, which can also be leveraged by other investors through industry data platforms.	Clarity Directionality
Utility (of asset classes)	Investor uses its portfolio to demonstrate the risk reduction and value creation opportunities of addressing systemic challenges.	Investor leverages the characteristics of a specific asset class to maximize the potential for their investment to address systemic challenges.	Investor expands the uses for which specific asset classes were explicitly created to enable the development of purpose-built, long-term solutions to systemic challenges.	Adaptability

^ Return To Table of Contents

Part IV: Roadmap for Assessing System-Level Investing Progress [vii]

While investors do not have sole responsibility for global challenges like climate change, income inequality, or financial system instability, investment activities can either facilitate or obstruct efforts to remedy the risks that these issues pose to investment returns across all asset classes.

Investors can have influence and affect change in their portfolios, across the financial community, and on broader social and environmental systems. They can:

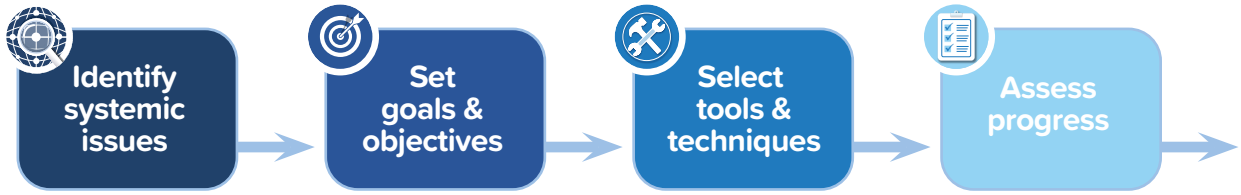
- Allocate capital to companies that have positive social and environmental impacts;
- Engage with investee companies to establish the rationale for addressing systemic risks and influence the way their business activities relate to systemic and idiosyncratic risks;
- Engage proactively in the policy and political process to have positive impacts on the policy responses to issues; and
- Collaborate with other investors, civil society, and other stakeholders to set standards for corporate performance and disclosure.

Across all actions that investors can take to advance system-level progress, effective change requires that investors:

- Understand how systemic issues develop, the thresholds beyond which they are destabilizing or destructive, and the dynamics of system influences that exacerbate or ameliorate them;
- Identify leverage points where their influence can be effective in addressing an issue;
- Commit resources (e.g., capital, influence, and expertise) to tactics and strategies that advance the leverage points from which the investor can have the most effective impact on underlying paradigms and ultimately an issue itself; and
- Identify existing current policies and practices that may counteract attempts to address an issue and develop alternatives.

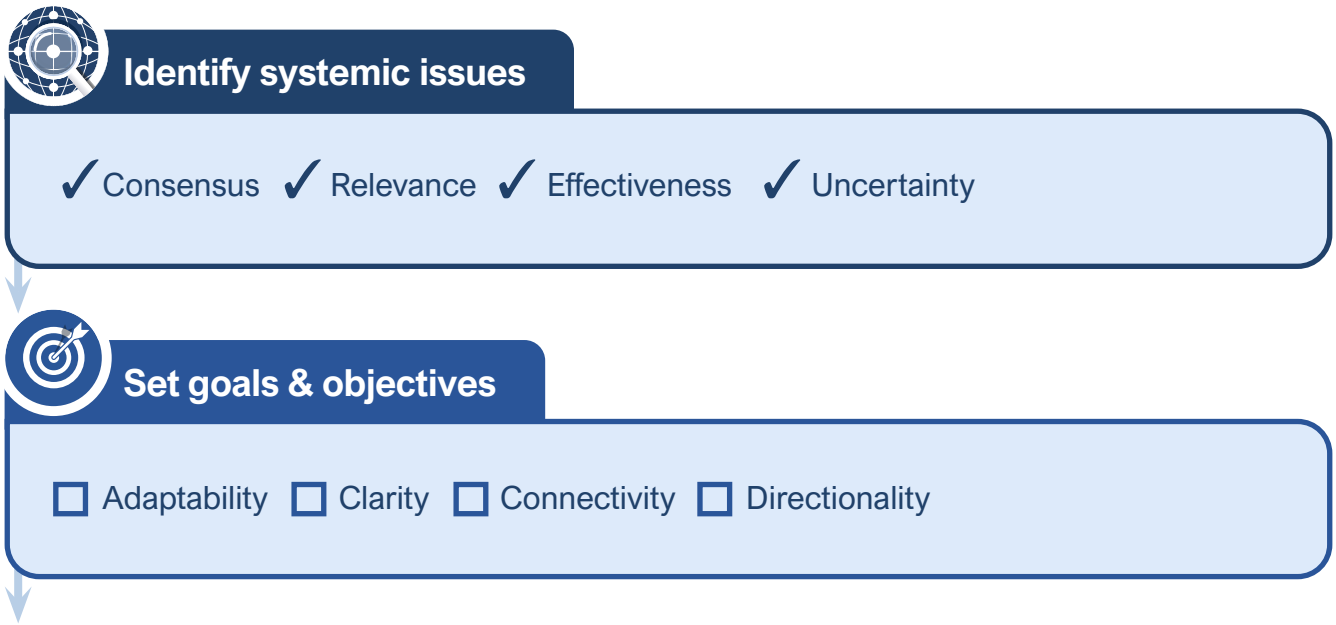
[vii] This section draws from the report "Measuring Effectiveness: Roadmap for Assessing System-level and SDG Investing," authored by William Burckart, Steve Lydenberg, and Jessica Ziegler (2018). For more of an elaborate treatment on the key points covered here, see https://tiiproject.com/new-report-measuring-effectiveness/

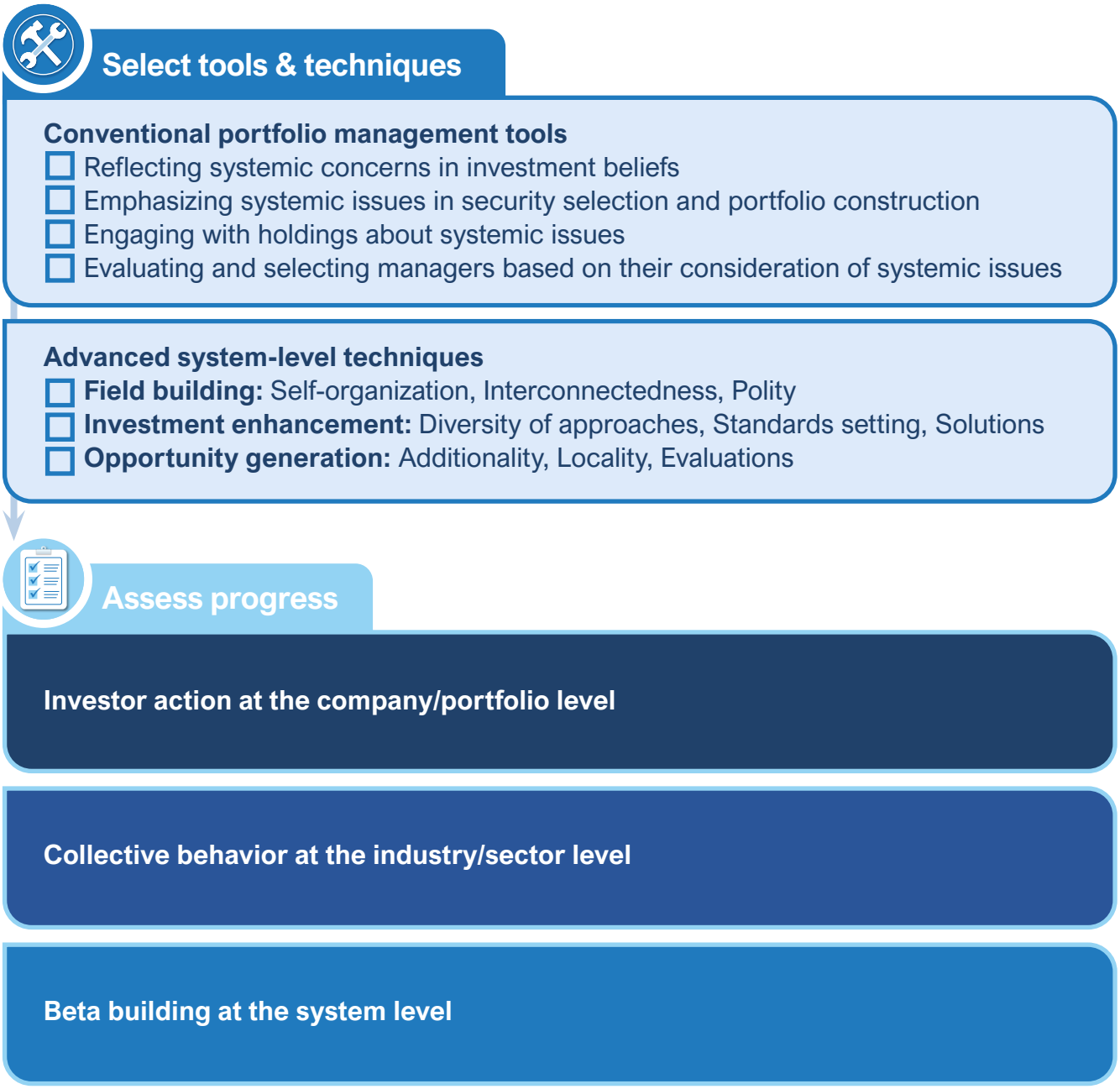
To put a system-level investing approach into practice, investors should outline their system-level goals, strategies, and expected outcomes using a logic model or something like it (e.g., a theory of change, theory of value creation, results chain, investment thesis, or impact thesis). Such models are beneficial for informing and tracking activities aligned with the investor's objectives and should cover four areas:



- **Identify systemic issues:** Choose the systemic issues of focus aligned to the investor's priorities, expertise, capabilities, and resources;
- **Set goals and objectives:** Set specific, achievable, clearly-articulated goals and objectives for shifting dynamics toward those of healthy, resilient systems;
- **Select tools and techniques:** Select realistic strategies and techniques that are aligned to the investor's capacities to make progress toward system-level goals and objectives; and
- **Assess progress:** Assess progress made toward system-level goals and objectives at the company/portfolio level, industry/sector level, and system level.

Figure 4. Developing a systems-aligned logic model





Step 1: Identify systemic issues

Investors seeking to address a certain systemic issue should have a clear understanding of the system in which that issue exists, as well as its key contributing factors. Investors can use the following criteria to identify whether an issue is systemic and warrants investor consideration:

- **Consensus:** There is broad consensus among experts, academics, and practitioners as to the legitimacy and general importance of the issue. This helps to ensure consideration of issues that have been widely debated and that do not represent narrowly conceived, idiosyncratic interests.

- **Relevance:** The issue has substantial potential to impact the long-term financial performance of investors' portfolios across industries and asset classes. This helps to ensure consideration of issues that are broadly relevant, either positively or negatively, to the investor's long-term financial interests.

- **Effectiveness:** Investors can effectively impact and influence the related environmental or social system – minimizing potential risks and maximizing rewards. This helps to ensure consideration of issues for which investors' decision-making can be effective in producing positive or negative impact at system-levels.

- **Uncertainty:** There is uncertainty as to the long-term impact of the issue on investment absent intervention by the investment community. This helps to ensure consideration of issues with substantial potential to create uncertainties and to reduce the scope of these uncertainties.

For example, Table 5 identifies climate change as a systemic issue that warrants investor consideration against the criteria of consensus, relevance, effectiveness and uncertainty.

Table 5. Identifying climate change as a systemic issue

Identify systemic issue

Consensus about the issue's importance	Broad consensus exists around the destabilizing risks of climate change and the contribution of human activity to that change. The International Panel on Climate Change (IPCC)—an authoritative source of scientific opinion on the significance of climate change—has consistently documented the consensus within the global scientific community that climate change is underway, is caused by human activities, and causes disruptive system-level risks.[35]
Relevance to investors	Left unaddressed, climate change can cause economic harm worldwide, likely to affect investors' portfolios across all asset classes. Investors globally have formed coalitions such as Climate Action 100+ to address and contend with these risks.

Effectiveness of investor action	Investors, along with corporations, governments and civil society organizations can take effective action to contribute to adaptation and mitigation efforts that will lessen the risks of climate change. Calls for $1 trillion or more in annual investments in clean technologies to keep global temperature rise under two degrees Celsius have emphasized the importance of investors' contributions.
Uncertainty about potential outcomes	The greater the likelihood of system-level disruptions in the climate, the greater the uncertainties about climate change's potential impacts on the economy and hence on all investors. Use of scenario analysis represents one means of attempting to reduce or forecast the uncertainties involved.

Step 2: Set goals and objectives

Once the investor has identified the systemic issue of focus, they should set goals and objectives to guide their approach. A key aspect of this step is assessing current policies and practices that may counteract attempts to address an issue and potential contributions to the perpetuation of negative externalities of the systemic issue being addressed. This step and the following step both focus on how investors can change their behaviors and practices to generate different outcomes that are important to system-level change.

Using leverage points to inform goal setting

When defining their goals and objectives, investors can look for "leverage points" within a system where they can drive change—places where they could intervene to have meaningful influence. Leverage points are where intervention has the most potential for change, both desirable and undesirable, and should be identified based on the investor's strengths and capabilities.

Goals based on leverage points should be achievable and measurable, and reflective of capacity constraints and stakeholder input. System-level goals should:

1. Define the boundaries of the system and issue that the investor is targeting, specifying whether they are focusing on an issue within the context of a specific local area, globally, or relating to some other clearly defined parameters;

2. Identify the time scale for the change sought, specifying the time frame within which the investor intends to influence change; and

3. Specify the desired change in the quality or characteristic of the system in question.[36]

For the purposes of this report, we have focused on the goal of adaptability as it relates to the global energy-production system for combating climate change, as described in Table 6 below.

Table 6. Setting goals to increase the adaptability of the global energy production system

Set goals and objectives

Adaptability	**Increasing the adaptability of the global energy-production system** In the case of climate change, the current challenge stems not simply from the fact that fossil fuels emit greenhouse gases, but from the fact that our economic system is so dependent globally on fossil fuels as its predominant source of energy that it cannot adjust rapidly enough to prevent climate change from occurring. It is this dependency on one predominant source of energy that is the fundamental aspect of the system that is at the heart of the climate change challenge. Therefore, investors can set a goal to change the paradigm for energy production not simply to a singular alternative, but to a diverse set of clean energy sources, ensuring the ability to monitor and manage impacts at various system levels. In doing so, investors can influence the larger system so that it will not simply replace our dependency on fossil fuels with dependency on another predominant source of energy—be that solar, wind, ocean, geothermal or some other—that may be the most cost effective at the moment but may also turn out to have unanticipated system-level challenges of its own. The goal is to shift the paradigm for energy production to a diversity of sources to create a system capable of adapting to unanticipated system-level challenges.

Adaptability

There are three main objectives associated with greater *adaptability*:

- **Investors, corporations, and governments can adjust to shocks and major disruptions to the environment relating to climate change.** More diverse products, services, data, internal practices and external opportunities are available to help balance the system's function and adaptability to changing circumstances and external shocks.
- **Asset owners can increase the potential effectiveness of their actions with multiple strategies.** Given the complexity of the current fossil-fuel-dependent economic system and its relationship to the global environment, multiple approaches and maximum mobilization of investors is needed.
- **Considering additionality can help the least developed nations adapt to climate change and capitalize on opportunities to build a low carbon economy.** Financing from the private and public sectors can promote stability and resilience to climate change, while enabling economic growth with minimal reliance on fossil fuels.

Step 3: Select tools and techniques

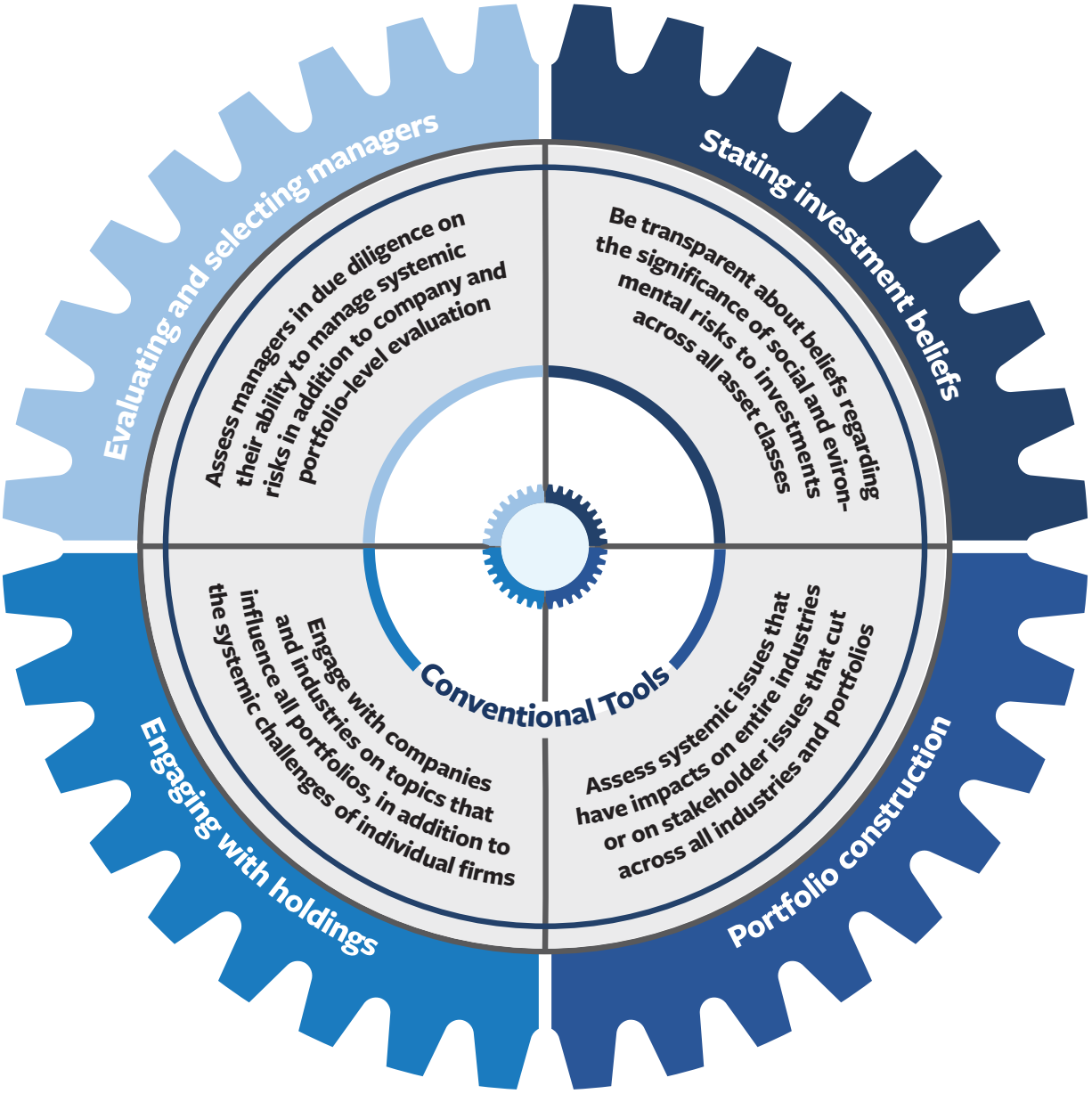
The specific ways that an investor seeks to influence systems will vary based on the systems and issues that they focus on, resource and capacity considerations, and stakeholders. Investors will be best set up for success if they are able to select tools and techniques that most effectively leverage their particular capabilities as an investor.

Extend conventional portfolio management tools

Investors can extend a variety of conventional investing tools as part of their adoption of system-level investing. This includes extending familiar practices related to codifying investment beliefs, security selection and portfolio construction, engagement programs, or manager selection to incorporate system-level perspectives. The fundamentals of these activities are not new to investors. Most are already well-established as part of mainstream portfolio management, but their use can be expanded to incorporate systemic perspectives.

As demonstrated in Table 7, the difference between the conventional implementation of these activities and their use in system-level investing is that system-level investing not only incorporates these key investment tools into the management of risks and rewards at the portfolio level, but also looks to understand how they can be applied at the system-level.[viii]

Figure 5. Conventional portfolio management tools extended to systemic issues



viii These and other examples included throughout the report are drawn from various of TIIP's efforts to build the evidence base of system-level investing, including its' investor profiling work contained in the Benchmark database (one component of the SAIL platform), the book 21st Century Investing: Redirecting Financial Strategies to Drive Systems Change (Berrett-Koehler, 2021), and publication such as Central Bank and Development Finance Institution Approaches to Investing in Global Systems (2017), and Tipping Points 2016: Summary of 50 Asset Owners' and Managers' Approaches to Investing in Global Systems (2016).

Table 7. Extending conventional portfolio management tools to the systemic issue of climate change

Select tools and techniques

Conventional tool	Extended to the systemic issue of climate change	Real-world example
Reflecting systemic concerns in investment beliefs	Investors can be more transparent about their beliefs regarding the characteristics of financial markets to include their position on the significance, if any, of social and environmental risks to their investments across all asset classes. They might go further still and identify that the synergistic relationship between social, environmental, and financial systems means that a threat to the health of one, impacts the health of the others.	University Pension Plan Ontario (UPP), a pension plan that serves 39,000 working and retired members across four Ontario universities and 12 sector organizations and manages $10.8 billion in pension assets, developed eight beliefs for its investment belief statement (IBS) that provide a framework for its investment practices. Statements like: "As a long-term investor, UPP has a responsibility to promote the health of the capital markets and the financial, social, and environmental systems on which capital markets rely" may seem broad and philosophical, but they provide guidance to staff and external managers in remarkably direct fashion. The IBS also includes direction on the position of the organization within the industry, such as "UPP embraces partnership as a foundation for enhanced performance and impact." This instructs UPP to engage in field-building efforts to support pension funds and other institutional investors to identify best practices and adopt lessons learned. managers in remarkably direct fashion. The IBS also includes direction on the position of the organization within the industry, such as "UPP embraces partnership as a foundation for enhanced performance and impact." This instructs UPP to engage in field-building efforts to support pension funds and other institutional investors to identify best practices and adopt lessons learned.[37]

Conventional tool	Extended to the systemic issue of climate change	Real-world example
Emphasizing systemic issues in security selection and portfolio construction	Investors' security and portfolio risk management techniques can look beyond individual security analysis to assess social and environmental issues that have adverse or positive impacts on entire industries or on stakeholder issues that cut across all industries and portfolios. Investors with system-related concerns may extend this process to the setting of standards or minimum thresholds for social and environmental conduct for whole industries based on problematic business models (say, fossil fuels) or issues (say, human rights).	To fulfill its legislatively mandated mission of promoting the economic development of the province, the pension fund Caisse de dépôt et placement de Québec (CDPQ) has adopted a three-fold approach: First, it emphasizes growth and globalization to finance and support Quebec companies of all sizes. Next, CDPQ focuses on innovation and the next generation, contributing to developing new-economy ecosystems and supporting innovative companies, in addition to stimulating entrepreneurship. Lastly, CDPQ invests in impact projects, designing, developing and financing major infrastructure and real estate projects and supporting the renewable energy sector.[38]
Engaging with holdings about systemic issues	Engagement with companies can extend beyond assessing the financial implications of social and environmental challenges on the business models or stakeholder relations of individual firms to include engaging entire industries on the same topics, which influence all portfolios. System-level investors can extend engagement beyond activism or engagement with individual firms by joining in efforts to change systems at the core.	Domini Impact Investments, a women-led investment adviser that focuses exclusively on impact investing, engages with companies, issuers, civil society, and policymakers to promote forest-positive business model transitions. They have taken particular action at the intersection of palm oil production and deforestation in Indonesia, which is home to some of the largest intact forests that provide shelter for endangered species and are home to many indigenous and local communities. Recently, as a result of government intervention, activism, and better corporate behavior, deforestation rates in Indonesia have gone down substantially. Domini has committed to further engagement work, pushing companies to consider action in order to prevent land grabs, end deforestation, and ensure respect for indigenous and local communities.[39]

Conventional tool	Extended to the systemic issue of climate change	Real-world example
Evaluating and selecting managers based on their consideration of systemic issues	Manager due diligence processes can evolve from assessments of managers' competencies at security- and portfolio-levels to encompass their skills at managing systemic risks.	Asset class teams and investment programs with the nation's largest public pension plan, California Public Employees Retirement System (CalPERS), evaluate potential—and monitor existing—external managers for their incorporation of ESG factors. Teams develop and use their own evaluation processes and questionnaires for managers that incorporate questions from the United Nations Principles for Responsible Investment ESG Disclosure Framework, which CalPERS helped develop.

For example, when emphasizing systemic issues in security selection and portfolio construction, system-level investors should consider the utility of each asset class and can take cues from the needs of the system to inform their investment strategies. Fixed income, for example, can naturally create public goods when issued by governments. Public equities are well-suited to influence incremental change in large firms. Venture capital is a disruptor of business models and services. Real estate is key to the built environment. Private equity offers opportunities to affect management practices beyond purely financial issues to those with systemic social and environmental implications.

With these characteristics in mind, investors can tailor their investments to address system-level issues. This may or may not impact the size of specific allocations of assets to individual classes or impact specific security selection within each asset class, but awareness of the ways that different asset classes serve different needs and purposes will help investors to address certain system-level goals and objectives. The more that investors can target their use of asset classes to allow systems to generate positive outcomes from the start, the greater their contribution will be to a rising tide of investment opportunities for themselves and for other investors.

Table 8. Considering the utility of each asset class when addressing climate change

Public Markets: leveraging divestment and proxy voting for shareholder influence on systemic challenges

Public equities

The California State Teachers Retirement System (CalSTRS), the largest educator-only pension fund in the world and the second largest pension fund in the U.S. with a portfolio of approximately $308 billion, provides one example of what leveraging public equities at a system level looks like in practice. It has determined that climate change is a systemic risk and developed a multi-year, multi-asset-class, internally managed Low-Carbon Index (LCI) for passive equity management.[40] Launched with a $2.5 billion commitment, the LCI is made up of stocks in all industries in all markets (U.S., developed, and emerging) around the world. CalSTRS' goal is for these holdings to have reduced carbon emissions and reserves in each market by between 61% and 93% in the coming years.[41] Since passive index funds hold hundreds, if not thousands, of stocks across all industries, the CalSTRS index will paint a picture of what the future should look like in all companies around the world, in effect setting a benchmark and model for the environmental performance of large corporations on climate change. To complement these efforts, in 2021 CalSTRS funded two low-carbon transition readiness exchange-traded funds (ETFs) and in 2022 set additional measures toward net zero including a target of 20% allocation of the Public Equity Portfolio to a low-carbon index to reduce emissions.

Fixed Income: using bond covenants for raising funds targeted to systemic challenges

Bonds

Bank of America (BoA) is an example of a financial services firm that participated systematically in the development of the green bond market. From the outset, BoA played a prominent role as a lead underwriter of green bonds. From 2013 to 2023, it has issued eleven ESG-themed corporate bonds totaling $14.93 billion including green and social bonds to advance racial equality, economic opportunity, and environmental sustainability.[42] In addition, it participated in the creation of the International Capital Market Association's voluntary Green Bond Principles and continues to sit on its Executive Committee. To further reinforce the integrity of green bonds, efforts need to be aligned with several sets of voluntary "principles" for green bonds devised by the financial industry and other stakeholders. These principles have been key to the market's continued growth: Sales of green bonds in the first half of 2023 rose 22.2% to $351.9 compared to the same period in 2022, the biggest ever half year of issuance, outstripping the previous record, set in the first half of 2021, when $296.6bn was issued.[43]

Loans

In conjunction with the United Nations' Financial Initiative, 130 banks launched the Principles for Responsible Banking, which among other things committed signatories to "continuously increase our positive impacts while reducing the negative impacts on, and managing the risks to, people and environment resulting from our activities, products and services." Whether this first voluntary step toward a more systematic, firm-level approach to the implications of their lending will have practical impact remains to be seen, but at a minimum it represents a symbolic shift in these financial institutions public stance.[44]

Private Markets: communicating among PE investors to set best-practice industry standards addressing systemic risks

Private Equity

Private equity owners often have controlling interests in companies, or are investors in funds of companies with controlling interest, so as owners they have much more influence. Some pension funds—a la Canadian pension fund model—actually take direct control of their private equity investments. This gives an opportunity in various industries to directly test circular economy technologies that could become models within or across industries. In this context, Taaleri, a Finnish wealth management group headquartered in Helsinki, was specifically launched to focus on three themes: renewable energy, recycling and material handling, and energy-saving solutions.[45] Today, Taaleri has nearly $2.7 billion of assets under management in its private equity funds and co-investments.[46]

Real Estate

The Caisse de dépôt et placement de Québec (CDPQ), one of Canada's largest pension funds, has adopted and implemented a sustainability program for much of the real estate property that it owns and manages through its Ivanhoé Cambridge and Otéra Capital subsidiaries. Ivanhoé Cambridge has approximately $77 billion in assets as of December 2022 and is "one of the ten largest real estate asset managers in the world." Many of its real estate investments support infrastructure and business development in Quebec. This program led to 44% of real estate investments in Quebec being LEED certified, $750 million allocated to "breathe new life into Montreal's downtown core," and an on-going expansion of Montreal's mass transportation system. Not only did these investments grow the pension plan of the 41 Quebec groups bought into the plan, but they helped bolster the economy where their beneficiaries live.[47]

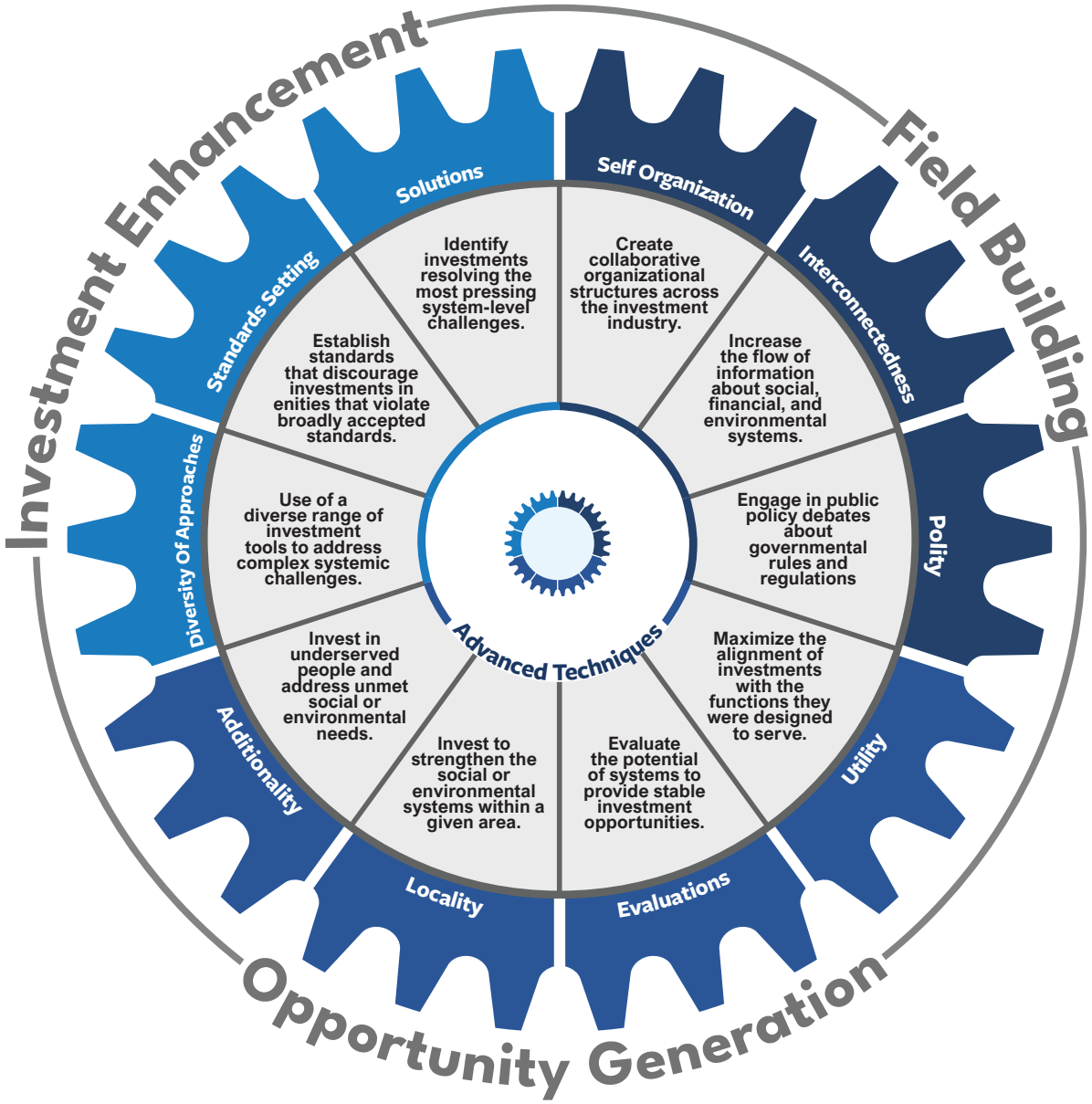
Infrastructure

New Zealand Superannuation (NZ Super), a sovereign wealth pension fund in New Zealand, has used a diversity of approaches to address a single system-level challenge: climate change.[48] It's initiatives include (but are not limited to) transitioning its equity portfolios to a low-carbon strategy; monitoring its external managers to ensure compliance with its climate policies; implementation of climate-related risk assessments and valuation disciplines across asset classes; integration of global-warming scenario analyses; and direct investments in alternative energy, sustainable agriculture and infrastructure.

Utilize advanced system-level techniques

System-level investors can also utilize a number of investment techniques that are explicitly designed to help investors to fortify environmental, social, and financial systems. These techniques stress collaborative action, building shared knowledge bases, setting industry standards, and creating a rising tide of investment opportunities for all investors. See Table 9 for illustrative examples.[ix]

Figure 6. Advanced system-level investing techniques



ix These and other examples included throughout the report are drawn from various of TIIP's efforts to build the evidence base of system-level investing, including its' investor profiling work contained in the Benchmark database (one component of the SAIL platform), the book *21st Century Investing: Redirecting Financial Strategies to Drive Systems Change (Berrett-Koehler, 2021),* and publications such as *Central Bank and Development Finance Institution Approaches to Investing in Global Systems (2017)*, and *Tipping Points 2016: Summary of 50 Asset Owners' and Managers' Approaches to Investing in Global Systems (2016).*

Table 9. Leveraging advanced techniques to address climate change

Select tools and techniques

Field-building

Self-organization

Trillium Asset Management, one of the first investment managers dedicated to aligning values with investment objectives and a leader in shareholder activism and public policy advocacy, has played a leading role in the founding of organizations that have contributed to the advancement of incorporating systems-level considerations into investment (US SIF, originally called the Social Investment Forum, which became the model for other Social Investment Forums around the world) and the Ceres Principles (which led to the creation of environmental advocacy organization Ceres and the Global Reporting Initiative).

Interconnectedness

Investors and financial services firms support CDP (formerly the Carbon Disclosure Project), which provides data on greenhouse gas emission of corporations and governmental bodies, as well as other environmental information. Its boards include representatives from the consultant Mercer's Global Responsible Investment Business unit (Mercer is subsidiary of the financial services firm Marsh & McLennan, Inc.); the UK Green Investment Group; the investment management firm Churches, Charities and Local Authorities and the Chair of the UK Financial Services Authority governmental regulatory body.

Polity

Aviva Investors, a global asset manager that offers investment products and capabilities for insurance, pension, and institutional clients, 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." They call for collaborative action and suggest capital market reforms on "how public policy makers could move the capital markets onto a more sustainable basis."

Investment enhancement

Diversity of approaches

Government pension fund New Zealand Superannuation (NZ Super) adopted a diversity of approaches to address the complex challenges of climate change, including: integrating climate-related factors into investment risk assessments; directing investments in alternative energy, sustainable agriculture and infrastructure; sponsoring of financial industry research on climate-change scenarios; producing of white papers on the topic; and engaging with corporations to improve their climate-related policies.

Standards setting

Norges Bank Investment Management, whose fund has a small stake in more than 9,000 companies worldwide, averaging 1.5 percent of all the world's listed companies, incorporates "internationally recognized standards" into its investment process, which have led it to divest from companies in the tobacco and weapons industries, and those causing severe environmental damage. They participated in OECD standard-setting initiative relating to the extractives industry and the stability of the financial markets.

Solutions

Dutch pension fund manager PGGM has an "investing in solutions" portfolio that 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." This portfolio intended to achieve regular risk/return expectations and "to support positive impact on at least one of the selected [environmental or social] themes."

Opportunity generation

Additionality

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."[49] 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.

Locality

The Ireland Strategic Investment Fund (ISIF), a sovereign development fund with a mandate to invest on a commercial basis to support economic activity and employment in Ireland, uses a three-pillared approach to target local development in Ireland as it relates to infrastructure, housing, and food production and security. This will continue to increase as ISIF continues to shift its investment portfolio from a conventional approach to one that is concentrated on the Irish economy with the ultimate goals of increasing employment and facilitating economic growth throughout the country.[50]

Evaluations

California Public Employees' Retirement System (CalPERS), which manages pension and health benefits for more than 1.5 million California public employees, retirees, and their families, believes that three forms of capital create long-term value and are the source of investment opportunities—physical capital, human capital, and financial capital—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.

Utility

Think Outside of the Box Asset Management (TOBAM), as asset manager that manages over $6 billion in equities, fixed income, and multi-asset strategies as well as digital assets, advocates for an "anti-benchmark" approach to investment and 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.

Step 4: Assess progress

Finally, investors should track the progress of their actions toward system-level goals. As there are different types of actions investors can take to achieve system-level progress (investor action at the company/portfolio level, collective behavior at the industry/sector level, and beta building at the system level), tracking the results of those activities can also span various types of information.

Assessing the alignment of all these activities toward overarching system-level goals can help investors and the broader financial community to calibrate their actions and collectively advance system-level progress. When misaligned, investors run the risk of counteracting their own progress, the progress of others, and the progress of resilience-building for systems.

Recurring reflections for investors might include:

Am I choosing tools and techniques that are aligned to my capabilities and resources as an investor? How can I—and others in my financial community—change our behaviors to work toward system-level goals? What types of practices, sectors, or beliefs are hindering system-level progress? How have outcomes changed due to these alterations in behavior? What signals are there that systems are changing?

Table 10. Assessing system-level progress on increasing the adaptability of the global energy-production system

Assess progress

Level of investor action	Description	Considerations for assessing progress
Investor action at the **company/ portfolio level**	*Are the investor's policies, programs, and practices guiding its resources and decisions toward achieving system-level goals and objectives?* Assessing progress at the company and portfolio level closely aligns with use of the industry standards and frameworks discussed in Part II of this report, as best practice in sustainable investing includes tracking against investment and portfolio level performance indicators.	• Capital and other support provided to funds and companies providing solutions to climate change, in particular the energy system transition • Emissions tracking against portfolio- and investment-level goals (e.g., renewable energy generated, CO2 emissions avoided) • Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/ opportunities • Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives • Progress tracking against system-level goals such as net zero commitments
Collective behavior at the **industry/ sector level**	*Are the investor's actions helping to increase awareness and influence in the financial community to address systemic risks and explore new behavior norms?* Assessing progress at the industry and sector level looks at thresholds for change, which are reflected in emerging industry trends and standards of best practice. These changes can be reflected in many contexts including market opportunity, regulatory environment, reporting and disclosure standards, and risk and reward assessments.	• A substantial percentage of investors increasingly supply and demand climate change solutions-oriented funds and strategies • A substantial percentage of investors invest in a diverse range of renewable energy technologies across all asset classes • A substantial percentage of investors effectively reflect net zero commitments in their investment beliefs, portfolio construction, due diligence, and portfolio management • A substantial percentage of investors understand and support industry collaboration and regulatory changes to shift away from fossil fuels and advance the low-carbon transition

Level of investor action	Description	Considerations for assessing progress
Beta building at the **system level**	*Are beneficiaries and systems able to become healthier and more resilient as a result of collectively changed behavior norms that support system health?* Assessing progress at the system level means aligning signals of change with the goals and objectives set in Step 2, in the context of the four system characteristics of health and resilience. These signals help investors determine whether systems under stress are demonstrating less stress and more stability as certain investor actions gather momentum.	Greater *adaptability* through: • **Investors, corporations, and governments can adjust to shocks and major disruptions to the environment relating to climate change.** More diverse products, services, data, internal practices and external opportunities are available to help balance the system's function and adaptability to changing circumstances and external shocks. • **Asset owners can increase the potential effectiveness of their actions with multiple strategies.** Given the complexity of the current fossil-fuel-dependent economic system and its relationship to the global environment, multiple approaches and maximum mobilization of investors is needed. • **Considering additionality can help the least developed nations adapt to climate change and capitalize on opportunities to build a low carbon economy.** Financing from the private and public sectors can promote stability and resilience to climate change, while enabling economic growth with minimal reliance on fossil fuels.

A logic model for the example of improving the adaptability of the global energy-production system to address climate change is outlined in Figure 7 below. These examples are suggestive and not at all exhaustive.

Figure 7. Example logic model applied to the global energy-production system

Identify systemic issues

✓ **Consensus:** Broad consensus exists around the destabilizing risks of climate change and the contribution of human activity to that change, which is strongly supported by the Fifth Assessment Report of the IPCC.

✓ **Relevance:** Left unaddressed, climate change can cause economic harm worldwide, likely to affect investors' portfolios across all asset classes. Investors globally have formed coalitions such as Climate Action 100+ to address these risks.

✓ **Effectiveness:** Investors, along with corporations, governments and civil society can take effective action to support adaptation and mitigation efforts that will lessen the risks of climate change. Calls for $1 trillion+ in annual clean technology investments have emphasized the importance of investor contributions.

✓ **Uncertainty:** The greater the likelihood of system-level disruptions in the climate, the greater the uncertainties about climate change's potential impacts on the economy and hence on all investors. Use of scenario analysis represents one means of attempting to reduce or forecast the uncertainties involved.

Set goals & objectives

☑ **Adaptability:** The current challenge stems not simply from the fact that fossil fuels emit greenhouse gases, but from the fact that our economic system is so dependent globally on fossil fuels as its predominant source of energy that it cannot adjust rapidly enough to prevent climate change from occurring. It is this dependency on one predominant source of energy that is the fundamental aspect of the system that is at the heart of the climate-change challenge.

Investors can set a goal to change the paradigm for energy production not simply to a singular alternative, but to a diverse set of clean energy sources, ensuring the ability to monitor and manage impacts at various system levels. In doing so, investors can influence the larger system so that it will not simply replace our dependency on fossil fuels with dependency on another predominant source of energy—be that solar, wind, ocean, geothermal or some other—that may be the most cost effective at the moment, but may also turn out to have unanticipated system-level challenges of its own. The goal is to shift the paradigm for energy production to a diversity of sources to create a system capable of adapting to unanticipated system-level challenges.

Select tools & techniques

☑ **Emphasizing systemic issues in security selection and portfolio construction:** Investor considers the long-term implications of climate change in its portfolio construction strategy and shifts its investments into energy efficiency and other renewable energy solutions that are critical to achieving progress toward net zero goals. Investor commits to allocating 90% of its energy focused portfolio to solutions that address climate change, in particular the reliability of renewable energy sources, within the next 3 years.

☑ **Solutions:** Investor develops and invests in funds and companies providing technologies that are critical to solving climate challenges. Investor experiments with new investment tools and innovative funding solutions such as targeted financing for climate change mitigation and adaptation projects, and mobilizing additional financing through equity funds, layered risk funds, and funds of funds.

☑ **Additionality:** Investor collaborates with local governing bodies and organizations to direct flexible capital toward climate mitigation and adaptation investments in the least developed nations and underserved communities. Select portfolio companies have a specific focus on delivering solutions to reduce carbon emissions and improve energy reliability in homes and buildings in low- and middle-income communities in the U.S. and U.K.

☑ **Diversity of approaches:** Investor sets standards for investments in the energy industry based on widely accepted norms related to climate change that discourage investments violating these norms and encourage investments that support agreed-upon criteria for positive practice. Investor uses a diversity of approaches to manage systemic risks in its various investment vehicles to ensure consistency with system-level goals.

Assess progress

Investor action at the company/portfolio level:

- Capital and other support provided to funds and companies providing solutions to climate change, in particular the energy system transition
- Emissions tracking against portfolio- and investment-level goals (e.g., renewable energy generated, CO2 emissions avoided)
- Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/opportunities
- Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives
- Progress tracking against system-level goals such as net zero commitments

Collective behavior at the industry/sector level:

- A substantial percentage of investors increasingly supply and demand climate change solutions-oriented funds and strategies
- A substantial percentage of investors invest in a diverse range of renewable energy technologies across all asset classes
- A substantial percentage of investors effectively reflect net zero commitments in their investment beliefs, portfolio construction, due diligence, and portfolio management
- A substantial percentage of investors understand and support industry collaboration and regulatory changes to shift away from fossil fuels and advance the low-carbon transition

Beta building at the system level:

Greater *adaptability* through:

- **Investors, corporations, and governments can adjust to shocks and major disruptions to the environment relating to climate change.** More diverse products, services, data, internal practices and external opportunities are available to help balance the system's function and adaptability to changing circumstances and external shocks.
- **Asset owners can increase the potential effectiveness of their actions with multiple strategies.** Given the complexity of the current fossil-fuel-dependent economic system and its relationship to the global environment, multiple approaches and maximum mobilization of investors is needed.
- **Considering additionality can help the least developed nations adapt to climate change and capitalize on opportunities to build a low carbon economy.** Financing from the private and public sectors can promote stability and resilience to climate change, while enabling economic growth with minimal reliance on fossil fuels.

Part V: Applying the Guidance to Income Inequality

Income inequality is sometimes used as a broad term to describe economic disparities between population segments. [x] But more specifically, income inequality refers to the gap between populations' claims to flows of money, most commonly from earned wages and/or returns on invested capital. In contrast, wealth inequality refers to the different claims to stocks of assets, which might include bank accounts, investment accounts, real estate, and personal possessions.

Income (and wealth) inequality—between and within countries, industries, and companies—is substantial and has been rising steadily for decades. The top 10% of earners receive nearly half of total global pay, while the lowest-paid half of workers receives just 6.4%. Cut another way, the lowest 20% of earners—around 650 million people—earn less than 1% of global pay.[51] Moreover, wages have stagnated and labor standards have eroded. In the U.S., wages grew by 160.3% for the top 1% of earners between 1979 and 2019, versus by just 26% for the bottom 90% of earners. During that same time, those in the top 0.1% experienced wage growth of 345.2%.[52] Over the past 30 years, more than half of countries and nearly 90 percent of "advanced" economies have seen an increase in income inequality.[53]

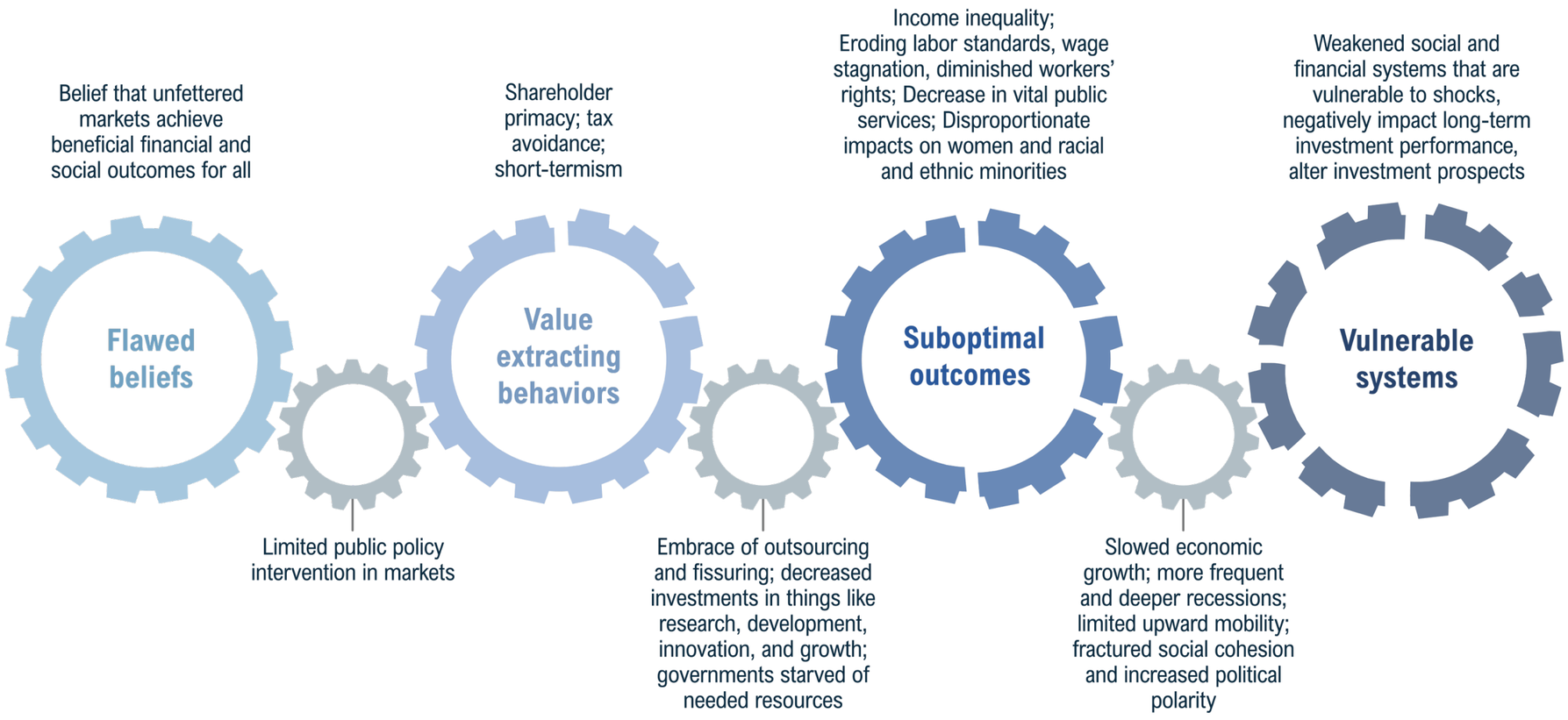
Fundamental to income inequality's risks has been its hollowing out of the middle class through wage stagnation, outsourcing and use of contract labor that cuts costs, and a diminution in the size and influence of unions. These trends have taken place in a political and theoretical context that emphasized deregulation of capital markets while relying on those same markets, and not governments, to rectify any market failures that ensued. In doing so, this paradigm has led to the prioritization of investors and management over workers and society, ignoring the long-term risks arising from the resulting disparities in incomes and wealth.[54]

Income inequality is relevant to investors because of its systemic effects on consumer demand, political stability, public finances, and social stability. While some degree of inequality is inevitable and an effective incentivizing source, investors should understand the current context of inequality throughout the world. Today, the extreme degree of global income inequality is accelerated by an interconnected set of beliefs and behaviors initiated by policymakers and often perpetuated by investors—whether they realize it or not. In the extreme, income inequality can hollow out the middle-income sectors of the population, thereby stunting consumer spending, which is one of the main engines of economic growth.

[x] The section draws from TIIP's series of reports focused on income inequality, including "Systemic Stewardship: Investing to Address Income Inequality" (2022), "Confronting Income Inequality: Practical guidance for how investors can address income inequality through action on labor relations, workers' rights, and financial and political equity" (2021), "Addressing systemic social risk: A roadmap for financial system action" (2020), and "Why and How Investors Can Respond to Income Inequality" (2018). For more of an elaborate treatment on the key points covered in these reports (and other of TIIP's publications), see https://tiiproject.com/system-level-investing/#publications

It can limit upward mobility for those at the bottom of the economic pyramid, thereby costing society the potential of productive workers and entrepreneurs. It can lead to deeper, more frequent recessions due to an impoverished, indebted class, thereby requiring a diversion of governmental resources to restoring yesterday's status quo rather than addressing tomorrow's challenges. Inequality is a destabilizing force, and instability hinders effective long-term investing. Further, inequality has been shown to polarize politics, paralyze governmental action, promote nationalistic populism, prompt trade wars, and in the worst of circumstances, destabilize democratic institutions and geopolitical relations.[55] It is a systemic risk that cannot simply be "diversified away" and necessitates action to intentionally improve the fundamentals of the system.

Figure 8. Income inequality: Flawed beliefs, value extracting behaviors, suboptimal outcomes, and vulnerable systems



Step 1: Identify systemic issues

Income inequality is worthy of a systemic approach not only because Nobel Prize winning economists like Joseph Stieglitz and Paul Krugman and prominent members of the investment community, such as PRI, Établissement de retraite additionnelle de la fonction publique (ERAFP), and The Business Commission to Tackle Inequality, validate its dangers (consensus), but because these dangers will affect investors across all asset classes (relevance), investors can have positive impact when addressing them (effectiveness), and income inequality creates uncertainties so great that conventional investment techniques cannot alone manage their risks (uncertainty).

Table 11. Identifying income inequality as a systemic issue

Identify systemic issue	
Consensus about the issue's importance	The issue of living wages, among others, is broadly recognized as a crucial component of healthy societal systems. Simply put, society cannot function smoothly without them.
Relevance to investors	Income inequality slows economic growth, leads to more frequent and deeper recessions, limits upward mobility, aggravates social cohesion, and exacerbates political polarization.
Effectiveness of investor action	To mitigate current income disparity, investors can support calls for fair compensation and a living wage, both in the companies they invest in and other industries at large.
Uncertainty about potential outcomes	While the effects of income inequality on social and economic stability are understood, the precise timing, magnitude and mechanisms of income inequality's effects are uncertain. It may be useful to consider a range of systemic impacts (e.g., social unrest, depressed consumer spending) and potential actions to reduce uncertainty (e.g., engaging with investee management, requiring best practices in contracting or subcontracting).

Step 2: Set goals and objectives

Over the last three decades of the 20th century, investors have participated in a paradigm shift regarding the theory of investment and the purpose of the corporation, while an underlying shift took place toward the maximization of short-term returns to shareholders and away from a countervailing emphasis on the long-term benefits of investments to the elements of the systems in which they operate. Consequently, the connectivity between corporate management, employees and labor, and support for government has been broken. Today, those fractures persist in the form of overemphasis on stock price as the primary incentive for compensation, growing tax avoidance schemes, and a crippling chasm between corporations, their immediate stakeholders other than stockholders, and the social and environmental systems upon which business operations depend. To restore a reasonable connectivity between corporate management and its full range of stakeholders, feedback loops must be recalibrated.

Investors can take a few decisive steps to put better guardrails in place. These include supporting governments resilient enough and with deep enough pockets to build safeguards and kindle economic recoveries; insisting that companies understand their business models (see Shift's "Business Model Red Flags" resources[56]) and prepare backstops to prevent their meltdown; and preparing for potential systemic breakdowns. With the right goals and tools, investors can help stabilize these systems while also making long-term, profitable returns.

To set goals to shift these paradigms, investors must first assess the relationship between current paradigms and current system stress. Then, investors can develop a theory for alternative paradigms and healthier systems. For example, if the current paradigm of maximizing short-term profits is connected to unsafe working conditions and child labor, a focus instead on dignified work for all may lead to safer working conditions and full employment for adults. With a clear definition of both old and new paradigms in mind, investors can then develop with reasonable specificity goals and milestones for progress.

Leverage points for income inequality

A full discussion of systemic risks in the capital markets cannot occur without talking about the concentration of power that has occurred in the last few decades globally, but particularly in the West, in which self-reinforcing corporate behaviors are partially responsible for rising income inequality. As corporations enrich investors and executives, avoid paying taxes, and underinvest in their workforces, labor standards and worker protections deteriorate; income inequality gaps widen; and the cycle repeats. As such, while there are many leading social and economic indicators by which to assess income inequality, the decline of labor and workers' rights, booming C-suite-to-average-worker pay ratio, and corporate tax avoidance, evasion, and competition are all driving forces of the issue today.

Thus, there are three essential components to consider, which currently contribute to the generation of disproportionate inequality: labor, C-suite compensation, and taxes. These three "subsystems" are closely related in their dynamics and are mutually reinforcing as to the overall goal of reduced income inequality.[57]

Labor. Currently, many investors and the companies they invest in primarily conceive of labor as a cost to be managed rather than as a resource—where they can increase profitability through enhanced productivity, morale, retention, and accumulation of firm-specific intellectual capital.

Treating labor solely as a cost leads to an exacerbation of income inequality. In contrast, reasonable investments in labor, and the value it brings to enterprise, can align interests and enhance social cohesion. A shared vision of common interests between investors allocating capital and labor creating value can also translate into political compromise that lessens the paralyses created by class divisions.

A desirable initial input here is an equitable assessment of the value of labor and its ability to add to value-creation chains. For example, investors can fund research on the value of labor, engage with companies and sectors on systemic issues around labor and support the formation of unions, or help to build the infrastructure that enables data sharing and transparency on the role of outsourced labor in supply chains. The ultimate outcome intended from an equitable assessment—or more holistic evaluation—of the value of labor is sustainable prosperity and the emergence of a stable middle class that realizes individuals' capacities and increases economic activity and investment opportunities.

Executive compensation. Currently, many investors and the companies they invest in tend to assume that stock price is the best expression of a firm's value and that executives are therefore most appropriately incentivized by tying their compensation primarily to stock price performance. A more reasonable assumption is that the full range of stakeholders, including labor, vendors, customers, communities, government, and the environment, contribute to and embody the value-creating potential of a corporation and can increase a firm's returns.

An excessive incentive to boost stock price can lead management to extract value from labor, customers, vendors and other stakeholders through short-sighted cost cutting, overpricing of goods and services, inordinate focus on transactional activities including mergers and acquisitions, and inflation of the value of asset classes. Lost in this singular attention to stock price is an appreciation for long-term, wealth-creating investment opportunities, many of which can be enhanced by a stable, creative cohort of stakeholders in addition to stockowners.

A desirable initial input here is appropriate allocations of assets to executive compensation, complemented by reasonable investments in the full spectrum of stakeholders in the corporation. For example, investors can encourage a consortium of peers to commit to publishing pay equity information including transparency around pay gaps.

A reasonable balance in asset allocation between the stockowners and other stakeholders can help in redressing the actual and symbolic exacerbation of income inequality manifested in the current trends in executive compensation, while at the same time enhancing trust in the current financial and economic systems and their activities.

Taxes. Currently, there is a tension between investor and corporate interests in maximizing profit with the legal and social necessities of paying taxes. Some even assert that fiduciary duty requires them to adopt this position. This anti-tax model increasingly permeates society to the detriment of government and its abilities to provide the basic services that a stable and resilient economy requires. Investments in the common goods of infrastructure and societal safety nets typically falls to government, as it is not in any single private enterprise's or individual's interest to incur these expenses that benefit the many.

Determinations of what constitutes a fair share of taxes to be borne by investors, companies, and individuals are made in the context of the times and vary with the changeable winds of politics. Various parties will lobby for their interests, and some have more political power than others, embedding bias into the political system.

A desirable initial input here is support for payment of fair levels of taxes and for governments' use of these revenues to invest in value-creating infrastructure, societal safety nets, and related services. In this case, investors can use their positions of power to liaise with regulators to determine what constitutes fair levels of tax and guideposts for their use cases. A reasonable balance between what is fair and what is feasible when it comes to taxes can create the basis for a stable and vibrant economy with enhanced investment opportunities.

Table 12. Setting goals to increase connectivity to improve labor and workers' rights

Set goals and objectives

Connectivity

Increasing connectivity to improve labor and workers' rights

Shift the paradigm such that greater responsibility for the welfare of employees is taken on by management. With this, there will be an enhanced understanding of the value of the workforce, thereby fostering the connectivity between companies and their workforce. The new paradigm forces accountability on companies and restores the balance that has been lost from an overemphasis on short-term stock price targets and maximizing value for shareholders. As part of restoring this balance, investments in labor are fundamental. Working to re-establish this connectivity will better position firms for the long-term not only by stimulating greater productivity of the workforce through competitive wages, training and job creation, but also by bolstering risk management through increased oversight.

There are three main objectives associated with greater *connectivity*:

- **Greater connectivity through top-down management throughout the supply chain.** Greater connectivity and enhanced oversight and centralized control from a systematic, top-down management improves companies' ability to connect with multiple tiers of their supply chains and ensure compliance throughout the entirety of operations.
- **Increased employee motivation and retention.** Restoring balance between investments for the short-term and the long-term help to hedge against the risk of an under-motivated staff and high turnover by demonstrating their value through investment in their potential.
- **Increased stability.** Increased investment in the labor force help to strengthen the middle class which is an important pillar of economic growth and macroeconomic stability.

Step 3: Select tools and techniques

Extend conventional portfolio management tools

Investors can incorporate income inequality into their investment activities by extending conventional portfolio management approaches. Table 13 describes the extension of conventional tools involving transparency of beliefs, security valuation and portfolio risk management, engagement with corporations, and due diligence.

Table 13. Extending conventional portfolio management tools to address income inequality

Select tools and techniques

Conventional tool	Extended to the systemic issue of income inequality	Real-world example
Reflecting systemic concerns in investment beliefs	Acknowledge that income inequality poses fundamental risks to the economy and political stability, and hence to investments across all asset classes; acknowledge the importance of addressing labor issues in contending with these risks.	Construction and Building Unions Superannuation (Cbus), an Australian industry super fund that has more than 910,000 members and manages over $85 billion in assets as of June 2023, utilizes a responsible investment policy where three of the five principles (health and safety, labor and human rights in direct operations and supply chains, and product supply chains) focus on income inequality-related issues. Specifically, Cbus believes this policy, "will reduce the volatility in financial markets brought about by climate change, social and economic inequality, and unequal access to resources such as energy, water, and food."[58]
Emphasizing systemic issues in security selection and portfolio construction	Incorporate consideration of labor-related risks relative to the long-term reputational viability and financial performance of entire industries (e.g., child and bonded labor in the apparel industry; labor practices in agricultural producers' supply chains).	Aviva investors, an asset management company with $480 billion in AUM, alongside six other asset managers refused to participate in the IPO of Deliveroo, an online food delivery company, over workers' rights issues. Aviva and the other managers refused investment due to Deliveroo classifying their riders as self-employed, meaning they would not be entitled to a minimum wage, holiday, or sick pay.[59]

Conventional tool	Extended to the systemic issue of income inequality	Real-world example
Engaging with holdings about systemic issues	Form and otherwise leverage global coalitions of investors to engage whole industries on the financial and reputational risks posed to their business models and stakeholder relations with regards to labor and employee relations.	The Committee on Workers' Capital created the Guidelines for the Evaluation of Workers' Human Rights and Labor Standards, reflecting international standards and norms (e.g., UN Guiding Principles for Business and Human Rights, OECD Guidelines for Multinational Enterprises, and ILO Fundamental Conventions). This framework recommended investors analyze companies' overall social performance against roughly 50 indicators from nine thematic areas, such as workforce composition, supply chain, pay levels, and grievance mechanics.[60]
Evaluating and selecting managers based on their consideration of systemic issues	Assess managers' ability to contend with employee relations and labor issues, specifically with relation to income inequality. Identify financial consultants capable of selecting managers attuned to these issues.	Following the reporting period of the Modern Slavery Act, HESTA, a $52 billion Australian superannuation fund for workers in health and community service sectors, engaged with all of its active managers on the presence of forced labor in their investment portfolios.[61]

For example, an initial step for investors is deciding how to allocate resources—financial and staff time—to the different assets in their portfolio. One of the challenges they face is understanding how these choices can bring about real change in addressing social and environmental challenges at a system level.

To do this properly, investors must determine which of the asset classes they invest in can best address income inequality. Each asset class comes with its own benefits and drawbacks: venture capital with a tendency to favor gig-economy workplace business models that can have systemically negative impacts; government agency bonds such as Fannie Mae that support low-income and affordable housing nationwide; public equities of companies that can influence basic labor standards for the largest employers in the country; municipal bonds that can support local economic development; and real estate that can influence the built environment positively or negatively. Each asset class offers its own special set of opportunities or challenges for investors to note in their asset allocation process and tailor as they view appropriate to the system-level issue on which they are focusing.

Table 14 illustrates some of the ways in which investors can use specific asset class features to help increase awareness of income inequality and best address its challenges.

Table 14. Considering the utility of each asset class when addressing income inequality

Public Markets: leveraging divestment and proxy voting for shareholder influence on systemic challenges	
Public equities	The Catholic organization, Franciscan Sisters of Allegany, filed a shareholder resolution with Wendy's in support of the Coalition of Immokalee Workers' and fair labor standards for farmworkers. After initially fighting the resolution, Wendy's eventually supported it in 2021.[62]
Fixed Income: using bond covenants for raising funds targeted to systemic challenges	
Bonds	In 2020, the European Commission began issuing social bonds under its SURE program to aid businesses and the unemployed impacted by COVID-19. The first of a projected €100 billion in these social bonds were issued to strong investor demand.[63]
Loans	BlueHub Capital is a community development financial institution serving low-income communities and addressing income inequality as a primary goal. Its loan fund has served customers in 28 states.[64]

Private Markets: communicating among PE investors to set best-practice industry standards addressing systemic risks

Private Equity	The Principles for Responsible Investment (PRI) created a guide for general partners at private equity firms looking to manage sustainability issues. One of the frameworks includes the possible use of a human rights violations screen when sourcing deals.[65]
Real Estate	GRESB maintains a Real Estate Assessment, an investor-driven global ESG benchmark and reporting framework for listed property companies, private property funds, developers, and investors who invest directly in real estate.[66]
Infrastructure	North America's Building Trades Unions (NABTU) maintains two objectives: to hold investment management firms to a high standard of business operations and to clearly indicate how such firms can improve their policies and practices in the years ahead.[67] NABTU evaluated Responsible Contractor Policies (RCP) across 10 criteria.[68]

Utilize advanced system-level techniques

In addition to extending conventional portfolio management tools to systemic issues, investors can go further by utilizing advanced techniques. For example, the advanced technique of Polity can contribute to crucial public discussions about what constitutes a minimum or a living wage, workers' rights, or equal pay for equal work, with particular applicability to the role of publicly traded companies. For fixed-income, the advanced techniques of Additionality and Utility can catalyze the development of new financial products that build income inequality into their design or enhance considerations in asset allocation of the wealth-creating benefits inherent in government-issued products. In the private markets, Standards Setting and Solutions can call attention to business models with solutions to income inequality challenges built in or establish expectations of best practice on labor relations for entire segments of the financial markets.

Table 15. Leveraging advanced techniques to address income inequality

Select tools and techniques

Field-building

Self-organization

PRI established a collaborative engagement on corporate tax transparency sought to create awareness within companies of investor concerns around aggressive corporate tax practices and expectations of responsible tax practice; improve company disclosures across tax policy, governance and financial reporting; and identify best practice. The coalition recognizes that corporate taxation that is effective and fit for purpose can drive sustainable development, mitigate rising inequality and support inclusive growth and prosperity. The advisory board included 10 investors including the likes of Boston Common Asset Management, Church of England Pensions Board, Hermes Investment Management, and Nordea.[69]

Interconnectedness

ShareActions's Workforce Disclosure Initiative (WDI) focuses on improving accountability and corporate transparency on workforce issues. WDI provides its 60 members (companies and investors) with $10 trillion in assets under management, with comprehensive and comparable social risk data. In 2022, WDI collected data from 167 companies in. This data covered companies' direct operations and their supply chains via a 180-question survey covering 10 thematic areas such as occupational health and safety, workers' rights and composition, and compensation.[70]

Polity

The UAW Retiree Medical Benefits Trust, a non-governmental purchaser of retiree healthcare, helped establish the Human Capital Management Coalition (HCMC). Supported by 36 institutional investors with over $9 trillion in AUM, HCMC petitioned the Securities and Exchange Commission to require company disclosure of human capital management policies and practices. HCMC asserted such disclosures were "fundamental to human capital analysis," and included workforce culture and empowerment, workforce health and safety, human rights, and workforce compensation and incentives in their disclosure requirements.[71]

Investment enhancement

Standards setting

Cleaning Accountability Framework (CAF), a multi-stakeholder coalition of investors (including Australian Super and AMP Capital), unions, real estate developers, facility managers, academic institutions, and the Australian government's Fair Work Ombudsman department. CAF promotes responsible contractor policies to protect the rights of workers who are providing cleaning services to properties owned by institutional investors. Among its activities, CAF provides its members, including investors, with a Code of Conduct and a procurement toolkit with industry- and market-specific pricing and quality-of-service benchmarks. To encourage the adoption of the standards, CAF has a certification and rating program for contractors.[72]

Solutions

The Isibaya Fund is a division of the Public Investment Corporations, the largest investment manager on the African Continent. The Isibaya Fund invests in high impact areas for socioeconomic development that bring financial returns and social dividends to the country. The Fund's areas of focus include Black economic empowerment, renewable energy, healthcare, education, and other infrastructure development projects that help to create jobs, relieve poverty, and transform the economy.[73]

Diversity of approaches

CCLA Investment Management, a manager for charities, religious organizations, and the public sector, has convened Find it, Fix it, Prevent it, an investor initiative with more than $18 trillion in AUM to mobilize the U.K. investment community to work against modern slavery. This initiative aims to promote public policy, increase corporate engagement, improve data disclosure, and commission a new rating tool – all through a coalition of 65 supporters, such as Australian Super, Fidelity International, and Schroders. Further, this initiative coordinates between investors, NGOs, and academics to develop data points around modern slavery, then lobbies ESG data houses to include them in standard rating products and work with governments.[74]

Opportunity generation

Additionality

Bridges Fund Management, a private markets investor that specializes in sustainable and impact investing, targets opportunities that create jobs and improve the skills of workers, such as vulnerable young people and aging populations. Bridges also promotes healthcare in historically underserved communities while emphasizing sustainable living.[75]

Evaluations

CalPERS, the pension fund for the civil service employees of the State of California, believes that "Long-term value creation requires effective management of three forms of capital: financial, physical, and human." Among the essential aspects of human capital management in long-term value creation, it includes "fair labor practices, health and safety, responsible contracting, and diversity"—all considerations that factor directly into stock price valuation but nevertheless have intrinsic value that is difficult to quantify.[76]

Locality

Prudential Impact Investing Unit (PII), an impact fund operated by Prudential Investment Management (PGIM), has made over $1B in community-focused impact investments between 2014 and 2020 in Newark, New Jersey. These investments were made to bolster underserved populations in Newark, promoting economic advancement and social mobility.[77]

Utility

Heron Foundation, a private foundation focused on community economic development, utilized two fixed-income investments, loans and bonds, to build affordable housing in communities in the San Joaquin Valley of California. These two investments, especially when issued by governments to support non-profits, significantly promote the building of infrastructure and public goods. These investments later resulted in a more stable community, further loans from other entities, and the stabilization of Self-Help Enterprises, a local non-profit focused on building and maintaining homes.

Step 4: Assess progress

For income inequality, with a focus on labor and workers' rights, considerations for assessing progress across multiple levels of investor action might include:

Table 16. Assessing system-level progress on increasing connectivity to improve labor and workers' rights

Assess progress

Level of investor action	Considerations for assessing progress
Investor action at the **company/ portfolio level**	• Capital and other support provided to funds and companies improving the health and well-being of workers in its portfolio and respective supply chains as a core value-add • Employee welfare metrics tracked against portfolio- and investment-level goals (e.g., workplace conditions, competitive wages, financial health and stability) • Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/opportunities • Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives • Progress tracking against system-level goals and frameworks such as UN Guiding Principles for Business and Human Rights
Collective behavior at the **industry/ sector level**	• A substantial percentage of investors increasingly integrate more thoroughly employee and labor relations as risk and reward factors in security valuation or create funds that include companies with notably strong relations in these areas. Employee and labor relations as a material investment factor have performance-enhancing potential. In addition, investors' assessment of these factors sends a signal to corporate management that investors consider important how these issues are handled. • A substantial percentage of investors support the creation of comprehensive, practical databases of information on the nature of workforce relations, with specific attention to the nature of wages, health and retirement benefits and other basics of employment, across the supply chain in developed and developing countries. When widely available, this data can enhance investors' understanding of the quality of companies' workforce relations and help in assessments of these fundamentals' role in maintaining the cohesion of the corporate entity itself. • A substantial percentage of investors engage public and private corporations, real estate developers and managers, municipalities, and other entities on the quality of their labor and employee relations, with an emphasis on their use of third-party vendors. Direct communications on these issues can help investors clarify their view of an appropriate balance between short-term cost control and long-term value creation in these relations.

Collective behavior at the **industry/ sector level**	• A substantial percentage of investors implement and advocate for policies that provide a competitive advantage through investment programs for entities with records of strong employee and labor relations. Policies that favor companies with strong employee and labor relations, other factors including quality and price being equal, can potentially create a virtuous circle of stable, resilient and mutually supportive relations between management and those it employs. • A substantial percentage of investors articulate the importance of the intangible values of strong employee and labor relations as embodied in such concepts as human capital. Recognition of this sort can lead to a paradigm shift in investment and corporate management through which the connection between corporate management and employees can be enhanced, fissuring within the workplace can to a reasonable extent be repaired, and a balance between income equity and cost control be managed.
Beta building at the **system level**	Greater *connectivity* through: • **Top-down management throughout the supply chain** Greater connectivity and enhanced oversight and centralized control from a systematic, top-down management improves companies' ability to connect with multiple tiers of their supply chains and ensure compliance throughout the entirety of operations. • **Increased employee motivation and retention.** Restoring balance between investments for the short-term and the long-term help to hedge against the risk of an under-motivated staff and high turnover by demonstrating their value through investment in their potential. • **Increased stability.** Increased investment in the labor force help to strengthen the middle class which is an important pillar of economic growth and macroeconomic stability.

An example logic model focused on labor and workers' rights is outlined in Figure 9 below. In this instance, the system-level goal is to shift the paradigms of the system toward more connectivity between management and workforce. Investors can help to increase connectivity through tools and techniques such as engaging with holdings, interconnectedness, and diversity of approaches. When assessing the progress of those practices toward achieving system-level progress, investors can look to a number of signals at the portfolio, sector, and system levels. Note that examples are suggestive and not exhaustive.

Figure 9. Example logic model applied to labor and workers' rights

Identify systemic issues

✓ **Consensus:** The issue of living wages, among others, is broadly recognized as a crucial component of healthy societal systems. Simply put, society cannot function smoothly without them.

✓ **Relevance:** Income inequality slows economic growth, leads to more frequent and deeper recessions, limits upward mobility, aggravates social cohesion, and exacerbates political polarization.

✓ **Effectiveness:** To mitigate current income disparity, investors can support calls for fair compensation and a living wage, both in the companies they invest in and other industries at large.

✓ **Uncertainty:** While the effects of income inequality on social and economic stability are understood, the precise timing, magnitude and mechanisms of income inequality's effects are uncertain.

Set goals & objectives

☑ **Connectivity:** Shift the paradigm such that greater responsibility for the welfare of employees is taken on by management. With this, there will be an enhanced understanding of the value of the workforce, thereby fostering the connectivity between companies and their workforce. The new paradigm forces accountability on companies and restores the balance that has been lost from an overemphasis on short-term stock price targets and maximizing value for shareholders. As part of restoring this balance, investments in labor are fundamental. Working to re-establish this connectivity will better position firms for the long-term not only by stimulating greater productivity of the workforce through competitive wages, training and job creation, but also by bolstering risk management through increased oversight.

Select tools & techniques

☑ **Engaging with holdings about systemic issues:** Investor forms and leverages global coalitions to engage whole industries on the financial and reputational risks posed to their business models and stakeholder relations with regards to labor and employee relations. Investor is an early adopter of the Guidelines for the Evaluation of Workers' Human Rights and Labor Standards, a framework which helps investors analyze companies' overall social performance against roughly 50 indicators from nine thematic areas, such as workforce composition, supply chain, pay levels, and grievance mechanics. This analysis is a core part of the investor's due diligence process and engagement strategy.

☑ **Interconnectedness:** Investor helps to increase the flow of information and communication about income inequality with peers, initiatives, and the public. Investor is a founding member of ShareAction's Workforce Disclosure Initiative (WDI), which focuses on improving accountability and corporate transparency on workforce issues. WDI provides comprehensive and comparable social risk data covering companies' direct operations and their supply chains via a 180-question survey covering 10 thematic areas such as occupational health and safety, workers' rights and composition, and compensation. Investor's portfolio companies are expected to submit data and encourages them to share this data with their other investors.

☑ **Diversity of approaches:** Investor uses a diverse range of investment tools to address the complex challenges of income inequality. Investor convened an investor initiative with nearly $10 trillion in AUM to mobilize the U.K. investment community to work against modern slavery. This initiative aims to promote public policy, increase corporate engagement, improve data disclosure, and commission a new rating tool. The initiative coordinates between investors, NGOs, and academics to develop data points around modern slavery, then lobbies ESG data houses to include them in standard rating products and work with governments.

Assess progress

Investor action at the company/portfolio level:

- Capital and other support provided to funds and companies improving the health and well-being of workers in its portfolio and respective supply chains as a core value-add
- Employee welfare metrics tracked against portfolio- and investment-level goals (e.g., workplace conditions, competitive wages, financial health and stability)
- Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/opportunities
- Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives
- Progress tracking against system-level goals and frameworks such as UN Guiding Principles for Business and Human Rights

Collective behavior at the industry/sector level:

- A substantial percentage of investors increasingly integrate more thoroughly employee and labor relations as risk and reward factors in security valuation or create funds that include companies with notably strong relations in these areas. Employee and labor relations as a material investment factor have performance-enhancing potential. In addition, investors' assessment of these factors sends a signal to corporate management that investors consider important how these issues are handled.
- A substantial percentage of investors support the creation of comprehensive, practical databases of information on the nature of workforce relations, with specific attention to the nature of wages, health and retirement benefits and other basics of employment, across the supply chain in developed and developing countries. When widely available, this data can enhance investors' understanding of the quality of companies' workforce relations and help in assessments of these fundamentals' role in maintaining the cohesion of the corporate entity itself.
- A substantial percentage of investors engage public and private corporations, real estate developers and managers, municipalities, and other entities on the quality of their labor and employee relations, with an emphasis on their use of third-party vendors. Direct communications on these issues can help investors clarify their view of an appropriate balance between short-term cost control and long-term value creation in these relations.

Collective behavior at the industry/sector level (Cont):

- A substantial percentage of investors implement and advocate for policies that provide a competitive advantage through investment programs for entities with records of strong employee and labor relations. Policies that favor companies with strong employee and labor relations, other factors including quality and price being equal, can potentially create a virtuous circle of stable, resilient and mutually supportive relations between management and those it employs.
- A substantial percentage of investors articulate the importance of the intangible values of strong employee and labor relations as embodied in such concepts as human capital. Recognition of this sort can lead to a paradigm shift in investment and corporate management through which the connection between corporate management and employees can be enhanced, fissuring within the workplace can to a reasonable extent be repaired, and a balance between income equity and cost control be managed.

Beta building at the system level:

Greater connectivity through:

- **Top-down management throughout the supply chain.** Greater connectivity and enhanced oversight and centralized control from a systematic, top-down management improves companies' ability to connect with multiple tiers of their supply chains and ensure compliance throughout the entirety of operations.
- **Increased employee motivation and retention.** Restoring balance between investments for the short-term and the long-term help to hedge against the risk of an under-motivated staff and high turnover by demonstrating their value through investment in their potential.
- **Increased stability.** Increased investment in the labor force help to strengthen the middle class which is an important pillar of economic growth and macroeconomic stability.

Part VI: Applying the Guidance to Racial Inequity [xi]

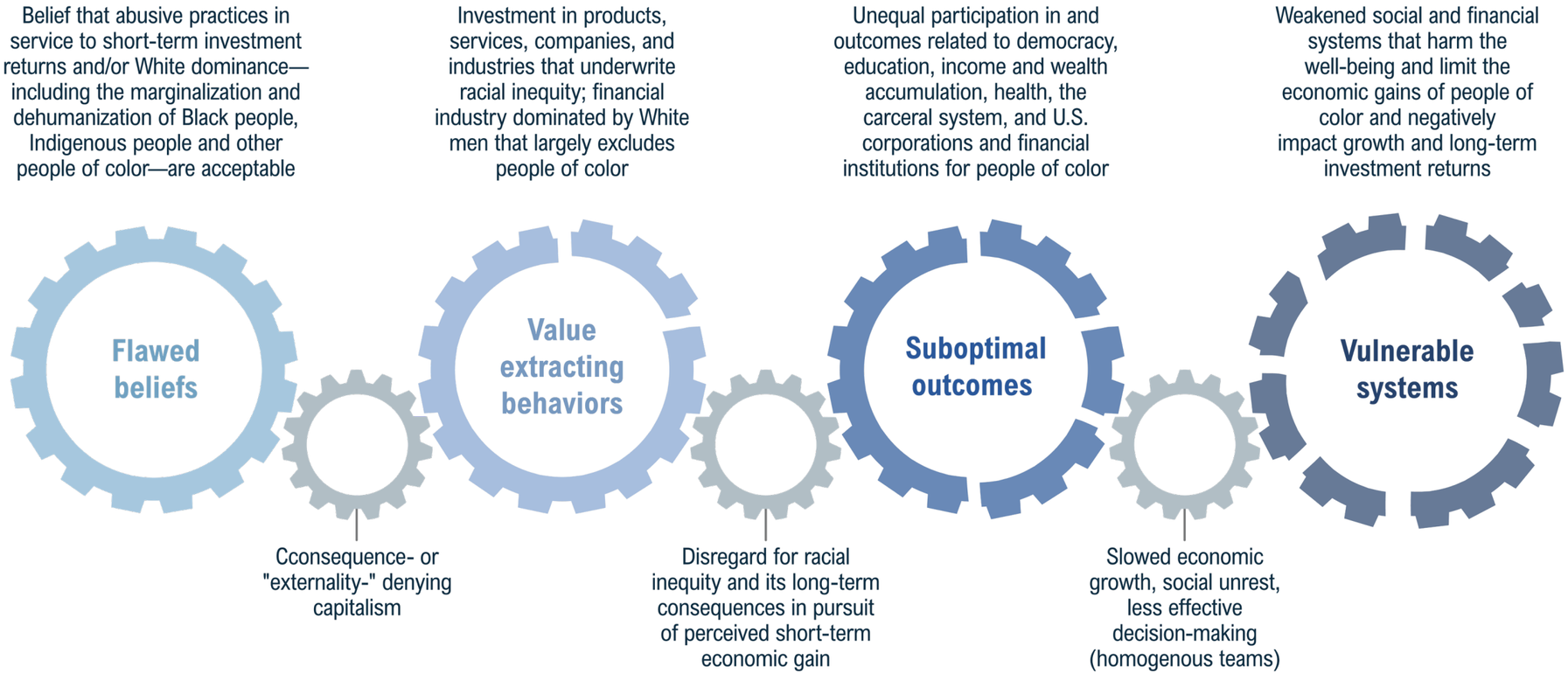
Racial inequity is the "unequal distribution of resources, power, and economic opportunity across race [and ethnicity] in a society."[78] In the U.S., racial inequity underpins the broader system of racial injustice and manifests as substantial and persistent unequal participation in and outcomes related to society and the financial system for Black/African American, Indigenous, Latine/o/a/x, East and South Asian and Arab and Middle Eastern people relative to their White peers. This includes but is not limited to unequal participation in and outcomes related to democracy, education, income and wealth, health, the carceral system, and U.S. corporations and financial institutions.

Racial inequity is a structural, systemic challenge that is affected by and that affects all aspects of life in the U.S. and threatens the health of American social and financial systems. Fully acknowledging the moral and ethical abhorrence of racial inequity, it has caused incalculable harm to people from historically marginalized groups and specifically threatens economic growth, social stability, and, in turn, long-term investment returns. Racial inequity is but one manifestation of the externality-denying capitalism that has come to characterize financial markets. Recall that externality-denying capitalism is the process of how investors internalize the gains and benefits of their investments but externalize or shift the costs of these investments on to the environment and society. This cost-shifting has created an incomplete accounting of what drives markets, investment opportunities, and returns–revealing only the benefits accrued by the invisible hand of the market but obscuring or otherwise hiding the unmentionable foot of the market (the "accumulation of social and ecological problems").[79]

There is broad consensus as to the importance and relevance of racial inequity to investors across asset classes. Simply diversifying investment portfolios will not insulate investors from related uncertainty and the negative economic consequences of racial inequity over the long term. In short, there is nowhere for investors to hide.

[xi] The section draws from TIIP's report "Introduction to Racial Inequity as a Systemic Risk: Why Investors Should Care and How They Can Take Action." For more of an elaborate treatment on the key points covered here, see https://tiiproject.com/introduction-to-racial-inequity-as-a-system-risk/

Figure 10. Racial inequity: Flawed beliefs, value extracting behaviors, suboptimal outcomes, and vulnerable systems



Furthermore, racial inequity is not a uniquely American problem–it is a systemic risk across the world and across global financial markets. Thus, lessons discussed in this context might also be applicable in other contexts when adapted to consider local history, differences between groups involved, local power dynamics, and the regulatory environment.

Step 1: Identify systemic issues

Racial inequity is the result of centuries of policies and practices designed to ensure White dominance in a racialized hierarchy and to justify the marginalization and dehumanization of people of color. Many of these policies and practices date back to before the U.S. was even founded and center around the "appropriation of the physical, financial, labor, and other resources" by White people from people of color. This includes the genocide of and theft of land from Indigenous people, the enslavement of African people, Anti-Chinese and Japanese sentiment, and discrimination against Latine/o/a/x/ people–the list goes on. The negative economic and social impacts and legacies of these and other de jure and de facto policies and practices in the U.S. persist today, including but not limited to:

- Workers of color earn on average $0.84 for every $1.00 earned by White workers;[80]
- People of color are substantially more likely than White people to live in poverty;[81]
- Most children of color attend poorer-resourced schools with larger class sizes, lower quality curriculum, and less qualified teachers than White students–all of which negatively influences academic performance;[82]
- People of color have higher rates of chronic illnesses like diabetes, hypertension, obesity, asthma, and heart disease than White people; and[83]
- Black/African Americans are incarcerated in state prisons at nearly five times the rate of White people.[84]

Table 17. Identifying racial inequity as a systemic issue

Identify systemic issue

Consensus about the issue's importance	In the U.S., racial inequity manifests as persistent unequal participation in and outcomes related to society and the financial system for Black/African American, Indigenous, Latine/o/a/x, East and South Asian, and Arab and Middle Eastern people relative to their White peers. This includes but is not limited to democracy, education, income and wealth accumulation, health, and the carceral system, and U.S. corporations and financial institutions.
Relevance to investors	Racial inequity threatens economic growth, social stability, and, ultimately, long-term investment returns. Not only is racial inequity morally and ethically abhorrent, but it also comes at a cost. The marginalization of Black/African-Americans alone cost the U.S. economy an estimated $16 trillion in Gross Domestic Product (GDP) between 2000 and 2020.[85] The U.S. cannot reach its full economic and growth potential, and effectively compete in the global economy, if it continues to exclude people of color from fully participating in its economy–especially given that people of color will make up the majority of the U.S.' population (approximately 52%) by 2050.[86] Major disparities in income, wealth, opportunity, and power–like those between people of color and White people in the U.S.–also lead to social discontent, tension, and unrest. Such social instability increases market volatility and uncertainty and creates a general sense of economic instability, impacting investment opportunities across all asset classes.[87]
Effectiveness of investor action	To mitigate racial inequity, investors can utilize both portfolio- and system-level tools to: (a) commit to equitably including people of color in the financial industry, and to ensuring that their investee companies and their supply chains do the same; and (b) use their individual and collective voices to help to reform discriminatory and biased social structures in the U.S.
Uncertainty about potential outcomes	Racial inequality creates issues with difficult-to-predict outcomes, such as social instability that increases market volatility and uncertainty and creates a general sense of economic instability therebylevel of diminishinged economic growth and stability, as well as uncertain political continuity.

Step 2: Set goals and objectives

If investors do not act now to address racial inequity and its risks, people of color will continue to suffer–and so too will investors' bottom lines. While today's investment professionals did not create the systemic risk of racial inequity (it has been central to life and economic activity in the U.S. for centuries), they are perpetuating the problem whether they acknowledge it or not. This includes everything from not recognizing their direct and indirect contributions to the systemic risk of racial inequity (e.g., excluding people of color from full participation in the financial industry and investing in products/services, companies, and industries that underwrite racial inequity) to knowingly disregarding racial inequity and its long-term consequences in pursuit of short-term economic gain. Consciously or not, allowing racially inequitable practices to persist is tantamount to co-signing them.

Investors must identify, confront, and address their contributions to the problem. There are two key actions that U.S. financial industry can take to leverage its power and work alongside government and civil society to effectively influence racial inequity–not just to promote the equal distribution of resources, power, and economic opportunity across all races and ethnicities in the U.S., but to support economic growth, improve business outcomes, fortify long-term investment returns, and help to set the U.S. on a path to racial justice: ensure racial equity at U.S. corporations and financial institutions, and contribute to the development of racially equitable social structures.[88]

Leverage points for racial inequity

Ensure racial equity at U.S. corporations and financial institutions. Only 17.5% of Fortune 500 board seats were held by people of color and White men manage nearly 98% of financial assets in the U.S.[89] This is not surprising given that existing leadership and personnel recruitment, hiring, compensation, and retention norms, policies, and practices across many industries–and the U.S. financial industry in particular–reflect in-group bias toward the employ, promotion, and retention of White people (and White men in particular), perpetuating (and exacerbating) racial inequity. This includes everything from asset owners requiring that prospective asset managers provide at least a 20-year track record (the oldest Black-owned asset management firms, for example, are only 30 years old) to conscious and unconscious bias against the hiring and promotion of financial professionals of color–barriers that have been acknowledged by the U.S. Securities and Exchange Commission (SEC).[90]

Investors can take steps to ensure parity, such that the racial and ethnic composition of the leadership and personnel of U.S. financial institutions, investee companies, and their supply chains mirrors that of society, and that personnel from across all the above earn equal compensation for equal work. Investors should do so not only to ensure equitable inclusion of people of color in U.S. corporations and financial institutions, but also to promote their equitable participation in decisions about things like where and how capital is deployed. Diversifying teams is not just the right thing for investors to do, it will improve team decision-making and help them make more money.

Contribute to the development of racially equitable social structures. As is discussed above, the underlying social structures in the U.S.–structures related to democracy, education, income and wealth accumulation, health, the carceral system, and, increasingly, technology–do not support and promote the full, equitable participation of people of color in society and the financial system. They are the foundation upon which the U.S. economy and financial system are built and underpin all investment activity.

Given that racial inequity permeates all aspects of life and economic activity in the U.S., there is no shortage of ways that investors from across asset classes can act to support the replacement of discriminatory and biased social structures with those that promote racial equity and advance racial justice. They can do so not only to improve societal well-being, but to promote economic growth and strengthen the financial system.

Table 18. Setting goals to establish racial equity at U.S. corporations and financial institutions and establish racially equitable social structures

Set goals and objectives

Connectivity, Clarity & Directionality	**Increasing connectivity, clarity, and directionality to improve racial equity** Create a new paradigm of increased racial equity and reduced or eliminated racial inequity to ensure parity such that the racial and ethnic composition of the leadership and personnel of U.S. financial institutions, investee companies, and their supply chains better mirror that of society, and that personnel earn equal compensation for equal work. Doing so will help to ensure equitable inclusion of people of color in U.S. corporations and financial institutions, and to promote their equitable participation in decisions about where and how capital is deployed (increasing connectivity). Disaggregated data for both public companies and private, as well as other investors, including private institutions of all types whether they be structured as a nonprofit or a for profit entity will be critical. This information would create a baseline of information which could be used to determine which entities are actually achieving parity and which are lagging, creating decision-useful information which could then be tracked over time when evaluating progress (increasing clarity).

Connectivity, Clarity & Directionality

A similar shift in the underlying social structures in the U.S. (increasing directionality)–structures related to democracy, education, income and wealth accumulation, health, and the carceral system (which continue to propagate racial inequity)–would serve to support and promote the full, equitable participation of people of color in society and the financial system.

There are three main objectives associated with the new paradigm:

- **Increased economic growth.** The U.S. economy reaches full economic and growth potential, and more effectively competes in the global economy, by ensuring the full, equitable participation of people of color in the American society and U.S. financial system and economy.[91]
- **Increased stability.** Major disparities in income, wealth, opportunity, and power–like those between people of color and White people in the U.S.–are addressed, leading to decreases in social discontent, tension, and unrest.
- **Increased consumer spending and tax revenues.** Improved racial equity grows the economy via substantial increases in consumer spending, coupled with increased tax revenues and decreases in social services and health spending.

Step 3: Select tools and techniques

Extend conventional portfolio management tools

Investors can extend conventional investment practices to manage systemic risks like racial inequity. Examples of these tools put in practice are in Table 19 below.

Table 19. Extending conventional portfolio management tools to address racial inequity

Select tools and techniques

Conventional tool	Extended to the systemic issue of income inequality	Real-world example
Reflecting systemic concerns in investment beliefs	Develop a statement of beliefs that articulates the fundamental perceptions of trustees and their institutions on the nature of financial markets and the role they play in these markets–that transparently conveys beliefs about the significance of racial inequity to investments across all asset classes.	Kellogg Foundation, a leader in the racial equity movement among foundations with a stated goal of achieving transformational systemic change, targets "racial equity via investments in people, products, services and communities, uncovering undervalued opportunities and demonstrating that racial equity impact and returns are aligned rather than in opposition." They also cite an approach to investing "that rethinks assumptions about risk, as part of reshaping the capital market system to dismantle historical biases and barriers."[92] Secondly, Nia Impact Capital, a public markets investor focused on creating a regenerative, just, and inclusive economy, recommends the development of Investment Policy Statements that incorporate racial justice goals and objectives.[93]
Emphasizing systemic issues in security selection and portfolio construction	Assess racial inequity and its impacts on industries and/or stakeholder issues across all portfolios, in addition to regular investment analysis.	Zevin Asset Management, a socially responsible investment manager with nearly $500 million in asset under management, has articulated a robust approach to both a research process and active ownership that reflects their organization-wide commitment to racial equity and anti-racism. This approach evaluates public companies along five dimensions: Products and Services, Data Disclosures, Policies and Practices, Workforce Composition and Governance and Oversight.[94]

Conventional tool	Extended to the systemic issue of income inequality	Real-world example
Engaging with holdings about systemic issues	Engage with entire industries–not just individual corporations or firms–on the financial implications of racial inequity. Hold them accountable for their racial equity promises.	Service Employees International Union (SEIU), a union of about 2 million diverse members in healthcare, the public sector and property services, alongside the CtW Investment Group, Trillium Asset Management, and the New York State Comptroller's Office, filed shareholder proposals at major corporations like Amazon and Wells Fargo to conduct third-party "racial justice audits" of operations and practices.[95]
Evaluating and selecting managers based on their consideration of systemic issues	Assess managers' skills at managing the systemic social risk of racial inequity. Support them in improving these skills and hold them accountable for progress over time.	Wealth management firm Veris Wealth Partners has a diligence framework for fund manager evaluation and selection that seeks to identify those managers that are "diverse and inclusive at all levels of the organization, have an EDI [equity, diversity and inclusion] lens in their investment process, are focused on intentional investments in under-resourced communities, and are working to dismantle obstacles to racial and gender equity through their policies, practices and investments."[96]

Furthermore, racial inequity is not a uniquely American problem–it is a systemic risk across the world and across global financial markets. Thus, lessons discussed in this context might also be applicable in other contexts when adapted to consider local history, differences between groups involved, local power dynamics, and the regulatory environment.

Table 20. Considering the utility of each asset class when addressing racial inequity

Public Markets: leveraging divestment and proxy voting for shareholder influence on systemic challenges

Public equities

One of the primary ways public equity investors have focused on racial equity is through the lens of workplace equity. Relatively new products such as the Impact Shares NAACP Minority Empowerment ETF (NACP), a fund tracking the Morningstar® Minority Empowerment Index, focuses on companies that are "empowering to minorities." This includes using social criteria centered around workplace equity, with board diversity, discrimination policy, and scope of supplier social programs as three of its main screens. While this ETF represents a starting point in the thematic fund category, some investment advisors have flagged that the issue analysis for the fund needs to be deepened given the companies represented in its top holdings.[97]

Fixed Income: using bond covenants for raising funds targeted to systemic challenges

Bonds

Inclusiv's Racial Equity Investment Fund is one example of a strategy focused on access to capital through a racial equity lens. Inclusiv, a federation of Community Development Credit Unions (CDCUs), aims to distribute $20 million to at least 15-20 credit unions through its fund in an effort to mitigate the economic distress caused by both financial exclusion among minority groups and COVID-19. The purpose of this fund is to provide capital leveraging opportunities to credit unions in communities of color through secondary capital investments, a source of long-term equity-like debt that strengthens the balance sheet of member institutions.[98]

Loans

Calvert Impact Capital, a global nonprofit investment firm that has mobilized $5 billion to build and grow local community and green finance organizations, leads the Southern Opportunity and Resilience (SOAR) Fund, working in partnership with national and community lenders, faith-based entities, and philanthropic organizations to leverage private debt in support of BIPOC businesses and families. Launched in early 2021, Calvert Impact's SOAR Fund aims to help raise $150 million in capital to provide loans to low-income, rural communities and women and BIPOC business owners through a network of established CDFIs. This program will take place in 15 southern states and also offer business support to entrepreneurs as they recover from the economic crisis created by COVID-19.[99]

Private Markets: communicating among PE investors to set best-practice industry standards addressing systemic risks

Private Equity	The Equilibrium Impact Ventures, led by Dr. Shante Williams, invests in "mission-driven startups to support sustainable social impact" and tracks their impact by leveraging values-aligned partner collaborations and SDG metrics. In addition, Equilibrium places equity at the forefront of their investment thesis by allocating at least 66% of their funding to BIPOC and women founders.[100]
Real Estate	In Oakland, California, where gentrification displaces BIPOC community members, the East Bay Permanent Real Estate Cooperative facilitates BIPOC and allied communities to cooperatively organize, finance, purchase, occupy, and steward properties, thus taking them off the speculative market and enabling a community-driven land and housing ownership approach.[101]
Infrastructure	Prudential Financial has used a coordinated set of infrastructure and impact investments in a concentrated set of interconnected initiatives to help revitalize downtown Newark, New Jersey. As part of this $1.1 billion initiative, Prudential has made $500 million in infrastructure investments and $438 million in impact investments, which it has supplemented with $197 million in grants and corporate contributions. Among its infrastructure projects in Newark are the headquarters for its Prudential Global Investment Management division; a nearly $50 million investment in the renovation of the former Hahne department store into a multi-use building including 160 units of affordable and market-rate housing, an arts and cultural incubator, a food supermarket, restaurants, and retail stores;[102] and a $6 million investment in the West Ward's Georgia King Village 422-unit affordable housing complex. In addition, among its support for local business is a $5.25 million investment in AeroFarms, an innovative indoor farming company headquartered in Newark. Prudential supplements these investments with grants to build out the public and non-profit infrastructure of downtown.[103]

Utilize advanced system-level techniques

Investors can additionally leverage advanced system-level investing techniques that focus on amplifying positive influence on racial equity through collaboration (field building), enhancing the way that they and other investors make investments (investment enhancement), and creating and using investment opportunities designed to address racial inequity and strengthen the broader social system (opportunity generation). See Table 21 for more.

Table 21. Leveraging advanced techniques to address racial inequity

Select tools and techniques

Field-building

Self-organization

The Institutional Allocators for Diversity, Equity and Inclusion (IADEI) is a group of universities, foundations, hospitals, and churches who have come together to conduct research and engage with others in the markets to promote racially equitable approaches. They have done significant work providing guidance to institutional investors on how to select diverse fund managers, among other resources.[104]

Interconnectedness

Asset manager Illumen Capital and behavior science "do tank" Stanford SPARQ published a peer review report, "Race influences professional investors' financial judgments," in the Proceeding's of the National Academy of Sciences journal in 2019. Since then, they have sought to help investors "become aware of their own implicit biases so they can make better investment decisions and generate more impact and financial value in the process."[105]

Polity

SEIU has also produced reports on diversity in asset management[106] and advocated for and against policy changes at the SEC.[107]

Investment enhancement

Standards setting

The Global Impact Investing Network (GIIN) has created standards for racially equitable investing for investors to incorporate into their investment strategies.[108]

Solutions

In 2022, Capital Impact Partners, part of the Momentus Capital family of companies, issued a $5 million Racial Equity Bond in support of real estate developers of color, who have "historically faced significant barriers resulting from generations of structural racism and disinvestment." The bond will help underrepresented developers "create generational wealth, construct developments that are aligned with community needs, and build more affordable housing."[109]

Diversity of approaches

In 2020, JPMorgan Chase committed $30 billion to advance racial equity through a range of activities that would "break down systems that have prorogated racism and widespread economic inequality, especially for Black and Latinx people." These commitments included: 1) Promotion and expansion of affordable housing and homeownership for underserved communities; 2) Growing Black and Latine/o/a/x owned businesses; 3) Improving access to banking in Black and Latine/o/a/x communities; and 4) Building a more diverse and inclusive workforce. By 2022, JPMorgan had also invested more than $100 million of equity in Minority Depository Institutions (MDIs) and Community Development Financial Institutions (CDFIs) and committed $128 million of its five-year $2 billion philanthropic target. It also elevated DEI standards as part of its supply chain assessment and created governance process to oversee the overall effort, reporting to the Board of Directors.[110]

Opportunity generation

Additionality

Common Future, a network of leaders rebuilding an inclusive economy, deploys racially equitable investment tactics such as Character Based Lending and Revenue Based Financing to directly address racialized inequities in funding for communities of color.

Evaluations

Groups like Citi GPS and the W.K. Kellogg Foundation calculate that improving equity between White Americans and Black/African Americans could grow the economy by $8 trillion by 2050, or even by as much as 0.35 percentage points per year (totaling approximately $5 trillion over five years).[111] Substantial increases in consumer spending, coupled with increased tax revenues and decreases in social services and health spending, would be the cornerstone of this growth. For instance, facilitating access to higher education for people of color would increase the lifetime earnings of Black/African American students by an estimated $90 to $113 billion over five years.[112]

Locality

In 2021, the W.K. Kellogg Foundation invest $3 million as a program-related investment in a 5-year, 1% senior loan in Navajo Power, a majority indigenous-owned Public Benefit Corporation that develops utility-scale clean energy projects on indigenous lands. The investment was structured as a loan vs equity to preserve indigenous ownership and control and support Navajo Power's mission "to develop more than $3 billion of clean energy infrastructure in Tribal communities by 2030."[113]

Utility

The black-woman led and owned asset manager Impact America Fund (IAF), now on Fund III, invests in early-stage investments in tech-driven businesses that create new frameworks of ownership and opportunity within marginalized communities. IAF views the lived experience of founders of color as "a competitive advantage" and believes that "venture capital can help advance economic justice" with their approach.[114]

Step 4: Assess progress

For racial inequity, with a focus on ensuring racial equity at U.S. corporations and financial institutions and creating racially equitable social structures, considerations for assessing progress across multiple levels of investor action might include:

Table 22. Assessing system-level progress on increasing connectivity, clarity, and directionality to improve racial equity

Assess progress

Level of investor action	Considerations for assessing progress
Investor action at the **company/ portfolio level**	• Capital and other support provided to funds and companies focused on the equitable participation, inclusion and compensation of people of color • Equity metrics tracked against portfolio- and investment-level goals (e.g., ownership share/decision making power, access to financial/other services) • Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/opportunities • Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives • Progress tracking against system-level goals such as Due Diligence 2.0 and ILPA DIA

Level of investor action	Considerations for assessing progress
Collective behavior at the **industry/ sector level**	• A substantial percentage of investors join or establish organizations that build the financial system's capacity to address racial inequity. • A substantial percentage of investors disseminate information about racial inequity to peers, clients, and the public - to build trust and increase the alignment necessary to establish shared goals and pursue effective collaborative action. • A substantial percentage of investors participate in and otherwise amplify public policy debates about governmental rules and regulations that impact exposure to the risks of racial inequity. • A substantial percentage of investors identify opportunities to collaborate with other investors to amplify messaging and influence about racial and ethnic bias in governance, personnel, and pay norms, policies, practices, and procedures across the financial industry, in investee companies, throughout their supply chains and within their investment practices. • A substantial percentage of investors help to establish standards and norms that provide the basis for engagement or investment in/divestment from industries related to racial inequity. • A substantial percentage of investors pursue investments and promote business models that help to resolve racial inequity, rather than profit from it. • A substantial percentage of investors utilize a diverse range of investment approaches to maximize overall positive impact on racial equity. • A substantial percentage of investors identify or develop and utilize standards for the disclosure of data on the disaggregated racial and ethnic composition and pay of leadership teams and personnel at financial institutions, investee companies, and throughout their supply chains. • A substantial percentage of investors identify or develop and utilize standards for engaging with industries and your investee companies therewithin to about the racial and ethnic composition and pay of leadership teams and personnel. • A substantial percentage of investors use financial products explicitly designed to and focused on addressing racial inequity; design new products when necessary. • A substantial percentage of investors evaluate the inherent worth of the systemic intangibles of social and human capital. • A substantial percentage of investors focus investments within a specific geographic region to increase its resilience to racial inequity. • A substantial percentage of investors maximize the societal uses for which specific asset classes were explicitly created to address racial inequity.

Level of investor action	Considerations for assessing progress
Beta building at the **system level**	Greater *connectivity, clarity, and directionality* through: • **Increased economic growth.** The U.S. economy reaches full economic and growth potential, and more effectively competes in the global economy, by ensuring the full, equitable participation of people of color in the American society and U.S. financial system and economy. • **Increased stability.** Major disparities in income, wealth, opportunity, and power–like those between people of color and White people in the U.S.–are addressed, leading to decreases in social discontent, tension, and unrest. • **Increased consumer spending and tax revenues.** Improved racial equity grows the economy via substantial increases in consumer spending, coupled with increased tax revenues and decreases in social services and health spending.

An example logic model focused on racial inequity is outlined in Figure 11 below. In this instance, the goal is to shift the paradigms of the system toward more connectivity, clarity, and directionality. Investors can do so through tools and techniques including engaging with holdings, self-organization, polity, and standard setting. When assessing the progress of those practices toward achieving system-level progress, investors can look to a number of signals at the portfolio, sector, and system levels. Note that examples are suggestive and not exhaustive.

Figure 11. Example logic model applied to ensuring racial equity at U.S. corporations and financial institutions and the development of racially equitable social structures

Identify systemic issues

✓ **Consensus:** In the U.S., racial inequity manifests as persistent unequal participation in and outcomes related to society and the financial system for Black/African American, Indigenous, Latine/o/a/x, East and South Asian, and Arab and Middle Eastern people relative to their White peers. This includes but is not limited to democracy, education, income and wealth accumulation, health, and the carceral system, and U.S. corporations and financial institutions.

✓ **Relevance:** The U.S. cannot reach its full economic and growth potential, and effectively compete in the global economy, if it continues to exclude people of color from fully participating in its economy. Major disparities in income, wealth, opportunity, and power also lead to social discontent, tension, and unrest. Such social instability increases market volatility and uncertainty and creates a general sense of economic instability, impacting investment opportunities across all asset classes.

✓ **Effectiveness:** To mitigate racial inequity, investors can utilize both portfolio- and system-level tools to: (a) commit to equitably including people of color in the financial industry, and to ensuring that their investee companies and their supply chains do the same; and (b) use their individual and collective voices to help to reform discriminatory and biased social structures in the U.S.

✓ **Uncertainty:** Racial inequality creates issues with difficult-to-predict outcomes, such as social instability that increases market volatility and uncertainty and creates a general sense of economic instability therebylevel of diminishinged economic growth and stability, as well as uncertain political continuity.

Set goals & objectives

☑ **Connectivity:** Create a new paradigm of increased racial equity and reduced or eliminated racial inequity to ensure parity such that the racial and ethnic composition of the leadership and personnel of U.S. financial institutions, investee companies, and their supply chains better mirror that of society, and that personnel earn equal compensation for equal work. Doing so will help to ensure equitable inclusion of people of color in U.S. corporations and financial institutions, and to promote their equitable participation in decisions about where and how capital is deployed.

☑ **Clarity:** Disaggregated data for both public companies and private, as well as other investors, including private institutions of all types whether they be structured as a nonprofit or a for profit entity will be critical. This information would create a baseline of information which could be used to determine which entities are actually achieving parity and which are lagging, creating decision-useful information which could then be tracked over time when evaluating progress.

☑ **Directionality:** A similar shift in the underlying social structures in the U.S.–structures related to democracy, education, income and wealth accumulation, health, and the carceral system (which continue to propagate racial inequity)–would serve to support and promote the full, equitable participation of people of color in society and the financial system.

Select tools & techniques

☑ **Engaging with holdings about systemic issues:** Investor engages with entire industries–not just individual corporations or firms–on the financial implications of racial inequity and hold them accountable for their racial equity promises. Investor, alongside a selection of large investors, filed shareholder proposals at major corporations like Amazon and Wells Fargo to conduct third-party "racial justice audits" of operations and practices.

☑ **Self-organization:** Investor joins and establishes organizations that build the financial system's capacity to address racial inequity. Investor convened a group of universities, foundations, hospitals, and churches to conduct research and engage with others in the markets to promote racially equitable approaches. They have done significant work providing guidance to institutional investors on how to select diverse fund managers, among other resources that support more equitable due diligence practices.

☑ **Polity:** Investor participates in and amplifies public policy debates about governmental rules and regulations that impact exposure to the risks of racial inequity. Investor funds research and reports on diversity in asset management and advocates for and against policy changes at the SEC.

☑ **Standard setting:** Investor helps to establish standards and norms that provide the basis for engagement or investment in/divestment from industries related to racial inequity. Investor contributed to the development of the Global Impact Investing Network's standards for racially equitable investing for investors to incorporate into their investment strategies.

Assess progress

Investor action at the company/portfolio level:

- Capital and other support provided to funds and companies focused on the equitable participation, inclusion and compensation of people of color
- Equity metrics tracked against portfolio- and investment-level goals (e.g., ownership share/decision making power, access to financial/other services)
- Engagement with and/or requirements for portfolio companies to improve their management of systemic risks/opportunities
- Transparency and accountability mechanisms to align impact outcomes to overarching strategy and objectives
- Progress tracking against system-level goals such as Due Diligence 2.0 and ILPA DIA

Collective behavior at the industry/sector level:

- A substantial percentage of investors join or establish organizations that build the financial system's capacity to address racial inequity.
- A substantial percentage of investors disseminate information about racial inequity to peers, clients, and the public - to build trust and increase the alignment necessary to establish shared goals and pursue effective collaborative action.
- A substantial percentage of investors participate in and otherwise amplify public policy debates about governmental rules and regulations that impact exposure to the risks of racial inequity.

Collective behavior at the industry/sector level (Cont):

- A substantial percentage of investors identify opportunities to collaborate with other investors to amplify messaging and influence about racial and ethnic bias in governance, personnel, and pay norms, policies, practices, and procedures across the financial industry, in investee companies, throughout their supply chains and within their investment practices.
- A substantial percentage of investors help to establish standards and norms that provide the basis for engagement or investment in/divestment from industries related to racial inequity.
- A substantial percentage of investors pursue investments and promote business models that help to resolve racial inequity, rather than profit from it.
- A substantial percentage of investors utilize a diverse range of investment approaches to maximize overall positive impact on racial equity.
- A substantial percentage of investors identify or develop and utilize standards for the disclosure of data on the disaggregated racial and ethnic composition and pay of leadership teams and personnel at financial institutions, investee companies, and throughout their supply chains.
- A substantial percentage of investors use financial products explicitly designed to and focused on addressing racial inequity; design new products when necessary.
- A substantial percentage of investors evaluate the inherent worth of the systemic intangibles of social and human capital.
- A substantial percentage of investors focus investments within a specific geographic region to increase its resilience to racial inequity.
- A substantial percentage of investors maximize the societal uses for which specific asset classes were explicitly created to address racial inequity.

Beta building at the system level:

Greater *connectivity, clarity, and directionality* through:

- **Increased economic growth.** The U.S. economy reaches full economic and growth potential, and more effectively competes in the global economy, by ensuring the full, equitable participation of people of color in the American society and U.S. financial system and economy.
- **Increased stability.** Major disparities in income, wealth, opportunity, and power–like those between people of color and White people in the U.S.–are addressed, leading to decreases in social discontent, tension, and unrest.
- **Increased consumer spending and tax revenues.** Improved racial equity grows the economy via substantial increases in consumer spending, coupled with increased tax revenues and decreases in social services and health spending.

Part VII: More Work is Needed to Assess System-Level Investment Progress

This report outlines a preliminary roadmap for assessing the progress of system-level investing and provides examples of how that roadmap can be used to address the system-level issues of climate change, income inequality and racial inequity. However thorough, the research and this report also raise various questions for exploration as part of future work on developing system-level strategies and assessing the influence of system-level investment. More specifically, this research raises considerations related to establishing a permanent working group to ensure interoperability across frameworks, emerging tools for evaluating system-level progress, and identification of data sources for system-level indicators.

Establishing a permanent working group

As covered in TIIP's Industry Needs Project in 2022, a key finding was a call for the establishment of a permanent working group to align efforts across the industry. This report reinforces the opportunity for investors and field building organizations to continue working together to explore, test, and iterate on the practical implementation of system-level investing assessment approaches. Investors, standards setting agencies, and industry associations have been developing and refining approaches to collecting ESG data and measuring and reporting on companies' and investors' environmental and social impacts for the past two decades. Although none of these approaches have been designed to monitor and evaluate system-level investing approaches, the financial industry should (a) examine whether they are fit for purpose for such analysis and, if not, (b) determine whether and how they could be usefully adapted for doing so.

The role and importance of the establishment and maintenance of a multi-stakeholder working group dedicated to this purpose will be critical. Such a group should include representatives from investors, data providers, ratings agencies, academia, think tanks, regulators, and the people and environments that are ultimately impacted by the choices of the financial system. It would operate with the goal of helping to inform and develop a standardized method for evaluating system-level progress, as well as helping to indicate the industry momentum of certain investor actions that are serving to advance system-level progress. Initiatives completed or underway by the (now concluded) TCFD, the ongoing Taskforce on Nature-related Financial Disclosures, and the Taskforce on Social-related Financial Disclosures provide examples of this kind of effort to develop and promulgate voluntary corporate and investor disclosure and risk management frameworks as they relate to specific systems.

Emerging tools for assessing system-level progress

In the context of assessment, a promising point of progress is the work PRI is doing on sustainability outcomes (which is similar in concept to how TIIP considers system-level progress). In particular, PRI has developed a due diligence questionnaire (DDQ) to "… help investors better understand and evaluate managers' approaches to stewardship for sustainability outcomes. It can be used jointly with PRI's guidance on evaluating stewardship for sustainability outcomes, or as an independent resource to structure investors' selection and monitoring of investment managers."

PRI has taken the additional step to design the DDQ "to complement the information gathered through the PRI's Reporting Framework – particularly the Policy, Governance and Strategy (PGS) and Sustainability Outcomes (SO) modules – as well as investment disclosure standards and frameworks developed by external organisations" to provide consistency and coherence to the process. By mapping the sustainability outcomes questions to other standards and frameworks, PRI offers interoperability between disclosures requirements and an on-ramp to system-level investing considerations. Understanding and managing systemic risks is essential—and fortunately, becoming increasingly standard—for all investors.

Figure 12: Excerpt from PRI Indicator Mapping

DDQ question	Organisation level or product/ strategy level?	2023 PRI Reporting Framework indicator	Other
1.1 Does the organisation have a firm-wide commitment to address system-level sustainability issues, including – at a minimum – climate change and human rights?	Organisation level	PGS 1, PGS 2, PGS 4, PGS 9, PGS 48.1	SFDR, Article 3 2020 UK Stewardship Code, Principles 1 and 4 ICAPs Expectations Ladder (ICAPs), Governance IIGCC Asset Owner Stewardship Questionnaire (IIGCC Questionnaire), Question 1
1.2 Is this commitment captured in the organisation's responsible investment policy, investment beliefs, or equivalent document?	Organisation level		
1.3 Is this commitment supported by a clear rationale aligned with fiduciary duties or equivalent obligations?	Organisation level		
1.4 Does the strategy have sustainability outcomes targets that are clear, verifiable, time-bound, and supported by intermediate milestones (where relevant)?	Strategy level	PGS 16, SO 1, SO 2-SO 4.1[1], SO 5-SO 13	SFDR, Articles 6.1(a) and 9 2020 UK Stewardship Code, Principle 9 ICAPs, Investment, Investor disclosure
1.5 Do these targets focus on aligning the sustainability outcomes addressed by the strategy with the relevant global sustainability goals and thresholds?	Strategy level		
1.6 Does the strategy report to clients on progress against these targets?	Strategy level		
1.7 Do the strategy's legal documentation, governance, processes and incentives support the achievement of the strategy's sustainability outcomes targets?	Strategy level	PGS 5, PGS 14, PGS 15, PGS 27	2020 UK Stewardship Code, Principles 1, 2, 5, 6 and 7 ICAPs, Governance
1.8 How does the organisation ensure that key investment personnel have the relevant sustainability skills/ expertise?	Strategy level		
1.9 How does the organisation ensure that the strategy's stewardship activities are sufficiently resourced to meet its sustainability outcomes targets?	Strategy level		

Source: PRI, Stewardship for Sustainability: Responsible Investment DDQ.

Data to enable better evaluation of system-level progress

While great progress has been made in recent years by industry associations to standardize data for comparability and benchmarking, sustainability and impact data remains quite variable. Sustainability scoring methodologies, terminology, and ranking systems vary across data providers, some using letter grades while others use numbers or percentages. Data and ratings can also vary widely based on what dimensions of performance are being evaluated. Understanding the coverage of these data sources is a core part of identifying what is currently being measured, and critically, where there are gaps in data coverage, particularly as it relates to systemic risk. The implications for data providers as more progress is made on this front are coming into view, including:

Data that measures the costs of externalities: Thought leaders of universal ownership call out the importance of two main types of impact that externalities have on portfolios: (1) pecuniary costs (immediate, monetary costs attributable to an externality); and (2) non-pecuniary (or 'real') costs that are neither immediate nor have immediate costs.[115] Data should help investors identify the costs of material externalities and understand by whom those externalities are being created and absorbed. Along with this comes a need for broadening of the definition of fiduciary duty—being able to quantify the impact of negative externalities on return-on-investment would help to clarify that the consideration of externalities is a core part of fiduciary diligence and duties.

Data that speaks to investor contribution: Impact Frontiers and the Predistribution Initiative have been working to redefine investor contribution in the context of positive, negative, and systemic impact. There are several channels by which investors can contribute, both positively and negatively, to changes in outcomes for end-stakeholders, the natural environment, and environmental and social systems. These channels continue to evolve through the work of Investor Contribution 2.0.[116] Data should help investors understand the potential positive and negative impacts of their actions on the enterprises they invest in, as well as on systemic risks more broadly, recognizing that attribution can only really be focused on positive impacts. For example, at the enterprise level, an investor can positively contribute by utilizing an innovative investment structure to change the cost, terms, or other conditions of capital available to the investee that enables it to deliver a positive impact that would likely not otherwise occur. It is critical for these actions to be aligned with system-level goals because the positive impact of the investment can be counteracted if the investee's business model exacerbates a systemic risk and drives in a direction that contradicts goals for healthy systems.

Data on activities in the context of planetary boundaries: The nine planetary boundaries—processes that regulate the stability and resilience of the Earth system—were first proposed by the Stockholm Resilience Centre's former director Johan Rockström and a group of 28 internationally renowned scientists in 2009. The third and most recent update to the framework concludes that six of the nine boundaries have been transgressed.[117]

Crossing planetary boundaries increases the risk of generating large-scale abrupt or irreversible environmental changes, together marking a critical threshold for increasing risks to people and the ecosystems that people are part of.

Impacts on the environment tend to be addressed as if they are separate issues (e.g., climate change, biodiversity loss, pollution). However, this approach ignores interactions and resulting aggregate effects on the overall state of Earth as a whole system. A global focus on climate change is not sufficient for increased sustainability. For example, planetary boundary modeling results demonstrate that one of the most powerful means that humanity has at its disposal to combat climate change is respecting the land system change boundary. Bringing total global forest cover back to the levels of the late 20th century would provide a substantial cumulative sink for atmospheric CO2 in 2100. However, failure to respect the land system change boundary can potentially jeopardize efforts to achieve the global climate goals adopted in the Paris Agreement.[118]

Data aligned with science-based targets: Science-based targets show companies how much and how quickly businesses need to alter their behaviors, such as reducing their GHG emissions, to prevent the worst impacts of a systemic risk, herein climate change. The Science Based Targets initiative (SBTi) guides companies in science-based target setting, promoting best practices in emissions reductions and net zero targets in line with climate science.[119] Core to setting science-based targets are third-party validation, validation, and ensuring that target-setting methods are aligned with the most robust approaches to emissions reduction, as argued by Bill Baue of r3.0.[120]

Data on human rights and well-being: The UN Guiding Principles on Business and Human Rights are the authoritative global framework for addressing business impacts on people. The four categories of affected stakeholders are a company's workforce, workers across the value chain, affected communities, and people impacted by the company's products and services.[121] Companies need to identify, understand and address their impacts on people and make practical contributions to tackling inequalities—key sources of business risk and opportunity over the short, medium and long term.[122] Data should help investors assess how their investments are tackling inequalities and managing systemic social issues such as income inequality, racial inequity, and more.

The SEC's proposed ruling on human capital management would require corporate disclosures on factors such as workforce composition, compensation, and diversity data. A logical extension of this employee and labor focus would be to consider workers throughout the supply chain, in addition to workers in a company's own operations, as well as the impacts of corporate practices on the lives of the people living in the communities where they do business. Core to this discussion is rethinking corporate dynamics to ensure that businesses are accountable to underrepresented stakeholders.[123]

Data on materiality: There are multiple approaches to thinking about materiality, with a notable contrast between financial materiality and impact materiality. Where financial materiality refers to factors that influence enterprise value, impact materiality refers to factors that affect the economy, environment, and people. The concept of double materiality proposes a two-pillar approach that taken together considers financial and impact materiality.[124] Here it is also worth calling for a more nuanced understanding of materiality that shifts from a causal, one-way relationship to a more dynamic, feedback loop that better reflects the complexity of economics, the environment, and society.

ISSB's definition of materiality remains primarily focused on financial materiality, therefore omitting the costs that companies externalize to the economy, which in turn affect overall market returns ("beta") and the returns of other companies in an investor's portfolio.[125] On the other hand, EFRAG is developing the European Sustainability Reporting Standards (ESRS) based on double materiality. Notably, GRI is working with both EFRAG and ISSB to ensure that the global corporate reporting system is created on both financial and impact materiality considerations, with GRI and EFRAG having recently confirmed that they have achieved a high level of interoperability between their respective standards.[126] An expanded view of materiality that includes system-level considerations is paramount to systemic risk management and more robust evaluation practice at the system-level.

Data and modeling on different scenarios: In many cases, the most significant effects of systemic issues such as climate change are likely to emerge over the medium to longer term and their timing and magnitude are uncertain. To incorporate the potential effects in their planning processes, investors can use scenario analysis to consider how these risks and opportunities may evolve and potential implications under different conditions. The now concluded TCFD developed guidance on climate-related disclosures, in which they recommended scenario analysis as an important and useful tool for understanding the strategic implications of climate related risks and opportunities.[127]

For example, scenario analysis can drive more focused engagement on water risks, including by providing much-needed information on whether responses to risk are adequate. Scenario analysis can inform financial models such as discounted cashflow models, which can then be modified to reflect value at risk due to water. To assess financial impact or loss of value, investors can integrate potential water-risk factors and the associated duration of those risks and probabilities. This could involve assessing which risks can be mitigated and which are harder to manage, as well as which risks require immediate response, and which should be prioritized for engagement.[128]

Conclusion

Record labor activism and strike activity, uncontrollable fires and devastating flooding, and unrelenting violence and geopolitical conflict across the globe continue to devastate communities and destabilize entire systems. Systems cannot and must not continue to operate in this way. These challenges are global, and they have tipping points that once passed cannot be reversed. They are systemic risks in a highly interconnected and complex world. And they threaten long-term investment returns across all asset classes in ways that traditional risk management cannot cope with.

A wave of asset owners and institutional investors have begun to respond by adopting system-level investing approaches and leveraging the power of capital allocation to address systems under stress and (re)calibrate the feedback loops between investor action, collective behavior, and building the beta of the economy. In doing so, the financial community is realizing its potential to lessen the impacts of systemic risks, improve the performance of their portfolios, and enhance the health and resilience of environmental and social systems.

What we've proposed in this report is a framework or guidance that credibly answers the following questions: *What is the relationship between the standards and goals set by investors at a portfolio level and the overarching indicators of progress at a system level? In what ways and to what extent does the management of portfolio-level risks and rewards translate into system-level progress? In what ways and to what extent do system-level developments affect portfolio-level performance?*

The answer requires a more holistic and effective application of assessment that spans the worlds of ESG integration, stewardship, and sustainable and impact investing with their varying emphasis on different internal policies and external performance. For system-level investors that have set a goal to influence the health and resilience of underlying systems, this means assessing their role in advancing system-level progress, including: how their own activities work to address a systemic issue, how they are influencing others in the financial community to address a systemic issue; and how certain actions may accelerate the shift of fundamental paradigms of a system.

This report highlights the reality that progress still needs to be made on multiple fronts for investors to embrace system-level investing more fully and to do so more effectively. Fortunately, with clarity of purpose, alignment of actions, and humility of progress, we as a multi-stakeholder community of practice can together begin to recalibrate feedback loops so that they support stable, resilient, and sustainable systems.

Appendix A: About the Project

About the Authors

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William is the CEO at TIIP, where he advises pension plans, private foundations, family offices, investment management firms, and financial advisors to develop and implement big picture investment strategies that consider systemic risks and opportunities. He is a co-founder of Colorful Capital, which is bringing capital support and scaffolding to enterprises founded and led by members of the broad LGBTQ+ community; he co-authors a regular column for Nasdaq on the intersection between LGBTQ+ advancement and investment. William is Adjunct Professor of International and Public Affairs and The Brandmeyer Fellow for Impact and Sustainable Investing at the School of International and Public Affairs (SIPA), Columbia University. He is a fellow of the High Meadows Institute and co-author of the book 21st Century Investing: Redirecting Financial Strategies to Drive Systems Change (Berrett-Koehler, 2021). He holds a Master of Public Policy from Johns Hopkins University and a Bachelor of International Affairs from The George Washington University. His full bio can be found here.

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About The Investment Integration Project

The Investment Integration Project's (TIIP) mission is to help investors understand how healthy social, environmental, and financial systems can benefit their portfolios. TIIP provides consulting services, applied research, and a subscription-based SaaS platform that supports investors' pursuit of system-level investing, an advanced approach to sustainable and impact investing that focuses on managing systemic risks and investing in solutions to systemic problems. Learn more at https://www.tiiproject.com

Appendix B: A Principles-Based Framework for Assessing System-Level Progress [xii]

When using a principles-based approach, evaluation includes assessing consistency of purpose, effectiveness of actions, and progress toward system-level social and environmental goals. There are four core tenets to keep in mind when evaluating system-level progress:

A system-level approach should be applied consistently throughout the investment process

Many investors tend to assume that sustainability factors can be measured primarily by considering the output and outcomes of their portfolio holdings, but in practice, the task is more complicated. For example, if a manager touts their investments in solar or wind power as a positive outcome for contending with global warming but ignore issues in their solar supply chain related to forced labor, their overall positive impact is undermined by contradiction.

To achieve consistency, and therefore results that are systemic and holistic, investors need to align their objectives to their investment decisions and be able to track the progress of their actions across multiple dimensions of impact. The original emphasis of sustainable investing on measuring discrete social and environmental outcomes is practical in that it lends itself to quantifiable metrics and comparability, but it does not always require the context that is necessary for positioning these outcomes in relation to system-level progress. Emissions avoided or lives improved have much more significance when they are achieved in contribution to progress toward an overarching goal to address a challenge. In recent years, the impact investing industry has shifted from impact measurement of outcomes alone to more holistic impact management approaches that look at both processes and performance (or resulting outcomes). Emphasizing processes in addition to performance provides a way to ensure that environmental and social considerations are being considered more holistically and that investors are acting in alignment with their stated goals and objectives.

[xii] This section draws from the report "Assessing System-Level Investments: A Guide for Asset Owners," co-authored by Steve Lydenberg and William Burckart (2020). For more of an elaborate treatment on the key points covered here, see https://tiiproject.com/assessing_system_level_investments/.

Qualitative considerations are a critical complement to quantitative analysis

However, when it comes to systemic social and environmental risks and rewards, they face the prospect of unintended consequences from risk controls that cannot see beyond their portfolios, as Hawley and Lukomnik's aforementioned work on the limitations of modern portfolio theory serves to demonstrate. For such systemic impacts, qualitative judgment—and the flexibility to make adjustments based on those judgments—need to fill that gap more substantially.

The challenge with managing systemic risks of social and environmental systems is that they are full of uncertainties and unpredictability—thus, decisions must be made in the absence of complete information and the outcomes of decisions need constant assessment. In these contexts, investors must rely substantially on sound judgment that accepts the "I-can-know-only-imperfectly" aspects of their situation.

Judgment with respect to system-level impacts is essential in the realm of financial products and services, as Omar Bhidé points out in A Call for Judgment. There he lays much of the blame for the 2008 crisis and near meltdown of the global financial system at the door of 1) lenders who abandoned qualitative judgment in favor of mechanical, efficiency-motivated, investment decision-making in granting risky mortgages and 2) the poor investment judgment of pension funds, banks, and others who believed in the highly complex risk-diversification tactics used to securitize these mortgages. "Relying on case-by-case judgment does have drawbacks," he observes. "But mechanical decision-making is rarely a good alternative when the choices involve willful humans."[129]

He compares forsaking that judgment to driving with one's eyes closed:

> *"[T]he absolutist prescription to forsake judgment, to blindly trust market prices, not only puts those who follow it at risk, but also undermines the pluralism of opinions that help align prices and values. If many drive with their eyes closed, widespread collisions and injuries to those who do keep their eyes open become routine. When many simply pile on, so that prices reflect the judgments of just a few, the possibility of mistakes—and the opportunity for self-dealing—is great."*[130]

Investors committed to achieving system-level progress will need to credit judgment as well as quantitative analysis. The greater the uncertainties in the social and environmental challenges involved, the greater the need for judgment in decision-making will be.

Systems have inherent worth that is greater than the sum of their parts

While investors recognize that social and environmental systems have inherent worth, the economic value of these systems, which is real, plays out over such long timeframes that it is nearly impossible to capture in a quantifiable price.

Herein lies one of the key drivers of externality-denying capitalism, as illuminated in Duncan Austin's aforementioned work. However, the inability to put an exact price on social and environmental externalities is not a sufficient rationale for relegating these matters outside of our realm of meaningful consideration.

It is also important to note that whole, overarching systems possess greater worth than the sum of their parts. Assigning value to certain parts of complex environmental or social systems—a conceivable, but inevitably imprecise exercise—and summing them up does not sufficiently capture the worth of the whole systems. It is the interrelationships among these parts, rather than the parts themselves, that operationalize these systems. No price-based market exists for these complex, intangible innerworkings.

For example, investors may recognize the difficult-to-price inherent value of diversity, including human diversity and the biodiversity of the natural world. The value of these distinct forms of diversity stems from the vitality and resilience it brings to social and environmental systems, as well as the economy. Investors that ignore diversity run the risk of creating volatile systems with conflicting stakeholders, generating outcomes that at best are suboptimal and at worst counterproductive. Investors that support diversity while still operating within price-based markets encourage long-term value creation.

A PricewaterhouseCoopers study noted that "Sustainability initiatives do create *bona fide* shareholder value, but the longer-term and intangible value is a lot more difficult to quantify [than market value]. The shareholder value framework needs to be *expanded* to accommodate the value proposition of hard-to-measure initiatives, including sustainability projects."[131] [Emphasis in original]

Investors must balance the short and long term

Forward-thinking investors need to balance the short term with the long term; the creation of private goods with those for the public; value extraction with value creation; and self-interest with that of the community. This balance is necessary to ensure a reasonable degree of alignment and stability within social and environmental systems.

Investors taking a system-level approach will not want, for example, a manager who invests in solar or wind power simply because these are the "wave of the future" without considering their business model and quality of management; who fails to anticipate developments in public policy or trends in customer preference; or who ignores the viability of competing technologies. On the other hand, an investor may also avoid a manager who overlooks alternative energy opportunities entirely due to the unpredictability of the future and its impact on future stock valuation. Without balancing the practicalities of today with the needs of tomorrow, those in the financial markets can underperform or, worse, become insolvent, before the realities of tomorrow materialize. On the other hand, if they do not correctly anticipate the future, they might find themselves irrelevant sooner than expected. Striking the right balance between these two extremes is essential to investing sustainably.

For environmental and social systems, an optimal balance exists between efficiency and effectiveness, and flexibility and resilience. This balance is what ecological economists have referred to as an “inherent push-pull tradeoff” that requires calculated trade-offs between the two in order for systems to remain stable.[132]

Investors already engage in similar balancing acts when seeking out an “efficient frontier” that simultaneously maximizes reward for a given level of risk. The ability to master the balancing act between short-term value extraction and long-term value creation lies at the crux of achieving stable systems—and thus, stable investments—over the long term.

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