GPIF Commissioned Research on Impact Investing

Summary Report

March 2026

Nissay Asset Management Corporation

Note: This document is an English translation of the original Japanese version. In the event of any discrepancy, the Japanese version shall prevail.

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Research Background, Objectives, and Methodology

- The Government Pension Investment Fund (GPIF) states in its “5th Medium-Term Plan” and the document “Initiatives for Sustainability Investment” (March 31, 2025) that “from the perspective of securing long-term returns for the benefit of insureds while ensuring market average returns, GPIF will consider making investments by incorporating the social and environment effects (impact) of investee companies’ business activities as a non-financial factor when evaluating the potential for sustainable growth of investee companies, and will undertake the necessary initiatives.” In the “FY2025 Plan” and related documents, GPIF also indicates that it will “examine target asset classes and investment approaches” with respect to investments that consider impact.

- This research aims to support GPIF’s detailed examination and focuses primarily on the following five areas:
  - Concepts of impact investing and other related activities (Chapter 2)
  - Market trends and industry organization developments related to impact investing (Chapter 3)
  - International policy and regulatory trends regarding impact investing (Chapter 3)
  - Case studies of overseas impact funds (Chapter 4)
  - Case studies of impact investing and other related initiatives by overseas pension funds (Chapter 5)

- The share of impact investing within total sustainable investment assets in Japan remains relatively small as of the time of this research. However, some reports indicate that the growth rate of assets under management in impact investing has recently significantly exceeded that of sustainable investment overall.

- This research was conducted primarily through a literature review. However, as existing literature was limited when examining case studies of impact investing and other related initiatives by overseas pension funds, interviews with overseas pension funds were conducted in order to directly obtain primary information.

- This research was commissioned to Nissay Asset Management Corporation. Part of the research work—primarily for Chapters 3 to 5—was subcontracted to The Japan Research Institute, Limited, and the research was conducted with its involvement.

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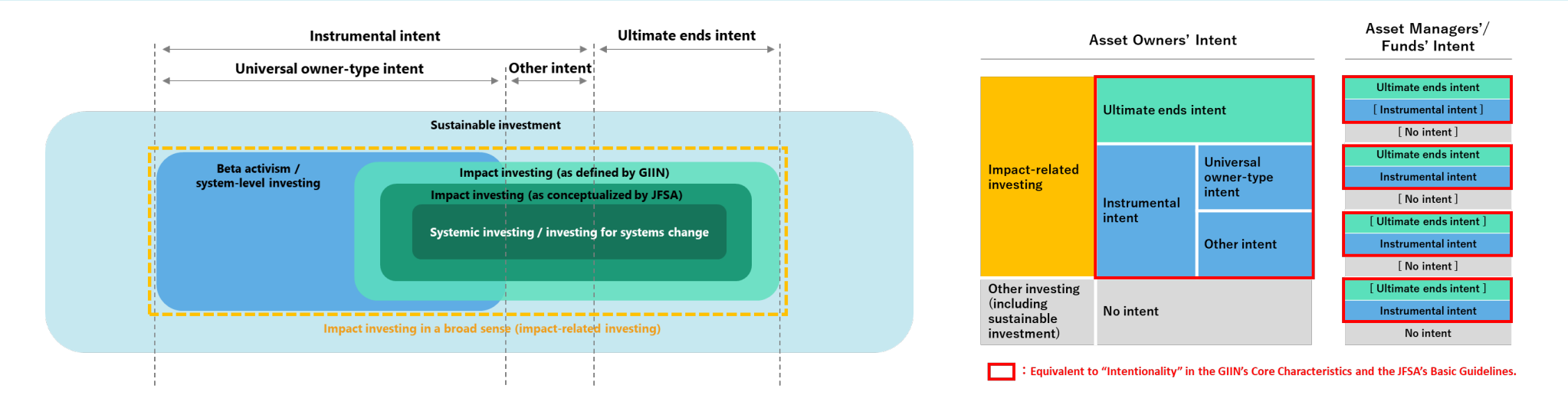
Key Points – Chapter 2: Concept of Impact Investing and Related Activities

- **This chapter organizes the concept of impact investing as shown in the figure below**. The main features of this research are summarized in the following three points:
  - ✓ This research distinguishes three types of "intent" related to impact creation, an element considered important in impact investing: **"instrumental intent", its internal subtype "universal owner-type intent", and "ultimate ends intent"** (the figure on the left).
  - ✓ **Clarification of the relationship between impact investing and related concepts such as sustainable investing and systems-thinking–based investing** (the figure on the left).
  - ✓ This research **distinguishes between the intent of asset owners and the intent of asset managers / funds**, and examines combinations of the two, including cases where the intent of the two parties does not necessarily align (the figure on the right).



- Furthermore, regarding **"investor contribution,"** a key element of impact investing, insights from academic research suggest **the importance of investor engagement, capital mobilization for firms facing external financing constraints or operating in immature financial markets, collaboration among multiple investors, and engagement with policy, regulation, and rule-making processes**.
- **Regarding investment returns of impact investing, this research reviews empirical studies not only on the returns of impact funds but also on studies focusing on individual firm-level outcomes**. The findings are mixed: some studies report that impact investing does not underperform compared with conventional investments, while others find significantly lower returns. However, the body of empirical research remains limited, making it premature to draw overall conclusions at this stage. Further empirical evidence is expected in future research.

What is Impact?

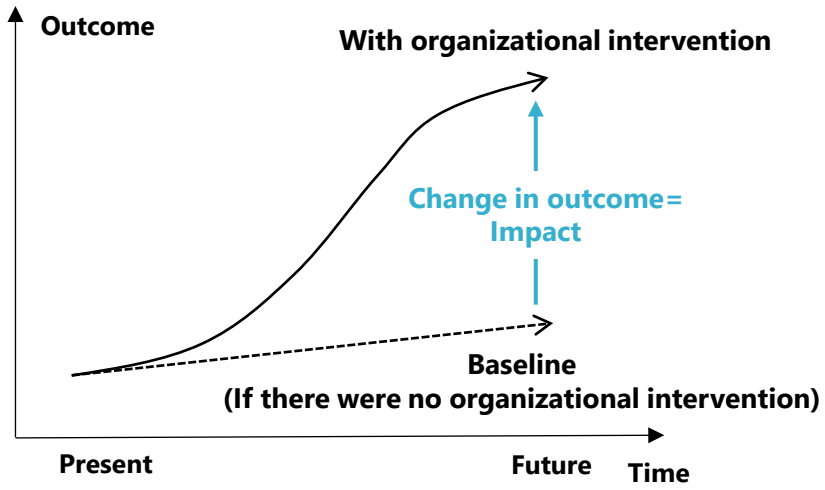
- According to the Impact Management Project (IMP)—now Impact Frontiers—impact creation is defined as bringing about a change in an outcome in a desirable direction. Here, outcome refers to the level of well-being experienced by a group of people or the condition of the natural environment.
- In some cases, the term "positive impact" is used to distinguish it from negative impact.

Definition by the Impact Management Project (IMP)

- Impact is defined as a change in an outcome caused by an organization.
- An impact can be positive or negative, intended or unintended.
- An outcome is the level of well-being experienced by a group of people, or the condition of the natural environment.

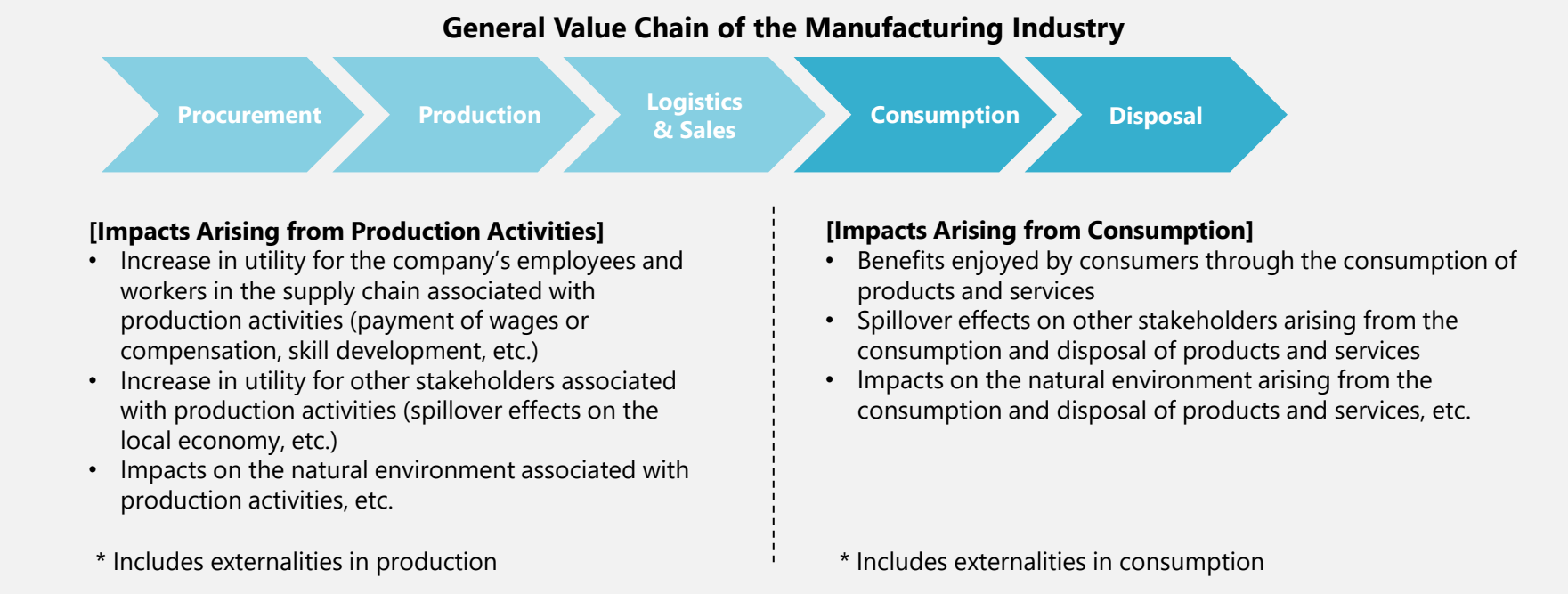
Note: The Impact Management Project (IMP) operated from 2016 to 2021 to build global consensus on the measurement, management, and reporting of impact. The outputs developed through this initiative are now maintained by Impact Frontiers.
Source: Adapted from Impact Frontiers (n.d.) "Impact Management Norms" https://impactfrontiers.org/norms/ (last accessed January 30, 2026)

Conceptual Illustration of Impact



Impact Can Arise from All Aspects of Corporate Activities

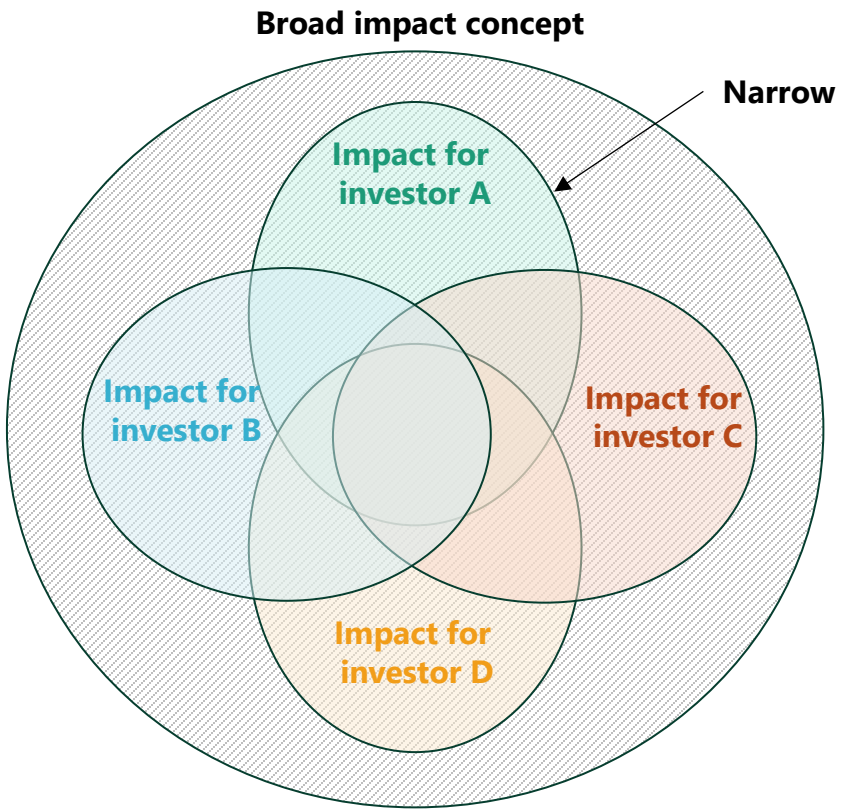
- Broadly, impact can be categorized into impacts derived from the production of products / services and those derived from their consumption.
- What are referred to in economics as “externalities in production” and “externalities in consumption” (so-called spillover effects) are also included as forms of impact.



Source: Hayashi, T. and Matsuyama, M. (2023) “Can impact creation and corporate value enhancement both be achieved?—Examination through a case study and an empirical analysis based on content analysis of corporate purpose—" Financial Services Agency, Financial Research Center Discussion Paper DP2023-3

Understanding Impact: Broad vs. Narrow Concepts

- In a broad sense, impact refers to changes in outcomes in a desirable direction (i.e., the broad impact concept).
- In practice, many practitioners interpret impact as progress toward addressing specific social issues (i.e., the narrow impact concept).
- The importance of individual issues is determined by companies and investors, and there is no single correct answer.
  (Which issues are considered "social" issues depends on the perspective of the company or investor.)



- Is addressing challenges faced by low-income populations considered an impact?
- Is solving problems for wealthy individuals considered an impact?

- Is reducing environmental harm considered an impact?
- Is improving organizational productivity considered an impact?

- Is increasing payments to suppliers and workers considered an impact?

**The judgment of importance depends on the company or the investor.
There is no single correct answer.**

Definition of Impact Investing by the GIIN

- The Global Impact Investing Network (GIIN) defines impact investing as follows.
- In 2019, GIIN further clarified four core characteristics that complement this definition.
- The GIIN also provides the following examples of best practices in impact investing.

Impact investments
Noun: Impact investments are investments made with the intention to generate positive, measurable social or environmental impact alongside a financial return.

Core Characteristics	
Intentionality	Impact investing is marked by an intentional desire to contribute to measurable social and environmental benefits.
Use of evidence and impact data in investment design	Impact investing needs to use evidence and data where available to drive intelligent investment design.
Management of impact performance	Impact investing comes with a specific intention and necessitates that investments be managed towards that intention.
Contribution to the growth of the industry	Impact investors share learnings where possible to enable others to learn from their experience.

Source: Adapted from GIIN (2019) “Core Characteristics of Impact Investing”

Examples of Best Practices in Impact Investing

- Developing a theory of change to identify the path to reach social and environmental impact objectives
- Collaborating with relevant stakeholders to develop the theory of change and impact objectives
- Setting performance targets related to these objectives using standardized metrics
- Monitoring and managing the performance of investees against these targets
- Reporting on social and environmental performance to relevant stakeholders
- Optimizing future impact returns based on data and learnings from past investments

Source: Adapted from GIIN (2025) “What you need to know about impact investing” https://thegiin.org/publication/post/about-impact-investing/ (last accessed March 3, 2026)

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Additional Guidance on Listed Equity Investing by the GIIN

- In 2023, the GIIN's Listed Equities Working Group published additional guidance on pursuing impact through listed equity investing.
- Building on the four core characteristics described earlier, the guidance outlines key practices expected in listed equity impact investing.

Basic Expectations for Impact Investing in Listed Equities

CONCEPT #1: SETTING FUND OR PORTFOLIO STRATEGY	• The fund's or portfolio's prospectus (or similar, required document per jurisdiction) states the intended real-world impact of the investment strategy. This is supported by a problem statement and a theory of change, articulated in internal documentation, that includes a description of how the fund or portfolio will contribute to accelerating the targeted impacts of its portfolio companies.
CONCEPT #2: PORTFOLIO DESIGN & SELECTION	• The fund or portfolio defines an investment universe, an approach to diversification, and a number of holdings that are aligned to the specific, real-world impacts targeted by the strategy • The business models and core activities of each company held in the portfolio should be directly relevant to the fund's impact strategy and investment thesis and should represent a material part of the company's business, particularly for companies that are large or diversified in their scope of business. In addition, the fund manager should define how a holding is expected to contribute to the changes targeted by their impact strategy. • The fund actively manages average holding periods of equities within the portfolio in a manner that contributes to the fund's ability to achieve its stated impact goals.
CONCEPT #3: ENGAGEMENT	• The engagement priorities are developed based on the fund's or portfolio's theory of change, and focus on actions that can accelerate the company's contributions to the impact objectives of the fund. • The effectiveness of engagement is measured in relation to progress towards changes or improvements that contribute to the outcomes that the fund or portfolio investment strategy seeks to deliver. • The progress towards achieving the goals of engagement processes is an important consideration in choosing the timing of exits. The fund or portfolio should be guided by an internal policy framework defining milestones and criteria for escalation and for exiting.
CONCEPT #4: USE OF PERFORMANCE DATA	• The fund or portfolio applies techniques to evaluate impact performance beyond relative measures of peer performance, and considers whether activities and outputs of companies are contributing to real-world changes consistent with the fund's goals and theory of change.

Source: Adapted from GIIN (2023) "Guidance for Pursuing Impact in Listed Equities"

Basic Elements of Impact Investing by the JFSA

- In March 2024, the Financial Services Agency, Japan (JFSA), published the “Basic Guidelines on Impact Investing (Impact Finance)”.
- The guidelines define the key elements expected of impact investing.
- The JFSA’s concept of impact investing is sometimes viewed as narrower than that of the GIIN, as it places particular emphasis on investor contribution (Element 2) and support for innovation, transformation, and acceleration (Element 4).

Four Basic Elements Expected for Impact Investing

Basic element 1	Intention: Intended "social or environmental impact" is clarified
Basic element 2	Contribution: investment contributes to realizing impact
Basic element 3	Identification / measurement / management: identifying, measuring and managing impact
Basic element 4	Innovation / transformation / acceleration: support transforming or accelerating transformations in markets and customers

Source: Adapted from JFSA (2024) “Basic Guidelines on Impact Investment (Impact Finance)”

Relationship Between Sustainable Investment and Impact Investing

- In 2023, the CFA Institute, GSIA (Global Sustainable Investment Alliance), and PRI (Principles for Responsible Investment) jointly published guidance aimed at improving the consistency of terminology related to sustainable investment.
- In this guidance, impact investing is positioned as one of the approaches to sustainable investment, and its definition follows that of the GIIN.
- The guidance uses the term "responsible investment." However, GSIA, one of the co-authoring organizations, uses the term "sustainable investment," and these concepts are sometimes also referred to as "ESG investment." In this research, the three terms—sustainable investment, responsible investment, and ESG investment—are treated as interchangeable, and the term "sustainable investment" is used as the primary term.

Definitions of Sustainable Investment Approaches

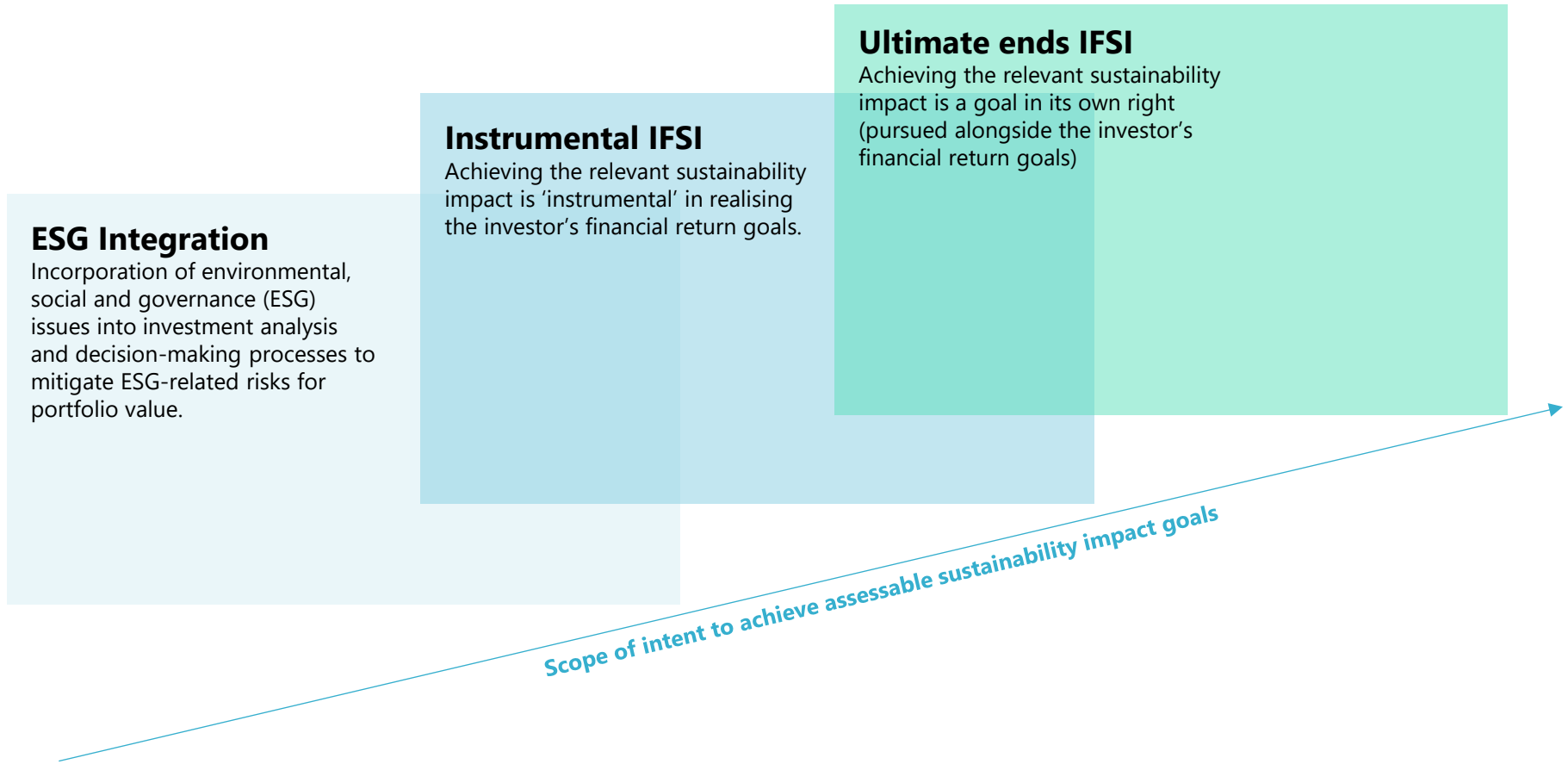
Screening	Applying rules based on defined criteria that determine whether an investment is permissible.
ESG integration	Ongoing consideration of ESG factors within an investment analysis and decision-making process with the aim to improve risk-adjusted returns.
Thematic investing	Selecting assets to access specified trends.
Stewardship	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.
Impact investing	Investing with the intention to generate positive, measurable social and/or environmental impact alongside a financial return.

General / Sustainable / Impact Investing

Note: Although the term "responsible investment" is used in the original source, it is referred to as "sustainable investment" here.
Source: Adapted from CFA Institute, GSIA & PRI (2023) "Definitions for Responsible Investment Approaches"

Investing for Sustainability Impact (IFSI)

- The PRI, in collaboration with the United Nations Environment Programme Finance Initiative (UNEP FI) and the Generation Foundation, and with support from the law firm Freshfields Bruckhaus Deringer, published the report A Legal Framework for Impact.
- Regarding Investing for Sustainability Impact (IFSI), the report states that investors' intent to generate impact can be categorized into two types: instrumental intent and ultimate ends intent.



Source: Adapted from PRI (2021) "A Legal Framework for Impact: sustainability impact in investor decision-making"

Universal Ownership Theory

- The term "universal owner" and the distinctive investor behavior associated with it were first introduced in the 1996 book *Watching the Watchers: Corporate Governance for the 21st Century* by Robert A. G. Monks and Nell Minow. The concept was subsequently developed into a theory through a series of studies by James P. Hawley (then a professor at Saint Mary's College of California) and Andrew T. Williams.
- More recently, the term "beta activism" has been proposed to describe the actions that universal owners should take. Beta activism refers to efforts aimed at reducing systemic risk by encouraging solutions to, or improvements in, underlying issues such as climate change and social inequality.
- This concept became widely known through the book *Moving Beyond Modern Portfolio Theory: Investing That Matters* by Jon Lukomnik and James P. Hawley. The book introduces ten advanced techniques for system-level investing proposed by TIIP as concrete approaches to beta activism.

Characteristics of Universal Owners

1. Long-term investment horizons
2. Large asset bases that limit frequent trading, leading to broadly diversified portfolios across the market
3. Return objectives focused on maximizing total portfolio value rather than outperforming market benchmarks

Causal relationship

Investor Behavior Unique to Universal Owners

- Primarily motivated by financial (economic) considerations, universal owners actively engage with industry practices, policies, and regulations to reduce negative externalities and create or expand positive externalities.

In theory, the scope of activities is not limited to reducing negative externalities.

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Systems Thinking–Based Investing

- The following pages introduce three approaches to systems thinking–based investing: “system-level investing”, “investing for systems change”, and “systemic investing”.

- Systems thinking is an approach that seeks to address fundamental problems by understanding the structure and dynamics of a system, viewing issues not as separate elements but as an interconnected whole (a system).

- As early as the 1950s, Jay Forrester at the Massachusetts Institute of Technology developed system dynamics (or system dynamics modeling) as a method primarily for quantitative analysis of systems.

- By clarifying the interactions among elements within a system and the feedback loops (*), this approach aims to help to explain the behavior of complex systems, understand how they change over time, and identify the underlying structural factors (root causes) behind the issues being addressed.

  * There are two types of feedback loops: reinforcing loops and balancing loops.

  A reinforcing feedback loop is a structure in which the result of a change generates further change in the same direction. Even a small initial change can be amplified over time. For example, improved customer satisfaction may lead to increased sales, which enables greater investment in service improvements, further enhancing customer satisfaction. Conversely, a decline in quality or growing customer dissatisfaction may reduce sales, prompting cost-cutting that lowers service levels and leads to further customer attrition.

  In contrast, a balancing feedback loop is a structure that counteracts change and return the system to a target state—similar to an air-conditioning system in which cooling operates when the room temperature rises and heating operates when it falls. a balancing feedback loop is a structure that counteracts change and seeks to return the system to a target state—much like an air-conditioning system that activates cooling when the temperature rises and heating when it falls.

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System-Level Investing by TIIP

- TIIP (The Investment Integration Project) advocates system-level investing.
- System-level investing, which can be positioned as an advanced form of sustainable investing, views the broader system—including the society in which companies operate and the planetary environment on which it depends. It seeks to improve the positive and negative impacts that investments have on the system, as well as the effects these impacts have on investment risks and returns.
- The PRI has also been collaborating with TIIP in recent years to promote system-level investing.

Comparison of Conventional, Sustainable, and System-Level Investing

Conventional investing		• Do not consider ESG factors as relevant and material in their security valuation, and view such factors as political or subject to other conflicts of interest • Primary goal is to maximize returns in as short a time as possible
Sustainable investing		• Consider ESG factors as potentially relevant and material in security selection and portfolio risk management • Seek to understand and, when appropriate, improve the ESG performance of specific investments regarding their market value (e.g., via proxy voting and engagement with individual companies on financially material ESG issues) • Primary goal is to allocate assets to strong ESG performers while maximizing returns in as short a time as possible
	System-level investing	• Intentionally manage the risks and rewards of the social, financial, and environmental systems that provide a stable, resilient foundation for investments across all asset classes, and their impact on these systems • Use a range of techniques to manage these risks and rewards, set explicit goals for their impact on systems, and measure their progress toward those goals • Seek to preserve and enhance foundational social, financial, and environmental systems in the long term while nevertheless achieving competitive returns in the short term

Source: Adapted from TIIP (2022) "Approaching the Tipping Point: Recommendations for Building the Marketplace for System-Level Investing"

System-Level Investing by TIIP (continued)

- TIIP has identified ten advanced techniques for system-level investing, in addition to those used in conventional investment practices.

Conventional Investment Techniques Used by System-Level Investors	
Statements of investment beliefs	System-level investors explicitly assert their commitment to contributing to the health of social, environmental, and financial systems that pose threats to, or offer opportunities for, their investments across all asset classes.
Security selection & portfolio construction	Beyond incorporating Environmental, Social, and Governance (ESG) considerations into their investment analyses, system-related investors may also set standards or minimum thresholds for social and environmental conduct for whole industries.
Engagement	System-level investors engage with entire industries – not just individual corporations or firms – on the financial implications of systemic social and environmental risks and toward the goal of influencing underlying systems.
Manager due diligence	System-level investors not only assess of managers' competencies at the security and portfolio-level, but they also examine their management of systemic risks and skills.

Source: Adapted from TIIP (2024) "System-level Investing: Case Studies of Investors Leading the Way"

Advanced System-Level Investing Techniques		
Field-building	Self-organization	Create collaborative organizational structures across the investment industry to build its capacity to address systemic challenges.
	Interconnectedness	Increase the flow of information and communication about social, financial, and environmental systems among peers, with clients, and with the public at large.
	Polity	Engage in public policy debates about governmental rules and regulations that can have a positive impact on whole systems relevant to investments.
Investment enhancement	Diversity of approaches	Use of a diverse range of investment tools to address complex systemic challenges.
	Standards setting	Establish standards that discourage investments in industries and countries with practices that violate broadly accepted standards or norms, or to contribute to the development of such standards.
	Solutions	Identify investments that both profit from the most pressing system-level challenges and resolve them positively.
Opportunity generation	Additionality	Invest in underserved people and address unmet social or environmental needs or markets.
	Locality	Invest to strengthen the social or environmental systems within a given geographic area—a city, state, region, or country.
	Evaluations	Look beyond quantifiable price and evaluate the potential of systems to provide the stability and predictability necessary to create a fertile field for investment opportunities.
	Utility	Maximize the alignment of specific investments within a portfolio's asset classes with the social or environmental functions that these asset classes were designed to serve.

Source: Adapted from TIIP (2022) "Approaching the Tipping Point: Recommendations for Building the Marketplace for System-Level Investing"

Investing for Systems Change by TWIST

- TWIST (Together We Invest for Systems Transformation) advocates investing for systems change.
- In 2024, it outlined ten core traits of investing for systems change.

Investing for Systems Change

Investing for systems change is investment capital that is being deployed - often coordinated with other types of resources and interventions - with the intention to contribute to positive systems change.

10 Core Traits of Investing for Systems Change

(1) Intentionality: The intention is to enable positive system(s) change; shifting from one system state to another. This typically includes an articulation of system boundaries, directionality, and a 'Guiding Star' (i.e., a desired future state of the system).		
(2) Problem Understanding: An understanding of the problem that is based on input from key stakeholders working on and impacted by that problem, which might include civil society, non-profits, government, business leaders, investors, and entrepreneurs, with an intention to create a collective understanding of the problem. The output might be a systems map, which portrays this problem visually	**(3) Strategy for Systems Change:** The strategy is developed with input from key stakeholders impacted by that problem with an intention to create a collective strategy for change (i.e., Theory of Transformation), which might include the identification of leverage points and targeted interventions within those leverage points.	**(4) Polycapital:** The capital types are aligned with the system needs, and often include not only financial capital (investment and philanthropic), but also intellectual, social, material, spiritual, living, cultural and experiential capital. The use of these multiple forms of capital is often called a polycapital approach. These capitals might be deployed to support not just entrepreneurs, but also to support awareness building, data collection and analysis, coordination amongst actors, and policy engagement.
(5) Integration of Interventions: The focus is on a specific system (i.e., the food system) and interventions across that system are actively linked and coordinated. This might be facilitated through gatherings and/or agreements	**(6) Power Sharing:** Power and decision-making is often distributed amongst stakeholders in the system, rather than held disproportionately by the investor.	**(7) Financial Return Expectations:** Financial returns are typically driven by what is deemed fair and appropriate within the context of the system, rather than predominantly by investor return expectations.
(8) Dynamic Evaluation: Investors typically identify some system-level proxies to see if the system is moving into the intended direction. This might be combined with real-time information 'from the ground' to allow for dynamic learning and adaptation.	**(9) Long Term Horizon:** Transformative change requires a longer (potentially generational) timeframe given that it typically takes a longer time for complex systems to shift.	**(10) Mindset Shift:** There is a recognition that a mindset shift is needed not just at the personal (investor) level, but also within the broader team, amongst stakeholders in the systems change initiative, and at the collective (cultural) level.

Source: Adapted from Korijn, A. & Fort, A. (2024) "Emergence and Co-Creation: A Collective's Perspective on Investing for Systems Change"

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Systemic Investing by the TransCap Initiative

- The TransCap Initiative advocates systemic investing.
- In 2024, it outlined 16 hallmarks of systemic investing.

Systemic Investing (working definition)

Systemic investing is the deployment of financial capital to transform human and natural systems with the intention of advancing environmental sustainability and social justice.

16 Hallmarks of Systemic Investing

(1) Systems Mindset	The fundamental attitudes, beliefs, and dispositions— anchored in systems thinking and complex systems science— directing the way systemic investors think about societal issues and how to address them
(2) Transformational Intent	The high-level change vision for a particular system
(3) Systems Analysis	The generation of strategic intelligence informing capital deployment decisions in systemic investment programs
(4) Systems Mapping	Identifying and visualizing nodes, relationships, and dynamics within a system
(5) System Boundary	A conceptual demarcation that defines the scope and limits of a system
(6) Leverage Points	Places within a complex system where a (relatively) small shift can produce outsized effects in other places of the system
(7) Theory of Transformation	The overarching hypothesis of how a transformational intent could be realized
(8) Transition Pathways	An evolutionary trajectory—understood as a series of stepping stones of “adjacent possibles”—that a system might follow given its path-dependency and current directionality
(9) Systems Financing Needs	A hypothesis of the capital requirements for achieving a particular transformational intent
(10) Coalition Building and Orchestration	Developing and nurturing a group of investors and funders committed to a shared transformational intent and theory of transformation
(11) Investment Architecture	The design of the overall capital structure of a systemic investment program
(12) Strategic Investment Portfolio	A collection of assets funded with return-seeking capital sitting within the overall investment architecture
(13) Investment Vehicle Design	The form, configuration, and legal structure of the containers in which assets and unallocated capital sit
(14) Nesting	The deliberate synergistic alignment of an investment portfolio with a broader system intervention approach
(15) Combinatorial Effects	The synergies that arise when multiple interventions stand in a strategic relationship with one another
(16) Measurement, Learning and Sensemaking	A systematic approach to generating insights and a basis for accountability in systemic investment programs

Source: Adapted from TransCap Initiative (2024) “Definition and Hallmarks of Systemic Investing: Version 1.0 (before public consultation)”

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Relationship Between System-Level Investing and Systemic Investing / Investing for Systems Change

System-Level Investing

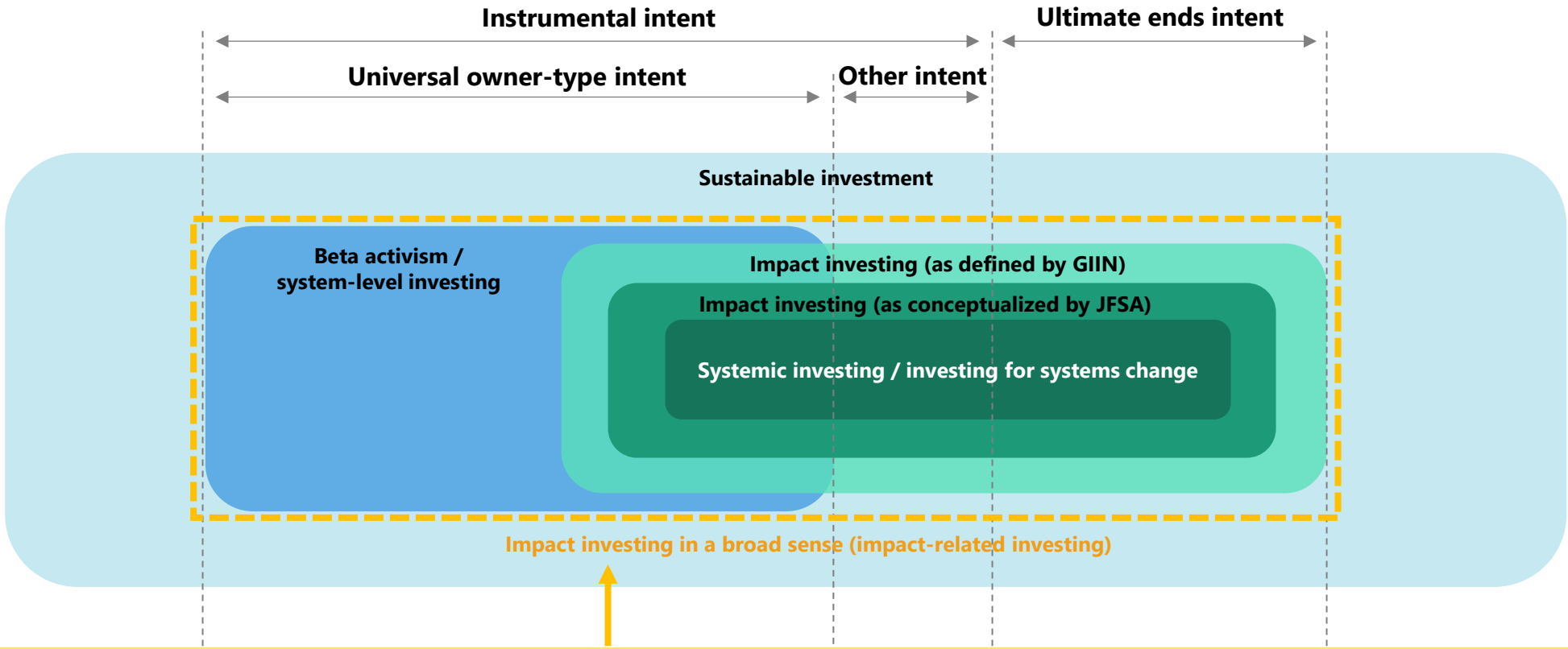
- **An advanced form of sustainable investing.**
- Aims to reduce system-level risks and capture system-level opportunities by actively generating impacts across broader environmental and socio-economic systems.
- Related to universal ownership and beta activism
- Mainly implemented at the asset-owner level or through cross-fund initiatives
- Promoted by the PRI and TIIP; TIIP has outlined “10 advanced techniques”

Despite differences in origin and system scale, they are difficult to clearly distinguish and conceptually overlap.

Systemic Investing / Investing for Systems Change

- **An advanced form of impact investing**
- Rather than focusing on the entire environmental and socio-economic system, this approach treats specific environmental and social issues as systems and seeks fundamental solutions (emphasizing causal-loop diagrams and identifying leverage points).
- Recognizes that the problem-solving capacity of a single fund is limited, and therefore emphasizes collaboration with a wide range of stakeholders and diverse types of capital
- Promoted by TWIST and the TransCap Initiative; TWIST has outlined “10 core traits,” while the TransCap Initiative has defined “16 hallmarks.”

Intent and Investment Approaches in Impact-Related Investing



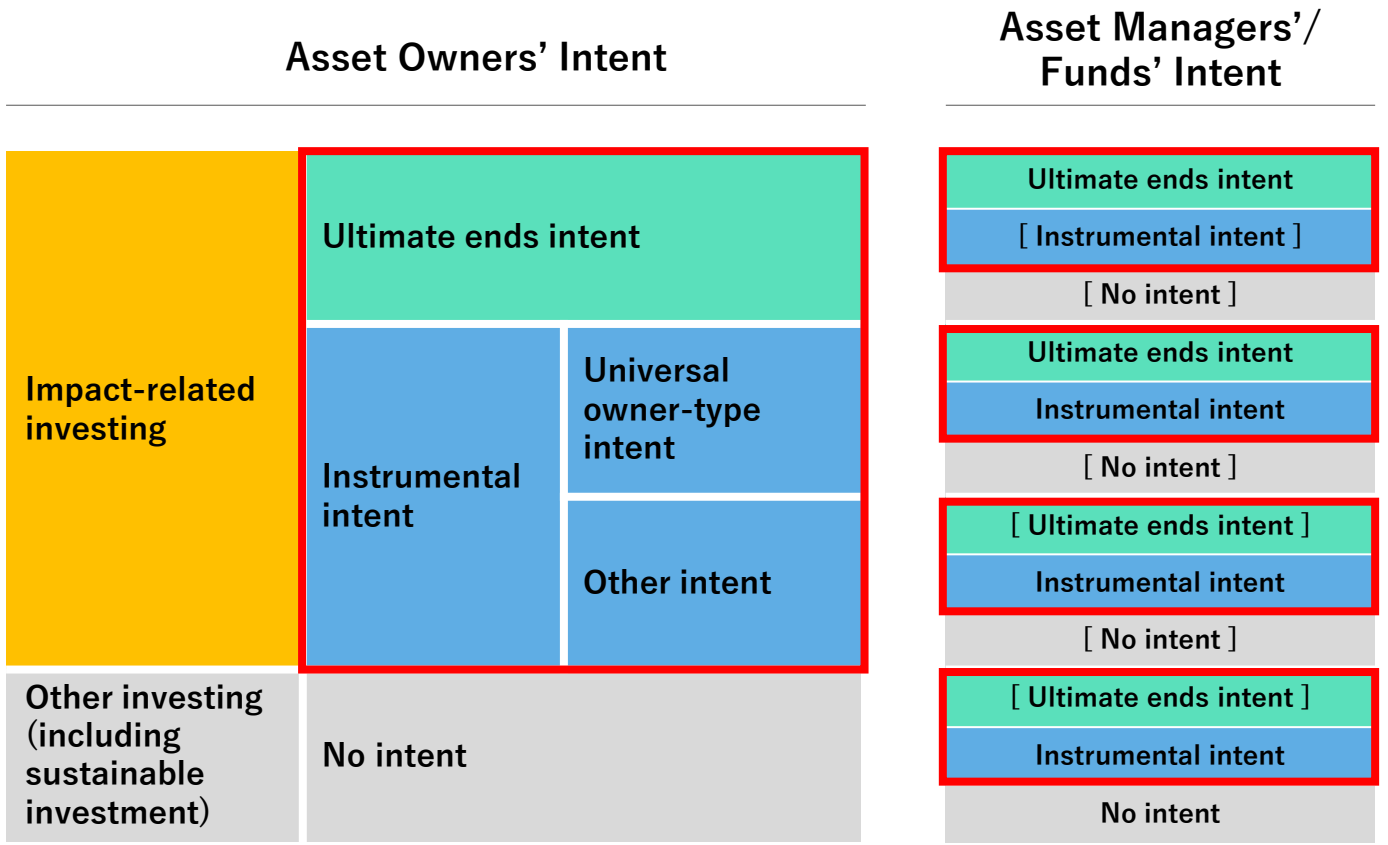
The primary focus of this research is, among investments related to impact, those that fall into either of the following categories:

- **Investment activities labeled as "impact investing"** (including systemic investing / investing for systems change)
- Investment activities not labeled as impact investing but considered to fall within the concepts of beta activism or system-level investing, with **a focus on creating positive impact, such as creating and expanding positive externalities**.

Case studies of individual funds and initiatives by overseas pension funds mainly focus on these types of investments.

Intent and Investment Approaches in Impact-Related Investing

- The intent of asset owners and the intent of asset managers or funds exist separately.
- While their intent is often expected to align, situations where they do not align are also possible—for example, when an asset owner with a universal ownership–oriented perspective appoints an asset manager or fund with ultimate ends intent, or when an asset owner without explicit impact intent allocates capital to a fund with instrumental intent due to its superior risk–return characteristics.



：Equivalent to "Intentionality" in the GIIN's Core Characteristics and the JFSA's Basic Guidelines.

Note: Parentheses indicating the intent of asset managers/funds denote combinations that are theoretically possible but likely to be rare in practice.

Example of Impact Theme Classification: SDGs

- Global goals adopted unanimously at the United Nations General Assembly in 2015, with a target year of 2030. They consist of 17 goals and 169 targets.
- One of the frameworks commonly used by practitioners in impact investing to classify investment areas.
- As these are global goals set only through 2030, it remains unclear at the time of this research what the "post-SDGs" framework beyond 2030 will be.

Goal (Examples)	Target (Examples)
Goal 3: Good Health and Well-Being	Target 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.
Goal 12: Responsible Consumption and Production	Target 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.
Goal 14: Life Below Water	Target 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

Source: Adapted from United Nations (n.d.) "Sustainable Development Goals" https://www.un.org/sustainabledevelopment/ (last accessed January 30, 2026)

Example of Impact Theme Classification: IRIS Catalog of Metrics (GIIN)

- The "IRIS Catalog of Metrics," developed by the GIIN, classifies each metric according to the following impact categories and themes.

Impact Category	Impact Theme
Agriculture	Food Security, Smallholder Agriculture, Sustainable Agriculture
Air	Clean Air
Biodiversity and Ecosystems	Biodiversity and Ecosystem Conservation
Climate	Climate Change Mitigation, Climate Resilience and Adaptation
Diversity and Inclusion	Gender Lens, Racial Equity
Education	Access to Quality Education
Employment	Quality Jobs
Energy	Clean Energy, Energy Access, Energy Efficiency
Financial Services	Financial Inclusion
Health	Access to Quality Healthcare, Nutrition
Infrastructure	Resilient Infrastructure
Land	Natural Resources Conservation, Sustainable Land Management, Sustainable Forestry
Oceans and Coastal Zones	Marine Resources Conservation & Management
Pollution	Pollution Prevention
Real Estate	Affordable Quality Housing, Green Buildings
Waste	Waste Management
Water	Water, Sanitation and Hygiene (WASH), Sustainable Water Management

Source: Adapted from GIIN (2025) "IRIS Version 5.3b Released June 2025" https://iris.thegiin.org/catalog/download/ (last accessed October 30, 2025)

Example of Impact Theme Classification: Fund Classification by Phenix Capital Group (The Netherlands)

Source: Reprinted with permission from Phenix Capital Group (n.d.) "Sustainable Development Goals & Impact Investing themes" https://phenixcapitalgroup.com/sustainable-development-goals-impact-investing-themes (last accessed January 30, 2026)

Example of Impact Theme Classification: GSG Impact JAPAN National Partner

- In the annual survey on Japan's impact investing market conducted by GSG Impact JAPAN National Partner, the following classification is used.

Impact Theme	Examples
Climate change mitigation	E.g., renewable energy
Climate change adaptation	To prepare for rainstorms, floods, tidal surges, and extreme heat; to ensure disaster response, etc.
Environmental protection	E.g., sustainable use of marine resources, forest management, and land use
Food security/Sustainable agriculture	E.g., technologies for nutritional improvement, agricultural productivity improvement
Water resource security/Hygiene	E.g., water and sewer, technologies for water quality improvement and water purification, sanitation
Health/Healthcare	E.g., healthcare and caregiving services, vaccine development
Infrastructure/Urban development	E.g., efficient infrastructure, smart communities
Housing supply	E.g., issue on vacant houses, temporary housing
Microfinance	—
Financial services	Other than microfinance
IT and advanced technology	E.g., information and telecommunication, development of new technologies
Support for small & medium-sized businesses	E.g., job creation, starting a business, productivity improvement
Women's empowerment	E.g., healthcare and education for women, housekeeping services
Quality education and parenting	E.g., school/educational services
Arts and culture	E.g., community support, art activity support, cultural preservation
Other	—

Note: The FY2024 survey simplifies the domain classification; however, the FY2023 classification is used here.
Source: Adapted from GSG-NAB (2023) "The Current State and Challenges of Impact Investing in Japan: FY2023 Survey"

Example of Impact Theme Classification: Green List (Ministry of Environment, Japan)

Main Category	Minor Category
Renewable Energy (including production, transmission, appliances and products)	Businesses that generate electricity from renewable energy sources such as solar, wind, hydroelectric, biomass, geothermal, and ocean renewables such as wave and tidal; Businesses that install and maintain power lines to transmit electricity generated by renewable energy sources and batteries to store electricity, and perform tasks such as maintenance and management, balancing supply and demand, and energy storage; Businesses that utilize renewable thermal energy sources such as solar thermal and geothermal heat; Businesses that manufacture equipment used in renewable energy projects, such as solar panels, power transmission lines, and batteries; Businesses that use renewable energy for part or all of the electricity consumed in offices, factories, retail stores, and residential buildings; Businesses that provide ICT solutions that contribute to renewable energy
Energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products)	Businesses that construct or renovate energy-efficient buildings for offices, factories, retail stores, and residential buildings; Businesses that introduce energy-efficient equipment and facilities in offices, factories, retail stores, and residential buildings; Businesses that introduce equipment related to the effective use of energy on a regional scale, such as energy storage, district heating and cooling, and smart grids; Businesses related to the provision of ICT solutions that contribute to energy savings, or the introduction of communication technologies with high energy-saving performance
Pollution prevention and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/emission-efficient waste to energy)	Businesses that aim to optimize the entire life cycle at each stage of resource extraction, production, distribution, use, and disposal to achieve a circular economy; Businesses that reduce the discharge of toxic substances into the environment through the introduction of advanced equipment and technologies related to the prevention of leakage, volatility, and permeation of toxic substances, and the use of alternative products; Businesses that design or manufacture products that contribute to the reduction of fluorocarbon emissions; Businesses related to the advanced treatment and reuse of wastewater from industries and the construction of sewerage facilities with high environmental benefits and improvements to combined sewer systems; Businesses that treat contaminated soil; Businesses that contribute to the prevention of pollution from plastic waste; Businesses that provide ICT solutions that contribute to the prevention and control of water and air pollutants, Toxic substances, and waste management
Environmentally sustainable management of living natural resources and land use (including environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes)	Businesses related to sustainable agriculture; Businesses related to sustainable fisheries and aquaculture; Businesses related to sustainable forest management; Businesses related to the conservation, creation, and restoration of natural landscapes, urban green spaces, waterfront areas, and networks of water and greenery; Businesses that contribute to reducing the burden on natural resources; Businesses that provide ICT solutions that contribute to the sustainable management of natural resources and land use
Terrestrial and aquatic biodiversity (including the protection of coastal, marine, and watershed environments)	Businesses related to the conservation and restoration of ecosystem integrity in protected areas and other effective area-based conservation measures (OECMs); Businesses related to the conservation of threatened species; Businesses that contribute to the prevention and reduction of negative impacts of invasive alien species; Businesses that maintain an appropriate distance from wild birds and animals and contribute to the mitigation of wildlife damage; Businesses providing ICT solutions that contribute to biodiversity conservation
Clean transportation (such as including electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions)	Businesses that manufacture or introduce electric vehicles, railways, bicycles, zero-emission vessels, and hybrid vessels for coastal shipping, and develop infrastructure necessary for their use; Businesses that improve the efficiency of the logistics system through systematic development of logistics bases, consolidation of transportation networks, modal shifts, and shared transportation and delivery; Businesses that introduce equipment or technologies to support eco-driving; Businesses to develop facilities for park-and-ride and car-sharing; Businesses related to sustainable marine transport
Sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation)	Businesses that conserve the water cycle, including activities such as watershed conservation and the infiltration of rainwater into soil; Businesses that develop facilities for flood prevention; Businesses related to clean water and drinking water infrastructure; Businesses related to urban drainage systems; Water-efficient technologies, equipment and water management activities that reduce water supply throughout the supply chain
Climate change adaptation (including efforts to make infrastructure more resilient to impacts of climate change, as well as information support systems, such as climate observation and early warning systems)	Agriculture, forestry and fisheries: Businesses that develop or introduce crop varieties and technologies adapted to climate change, introduce equipment for controlled-environment agriculture, relocate production areas, and promote environmentally friendly agricultural practices; businesses that develop or introduce aquaculture species and technologies adapted to climate change, introduce processing equipment to address changes in fish species, and improve fishing grounds such as through the conservation of seaweed beds; Water environment and water resources: Businesses related to the efficient use of water resources and the introduction of drought countermeasures, the protection of drinking water quality, and the conservation of water resources; Natural ecosystems: Businesses related to ecosystem-based adaptation, green infrastructure for disaster prevention and mitigation that utilizes ecosystems, and the monitoring of climate change impacts; Natural disasters and coastal zones: In logistics, railways, ports, airports, roads, rivers, water supply infrastructure, waste management facilities, road safety facilities and private real estate, businesses that strengthen disaster prevention and mitigation functions while considering the natural environment and biodiversity conservation; Health: Businesses related to the provision of meteorological information and the Wet Bulb Globe Temperature (WBGT) index and related alerts, awareness-raising on prevention and response measures, the provision of information on occurrence conditions, the introduction of air conditioning and dehumidifiers, the creation of cool spots (such as shade and mist), the development of cooling shelters, and the improvement of building airtightness and insulation performance; Industrial and economic activities: Businesses that ensure the sustainability of their businesses, such as measures to deal with weather related disasters at business sites, relocation from areas of high climate risk, heat stroke prevention measures, and initiatives to ensure a stable supply of raw materials; National and urban life: Businesses related to the development of sewerage facilities to prevent inundation caused by rainwater and the development of a system that allows for the prompt and appropriate implementation of emergency measures and restoration in the event of a reduction in water supply due to damage to facilities; Businesses related to meteorological observation and monitoring, early warning systems, and ICT solutions that contribute to climate change adaptation
Circular economy adapted products, production technologies and processes (such as the design and introduction of reusable, recyclable and refurbished materials, components and products; circular tools and services); and/or certified eco-efficient products	Businesses that produce environmentally friendly products; Businesses related to the research and development and demonstration of technologies and products that contribute to the reduction of greenhouse gases
Green buildings that meet regional, national or internationally recognized standards or certifications for environmental performance	Businesses that construct or renovate new buildings that either meet national standards or have obtained environmental certification demonstrating high performance under nationally and internationally recognized environmental certification systems, such as CASBEE and LEED, regarding green buildings that have energy-saving performance and take a wide range of considerations into account, such as the reduction of lifecycle greenhouse gas emissions, the use of materials with low environmental impact, water use, waste management, and the conservation and creation of biological environments

Note: Due to space constraints, parentheses and annotations for minor categories are omitted.
Source: Adapted from Ministry of Environment (2025) “Annex 1: Appended Table (commonly known as the "Green List"), Updated in July 2025”

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Example of Impact Theme Classification: Non-Exhaustive Transition Technology List (Ministry of Economy, Trade and Industry, Japan)

Clean Energy	Solar power generation Wind power generation Geothermal power generation Biomass power generation and biofuel production Hydroelectric power generation Nuclear power generation Production, transportation, supply, and utilization of hydrogen and fuel ammonia Synthetic methane (e-methane) production and utilization Distributed power generation (including microgrids, on-site generation) Other clean energy (e.g., ocean energy, temperature difference energy, etc.)
Fossil Fuel	Coal-fired power generation with emission reduction measures (e.g., CCUS, ammonia co-firing, biomass co-firing) High-efficiency gas-fired power generation and cogeneration (e.g., CCGT, cogeneration systems, hydrogen co-firing), LNG receiving and regasification facilities (e.g., FSRU)
Power Grid / Power Systems	Power transmission and distribution systems Energy storage systems (e.g., batteries) Fuel cells Transformers and grid equipment
Energy Efficiency	Waste-to-energy utilization (including waste power generation) Energy-efficient industrial parks and equipment (e.g., district heating and cooling, HEMS, BEMS, top-runner equipment) Other energy-saving power generation and heat supply systems
Industrial Decarbonization	Decarbonization and energy-saving technologies in steelmaking processes Decarbonization and energy-saving technologies in chemical and petrochemical manufacturing Decarbonization and energy-saving technologies in pulp and paper production Decarbonization and energy-saving technologies in cement manufacturing Green mobility (e.g., EVs, FCVs, public transport electrification) Decarbonization and energy-saving technologies in aviation Decarbonization and energy-saving technologies in shipping Decarbonization and energy-saving technologies in daily life sectors (e.g., buildings, appliances) Decarbonization and energy-saving technologies in other industries Fuel switching (e.g., conversion from coal and oil to natural gas, hydrogen, ammonia, etc.) Resource conservation, effective utilization of waste heat and exhaust gases Circular economy initiatives (e.g., recycling, resource circulation)
Other GHG Reduction	CCS / CCUS (Carbon Capture, Utilization and Storage) BECCS, DACCS, and soil carbon sequestration Digitalization and AI utilization for energy management and emissions reduction Other measures to reduce methane, CFCs, N2O, and other non-CO2 GHGs (including those related to agriculture)

Source: Adapted from Ministry of Economy, Trade and Industry (2025) “FRTF: Fundamental Review of Transition Finance: Japan Public-Private Working Group’s Report on Scaling “Inclusive” Transition Finance in the ASEAN Region”

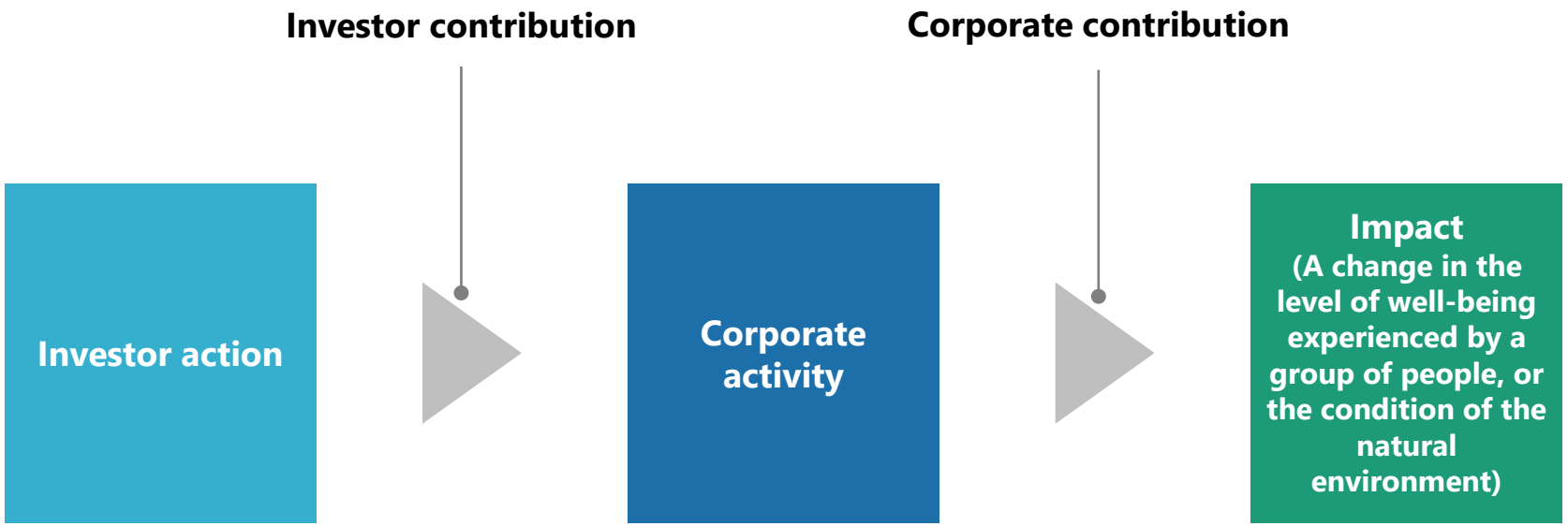
Example of Impact Theme Classification: Examples of Social Issues / Projects (JFSA)

Examples of Social Issues	Examples of Social Projects
Promoting diversity and empowering women	○Providing programs for education/vocational training, career development, and skills development, as well as business support for those in socio-economically vulnerable positions; ○Providing investments and loans to and support for start-ups and entrepreneurs (whose managers are in a socio-economically vulnerable position); ○Providing investments and loans to companies with credentials, etc. in empowering women and promoting gender equality; ○Providing support services/facilities for childcare and parenting; ○Providing support services/facilities for long-term caregiving
Undertaking working-style reform and achieving decent work	○Establishing a more decent work environment; ○Introducing ICT tools for remote working (web conference tools, etc.); ○Developing satellite and shared office spaces; ○Providing support services/facilities for childcare and parenting; ○Providing support services/facilities for long-term caregiving
Promoting barrier-free access	○Eliminating the digital divide (improvement of web accessibility, etc.); ○Developing barrier-free and/or gender free facilities/equipment; ○Promoting universal support; ○Providing sports and leisure opportunities for people with disabilities
Promoting countermeasures against child poverty and securing educational opportunities for all	○Implementing projects in education and welfare for economically disadvantaged children; ○Providing scholarships and educational loans; ○Providing support for creating safe and useful online environments for children; ○Providing online learning systems, providing training programs that promote the utilization of ICT, and developing and the infrastructure of school facilities for students and teachers
Promoting responsible business conduct	○Providing training programs on human rights and corporate responsibility (safety, prevention of bribery/corruption, fair labor practices, children's rights, etc.); ○Implementing programs for fair trade based on international norms, etc. regarding business and human rights; ○Supporting small-scale producers and suppliers who meet certain social and environmental standards, etc.
Achieving good health and longevity	○Providing programs aimed at promoting health and preventing Illness; ○Conducting research and development of advanced medical nutrients; ○Conducting research, development, sales and distribution of healthier products; ○Conducting research and development to achieve improved food nutrition; ○Establishing state-of-the-art medical research facilities; ○Conducting research and development of innovative medical technology; ○Projects and investments/loans related to ICT utilization in the field of health and medical care (introducing telemedicine systems, etc.)
Correspondence to an aging society	○Providing welfare and long-term caregiving services for aging populations; ○Providing welfare facilities for aging populations (including long-term caregiving facilities, medical facilities, housing facilities, and cultural facilities); ○Providing preventive care programs for aging populations (promotion of exercise, etc.)
Countermeasures against COVID-19	○Conducting research and development of medical testing equipment (test kits, etc.) and pharmaceuticals (vaccines, etc.), and establishment of production systems for those products; ○Supporting countermeasures against infectious diseases at companies, facilities, stores, etc. (preparation of equipment to measure temperature and prevent infection, support for business continuity, etc.)
Countermeasures against economic impact	○Providing support to SMEs, etc. that have been economically affected by the spread of infectious diseases (investments and loans for business/employment continuity, etc.)
Regional revitalization	○Providing business support for local companies (including recruitment of human resources and sharing of intellectual property); ○Improving local living infrastructure and services (improvement of ICT environment in geographically disadvantaged areas, etc.); ○Providing support for local employment/employment generation; ○Providing investments and loans to promote and support the business growth of local SMEs
Sustainable and resilient land use (disaster prevention and mitigation, measures for aging infrastructure)	○Constructing facilities with disaster prevention and mitigation measures; ○Providing logistics facilities in the event of a disaster ○Providing evacuation shelters and supplies in the event of a disaster; ○Conducting countermeasures against disaster vulnerability/aging Infrastructure; ○Conducting projects to support disaster recovery; ○Conducting projects to promote the sustainable development of towns
Housing support for low-income earners	○Constructing and renovating high quality, affordable housing for low income earners, etc.; ○Providing mortgages for low-income earners, etc.
International cooperation (promoting Universal Health Coverage, supporting developing countries in Asia, Africa, etc., developing high-quality infrastructure overseas)	○Providing support services to enable access to electricity in underserved areas (in developing countries); ○Providing support programs for improving access to clean drinking water for low-income groups (in developing countries); ○Conducting community development projects, including sanitary sewage systems, transport, waste management, and development of green and coastal areas (in developing countries)
Promotion of sustainable production and consumption, reduction of food waste and loss, and utilization of food waste and loss/International cooperation (Achieving food security and improved nutrition in developing countries)	○Conducting projects related to addressing issues of food loss and waste in the process from food production to distribution (supply chain); ○Providing guidance, advice and support programs on sustainable production and agricultural practices; ○Introducing highly productive food processing equipment utilizing advanced technology (plant factories, etc.)

Source: Adapted from Financial Services Agency (2021) “Social Bond Guidelines”

Corporate Contribution and Investor Contribution

- "Investor contribution," identified as one of the key elements in the basic guidelines of the JFSA, is also referred to as "additionality" and is considered essential in impact investing.
- The primary actor in creating impact is the company, and corporate contribution and investor contribution are generally distinguished.



Classification of Corporate Contribution: ABC of Enterprise Impact (Impact Frontiers)

A. ACT TO AVOID HARM

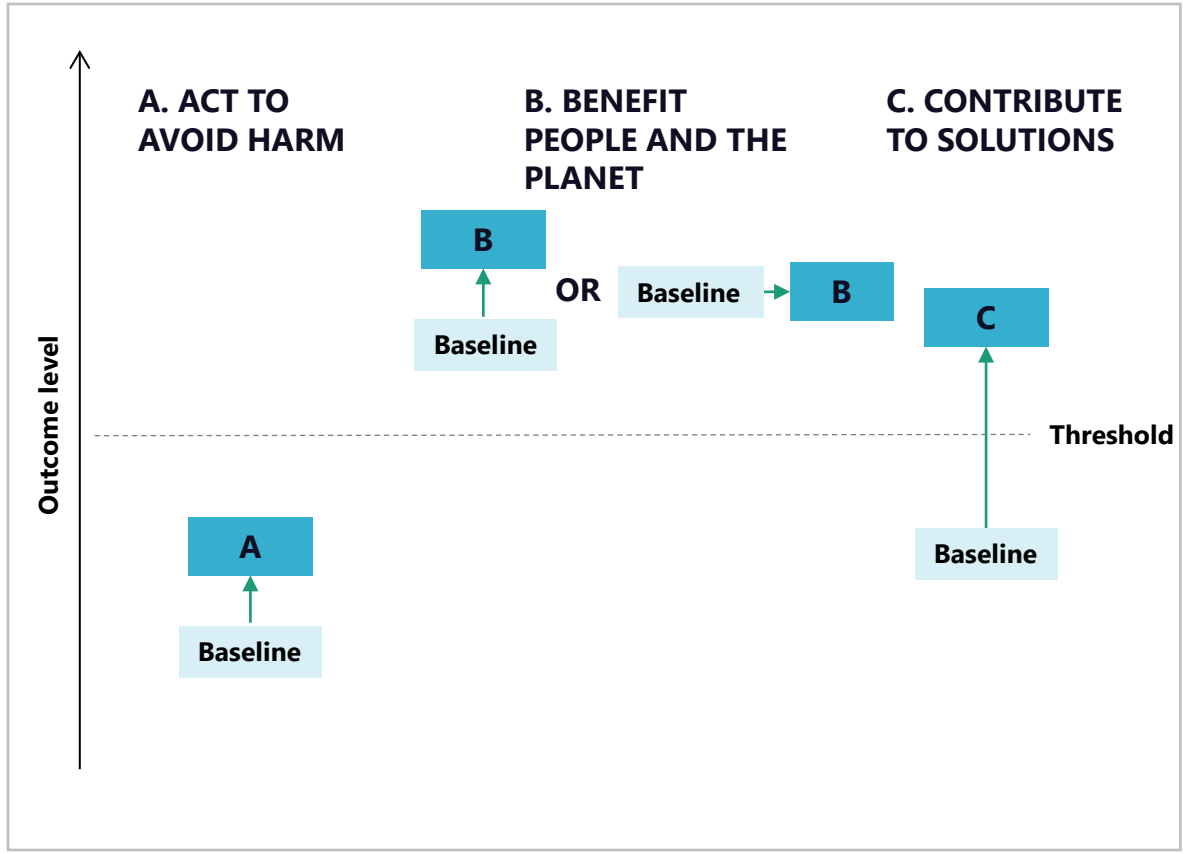
At a minimum, enterprises can Act to avoid harm by identifying where the organization (or asset) is causing harm to people's well-being and the condition of the natural environment and improving those outcomes so that they are getting nearer the positive range established by the societal or ecological threshold. This objective is set when the organization will improve performance on the outcome but will not achieve a positive outcome within the period for which the objective is being set.

B. BENEFIT PEOPLE AND THE PLANET

In addition to acting to avoid harm, enterprises can actively benefit affected people and communities by not only acting to avoid harm for them (A), but also maintaining or causing improved well-being for one or more group of people and / or the condition of the natural environment, so that it is within the positive range established by the societal or ecological threshold.

C. CONTRIBUTE TO SOLUTIONS

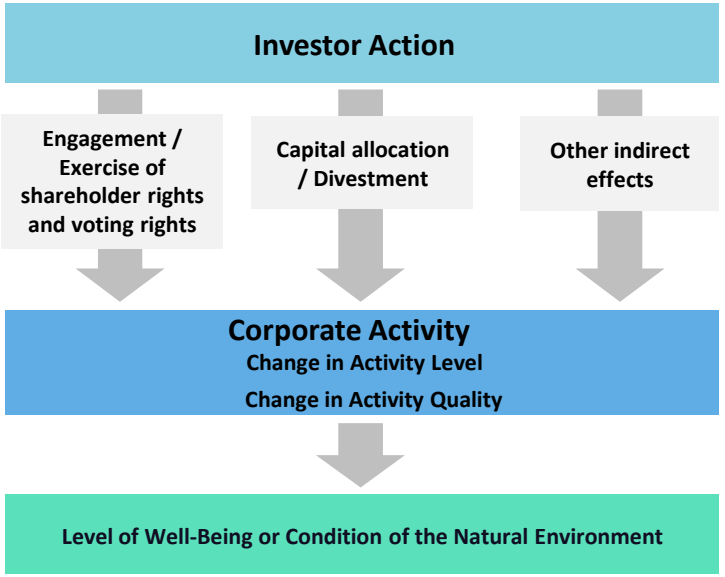
A Contribute to solutions (C) classification should be improving the well-being of a group of people or the condition of the natural environment so that the outcome is within the positive range, where the outcome had been negative prior to engaging with the organization. These negative outcomes should not have been originally generated by the organization itself (for instance, they might have been the result of a market or policy failure), leaving a group of people without access to something they need for their well-being or putting the availability of natural resources at risk.



Source: Adapted from Impact Frontiers (n.d.) "Norms | ABC of Enterprise Impact" https://impactfrontiers.org/norms/abc-of-enterprise-impact/ (last accessed January 30, 2026)

Literature on Investor Contribution

- A review paper published in 2020, "Can Sustainable Investing Save the World?"
- Organizes evidence on investor contribution based on empirical and theoretical studies across three mechanisms: "Engagement / exercise of shareholder rights and voting rights" "capital allocation / divestment," and "other indirect effects".
- Findings suggest the importance of investor engagement and capital mobilization for companies facing external financing constraints or operating in less mature financial markets in order to create impact.
  - ✓ Investor engagement is suggested to be particularly important in areas where capital supply is already relatively abundant, such as listed equity investments.
  - ✓ Providing funding to early-stage start-ups that lack sufficient growth capital, for example, or mobilizing over JPY 130 trillion in private capital required to achieve Japan's Green Transformation (GX) are among the ways that can play a significant role in enabling investors to contribute.



Mechanism	Evidence Overview
Engagement / Exercise of shareholder rights and voting rights	• There is strong evidence suggesting that it is an effective mechanism for driving reforms that improve the quality of corporate activities.
Capital allocation / Divestment	• There is evidence that investment in or divestment from specific companies can affect market prices. However, there is no consensus on the magnitude of this effect, making it difficult to assess its significance. In addition, there is no reported evidence that changes in market prices have led to changes in ESG practices at investee companies. • Investment in specific companies is more likely to influence the growth of smaller, younger firms in less mature markets—where growth may be constrained by limited access to financing—than that of large, established companies in mature financial markets.
Other indirect effects	• For other indirect effects—mechanisms whereby investor actions influence third parties other than companies, which in turn affect corporate behavior—evidence supporting their effectiveness is limited, with little empirical backing.

Studies report that the success rate of requests made through shareholder engagement ranges from 18% to 60%.

Reference	No. of requests	Sample period	Success rate
Dimson *et al.* (2015)	2,152	1999-2009	**18%**
Hoepner *et al.* (2016)	682	2005-2014	**28%**
Barko *et al.* (2017)	847	2005-2014	**60%**
Dimson *et al.* (2018)	1,671	2007-2017	**42%**
Dyck *et al.* (2019)	147	2004-2013	**33%**

Note: Engagement with policymakers—an approach that can also be undertaken by actors other than investors—is excluded from the scope of the review.
Source: Adapted from Kölbel, J. F. Heeb, F. Paetzold, F. & Busch, T. (2020) "Can Sustainable Investing Save The World?: Reviewing The Mechanisms of Investor Impact" *Organization & Environment*, 33(4), pp.554-574

Literature on Investor Contribution (Continued)

- A review paper published in 2023, "The Impact of Sustainable Investing: An Interdisciplinary Review"
- Explores in greater depth the "other indirect effects" identified in the review paper on the previous page and presents five mechanisms (shown in the table below) under the concept of "field building," a third strategy distinct from investor engagement and capital allocation (investment or divestment).
- Notes that cooperation among multiple investors and engagement with policy, regulation, and rule-making processes are also important for realizing investor contribution.

1. Shifting other shareholders' evaluation of environmental / social issues
2. Sharing expertise with other shareholders regarding environmental / social issues
3. Delegitimizing certain business activities by raising concerns about specific business activities with negative effects on environment / society
4. Establishing voluntary sustainability-related standards
5. Supporting regulatory changes by government

Source: Adapted from Marti, E. Fuchs, M. DesJardine, M. R. Slager, R. & Gond, J. P. (2023) "The Impact of Sustainable Investing: A Multidisciplinary Review" *Journal of Management Studies*, 61(5), pp.2181-2211

Note: A practitioner-oriented article by the same authors explaining the above content is also available: Marti, E. Fuchs, M. DesJardine, M. R. Slager, R. & Gond, J. P. (2023) "A More Impactful Strategy for Sustainable Investing" *Harvard Business Review* https://hbr.org/2023/09/a-more-impactful-strategy-for-sustainable-investing

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Literature Review on Investment Returns in Impact Investing: Investment Returns of Impact Funds

- As impact investing is a relatively new field, the accumulation of empirical research on the investment returns of impact funds remains limited.
- As of December 2025, a search of academic databases for empirical (peer-reviewed) studies identified only four relevant papers.

Author, Title, etc.	Analysis Overview	Summary of Findings
Kovner, A. & Lerner, J. (2015) "Doing well by doing good? Community development venture capital" *Journal of Economics & Management Strategy*, 24(3), pp.643-663	• Using data on 65,000 investments in the U.S. from 1996 to October 2009, the study compares U.S. community development venture capital (CDVC) with conventional VC.	• CDVC investments tend to target earlier-stage deals, industries, and regions where conventional venture capital funding is less likely to flow. • Even after controlling for these differences, the success rate of CDVC investments—measured by the probability of exit through IPO or acquisition—is lower than that of conventional VC investments. • However, CDVC may have a catalytic effect by attracting additional investment to areas that are underserved by conventional VC.
Barber, B.M. Morse, A. & Yasuda, A. (2021) "Impact investing" *Journal of Financial Economics*, 139(1), pp.162-185	• Analyzes the IRR of 24,000 VC and growth equity investments made by 4,659 funds between 1995 and 2014 (of which 159 funds are identified as impact funds).	• The IRR of impact funds is 4.7 percentage points lower than that of traditional VC funds, after controlling for industry, vintage year, fund sequence number, and geography.
Jeffers, J. Lyu, T. & Posenau, K. (2024) "The risk and return of impact investing funds" *Journal of Financial Economics* https://doi.org/10.1016/j.jfineco.2024.103928	• Analyzes all 2,509 equity investments made by IFC (World Bank Group) between 1961 and 2019 (including 2,029 direct investments and 480 fund investments). • Calculates the Public Market Equivalent (PME) and compares the returns with the S&P 500 Index.	• The PME is 1.15 for the overall portfolio, 0.97 for direct investments (hypothetically net of fees), and 0.96 for fund investments, indicating returns broadly comparable to market benchmarks. • Returns tend to decline as capital constraints ease and the banking sector becomes more developed.
Cole, S. Melecky, M. Mölders, F. & Reed, T. (2025) "Long-run returns to private equity in emerging markets" *Management Science* https://doi.org/10.1287/mnsc.2023.03313	• Analyzes 94 impact funds (vintages 1999–2015) that target market-rate returns, excluding concessionary funds. • Compares their performance with conventional U.S. VC using the Generalized Public Market Equivalent (GPME), which adjusts for differences in beta.	• The PME is 0.74, indicating lower absolute investment returns than conventional U.S. VC. However, when analyzed using the GPME, the investment returns are broadly comparable to those of conventional U.S. VC overall.

Literature Review on Investment Returns in Impact Investing: Investment Returns of Impact Funds (Continued)

- An interview survey conducted by the GIIN, covering 22 asset owners (insurance companies and pension funds) across 10 countries with total assets of approximately USD 3.5 trillion, presents the following perceptions regarding returns from impact investing.
- Only a limited number of asset owners position impact investing as concessional investing; in many cases, it is suggested that investors emphasize risk–return comparability with other investments or the diversification benefits that impact investing may provide within an overall investment strategy.

- The asset owners (AOs) surveyed apply the same target investment return for impact investments as for their other investments.
- Impact investments are evaluated using the same financial metrics as other investments within the same asset class, with expectations of risk–return comparability or contributions to diversification and liquidity.
- Some AOs place particular emphasis on the diversification benefits of incorporating impact investments.
- A small number of AOs believe that impact investing may generate investment returns that significantly outperform the market in the future.
- Some AOs have experienced increased costs during the capability-building phase related to impact investing.
- Some AOs may tolerate slightly higher risk when supporting funds with a strong impact orientation through first-time investments.
- Only one AO engages in concessional investing that accepts lower financial returns for the sake of impact.

Source: Adapted from GIIN (2025) “Navigating Uncertainty, Seizing Opportunity: Institutional Asset Owners and Impact Investing 2025”

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Literature Review on Investment Returns in Impact Investing: Beyond the Investment Returns of Impact Funds

- Given the limited accumulation of empirical studies on the investment returns of impact funds, supplementary research was conducted on empirical studies focusing on individual companies.
- The review found that even at the individual company level, the accumulation of empirical research remains very limited, as company-level impact is highly heterogeneous and there are no datasets based on common metrics; moreover, unlike ESG ratings or ESG scores, no widely accepted metrics exist to measure company-level impact.
- The few relevant empirical (peer-reviewed) studies identified through this research can be broadly classified into two categories.

Analytical Perspective	Empirical Studies Identified (Authors, Titles, etc.)
Empirical analysis of the relationship between corporate purpose and financial performance (Focusing on corporate purpose, which is considered important in impact-oriented management)	• Gartenberg, C. Prat, A. & Serafeim, G. (2019) "Corporate purpose and financial performance" *Organization Science*, 30(1), pp.1-18
Empirical analysis of the diversification effects of investments in microfinance institutions	• Krauss, N. & Walter, I. (2009) "Can microfinance reduce portfolio volatility?" *Economic Development and Cultural Change*, 58(1), pp.85-110 • Galema, R. Lensink, R. & Spierdijk, L. (2011) "International diversification and microfinance" *Journal of International Money and Finance*, 30(3), pp.507-515

Literature Review on Investment Returns in Impact Investing: Corporate Purpose and Financial Performance

- Empirical studies arguing that corporate purpose has a positive effect on financial performance.

Gartenberg, C. Prat, A. & Serafeim, G. (2019) "Corporate purpose and financial performance" *Organization Science*, 30(1), pp.1-18

- Quantifies the strength of corporate purpose based on employee survey data and examines its relationship with financial performance indicators (ROA and Tobin's Q).
- The results suggest that when corporate purpose is clearly understood by organizational members—and when it is particularly well embedded among middle managers and professional/technical staff—it has a positive effect on financial performance.

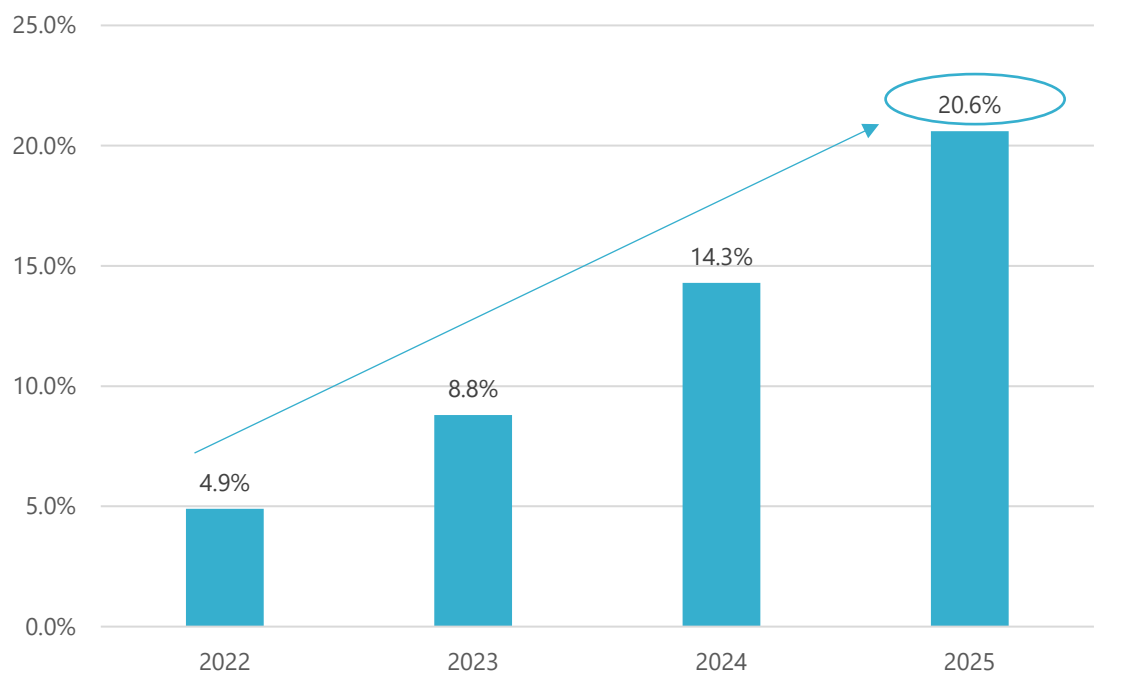
Reference: Definition of purpose in for-profit companies

"Purpose in the for-profit firm captures the essence of an organization's existence by explaining what value it seeks to create for its stakeholders."

Source; George, G. Haas, M. R. McGahan, A. M. Schillebeeckx, S. J. & Tracey, P. (2023) "Purpose in the for-profit firm: A review and framework for management research" *Journal of Management*, 49(6), pp.1841-1869

Reference: An increasing number of listed companies in Japan have begun to adopt statements explicitly disclosed or referred to as "purpose."

Percentage of TSE Prime Companies with a Stated Purpose



Source: Compiled based on the annual survey "PURPOSE STATEMENT LIST" (in Japanese) conducted by SMO Co., Ltd. (2022–2025).

Literature Review on Returns in Impact Investing: Diversification Effects of Investments in Microfinance Institutions

- Empirical studies suggest that investments in microfinance institutions—long regarded as one of the core investment areas in impact investing—can enhance portfolio diversification.
- Further research is required to examine whether similar trends persist today and whether comparable effects can be observed in other areas of impact investing.
- In addition, interview-based research by the GIIN reports that some asset owners perceive impact investing as contributing to greater portfolio diversification. This suggests that, from the perspective of asset owners, further insights are needed regarding the role of impact investing in enhancing portfolio diversification and diversifying investment strategies.

Krauss, N. & Walter, I. (2009) "Can microfinance reduce portfolio volatility?" *Economic Development and Cultural Change*, 58(1), pp.85-110

[Sample] 325 microfinance institutions (MFIs) from 1998–2006 (data from MicroBanking Bulletin)

[Main Method] Analysis of the correlations between MFIs' financial indicators (e.g., ROE, profit margins, asset growth rates) and global market indices (e.g., S&P 500, MSCI World) as well as domestic GDP

[Key Findings and Implications]
- MFIs show no statistically significant correlation with capital market movements and exhibit lower sensitivity compared with emerging market commercial banks.
- While many financial indicators show statistically significant correlations with domestic GDP—indicating that MFIs are not fully independent of domestic economic conditions—the correlations are relatively small, and their domestic risk exposure is lower than that of emerging market firms and commercial banks.

Portfolio Implication:
- MFIs offer significant diversification benefits (volatility reduction) for internationally diversified investors, while the diversification benefits are limited for domestic investors in the same country.

Galema, R. Lensink, R. & Spierdijk, L. (2011) "International diversification and microfinance" *Journal of International Money and Finance*, 30(3), pp.507-515

[Sample] MFI data from 1997–2007 (sourced from MixMarket)

[Main Method] Uses a mean–variance spanning test (with short-selling constraints) to examine whether adding MFIs to an internationally diversified asset portfolio improves the efficient frontier

[Key Findings and Implications]
Improved portfolio efficiency:
- Incorporating MFIs into a portfolio improves its risk–return characteristics, with particularly strong diversification benefits when added to global bond portfolios.

Differences by region and institutional type:
- MFIs in Latin America and those structured as commercial or regional banks offer stronger diversification benefits.
- In contrast, MFIs in Africa and those operating as non-profit institutions provide more limited diversification benefits for investors.

Contents

1. Research Background, Objectives, and Methodology

2. Concept of Impact Investing and Related Activities

3. Market, Industry Organizations, and International Policies and Regulations

4. Case Studies of Overseas Impact Funds

5. Case Studies of Overseas Pension Funds

6. Concluding Remarks

Key Points – Chapter 3: Market, Industry Organizations, and International Policies and Regulations

- This chapter reviews global and Japanese market reports on impact investing, confirming that **the expansion of impact investing is a global trend**. It also confirms that **pension funds are a major source of capital** for the global impact investing market.

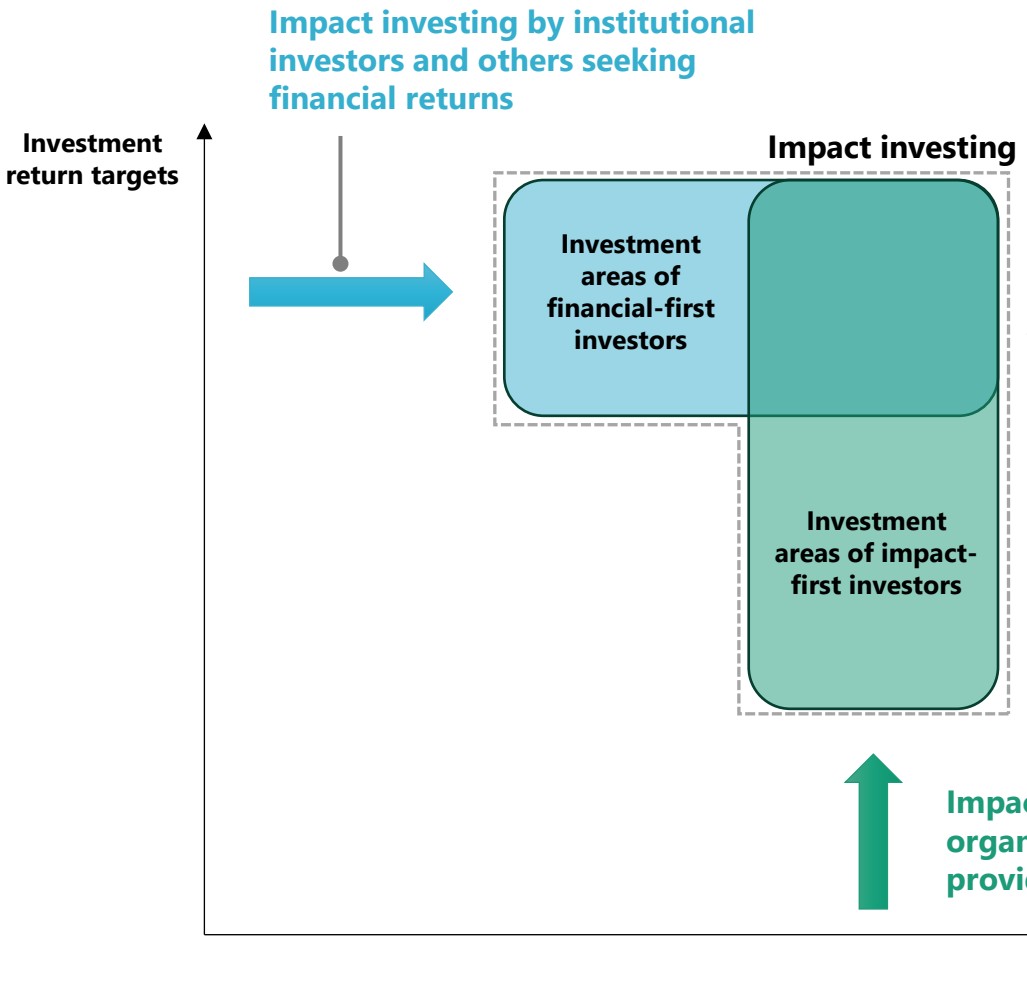
- Regarding asset classes, impact investing is made across various categories globally; however, Japan is characterized by a particularly high share of debt and bonds. Regarding impact areas, impact investing globally spans a wide range of sectors such as financial services, energy, agriculture and food, and healthcare, whereas Japan is characterized by a relatively large share of investments related to climate change mitigation.

- Furthermore, this chapter conducts a comprehensive review of **nine industry organizations related to impact investing (GIIN, OPIM, PRI, GSG Impact, Impact Europe, AVPN, ICM, Toniic, and the Japan Impact-Driven Finance Initiative**). It clarifies the characteristics of each organization—for example, GIIN and OPIM focus specifically on impact investing; PRI promotes sustainable investment more broadly; GSG Impact aims to build an impact economy beyond investment; ICM focuses on fund GPs; and the Impact-Driven Finance Initiative focuses on Japan.

- In addition, corresponding to the countries where the overseas pension funds examined in Chapter 5 are located, this chapter conducts a comprehensive review of major policies and regulations related to impact investing across **eight countries and regions (U.S, Australia, EU, the Netherlands, UK, France, Sweden, and Japan)**. While policy and regulatory approaches vary across jurisdictions, the chapter highlights, for example, that the proposed revision of the EU Sustainable Finance Disclosure Regulation (SFDR) clarifies the positioning of impact investing.

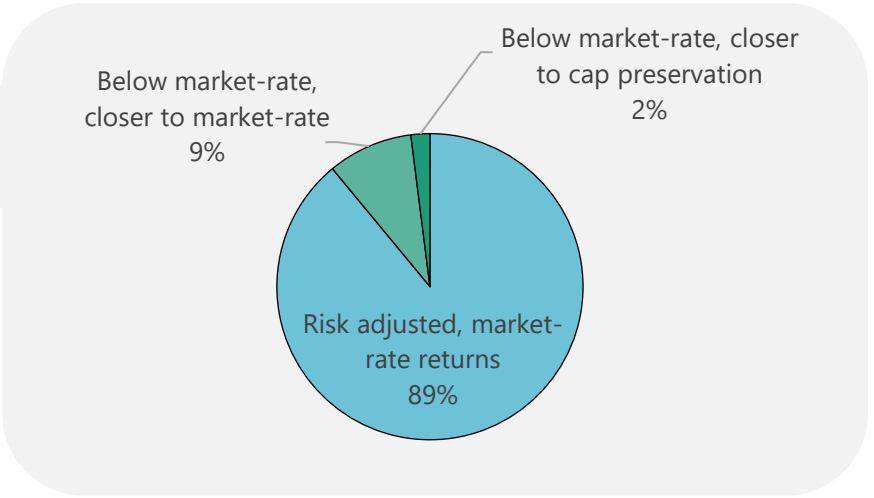
Diversity of Players in Impact Investing

- A wide range of investors participate, from impact-first investors (investors with ultimate ends intent) to financial-first investors (investors with instrumental intent who prioritize financial returns).



Note: For illustrative purposes only.
Source: Adapted from Monitor Institute (2009) "Investing for Social & Environmental Impact: A Design for Catalyzing an Emerging Industry"

Share of AUM by Target Investment Return (Global, 2024)

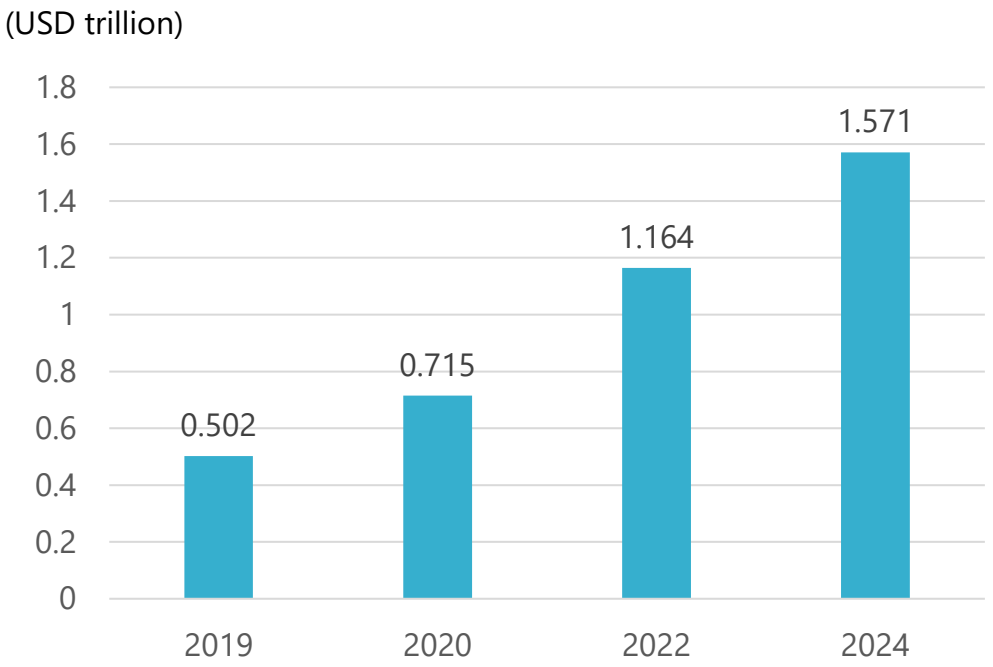


Note: N=264, AUM=USD 189 billion
Source: Adapted from GIIN (2025) "State of the Market 2025: Trends, Performance and Allocations"

Impact Investing Market Size (Global and Japan)

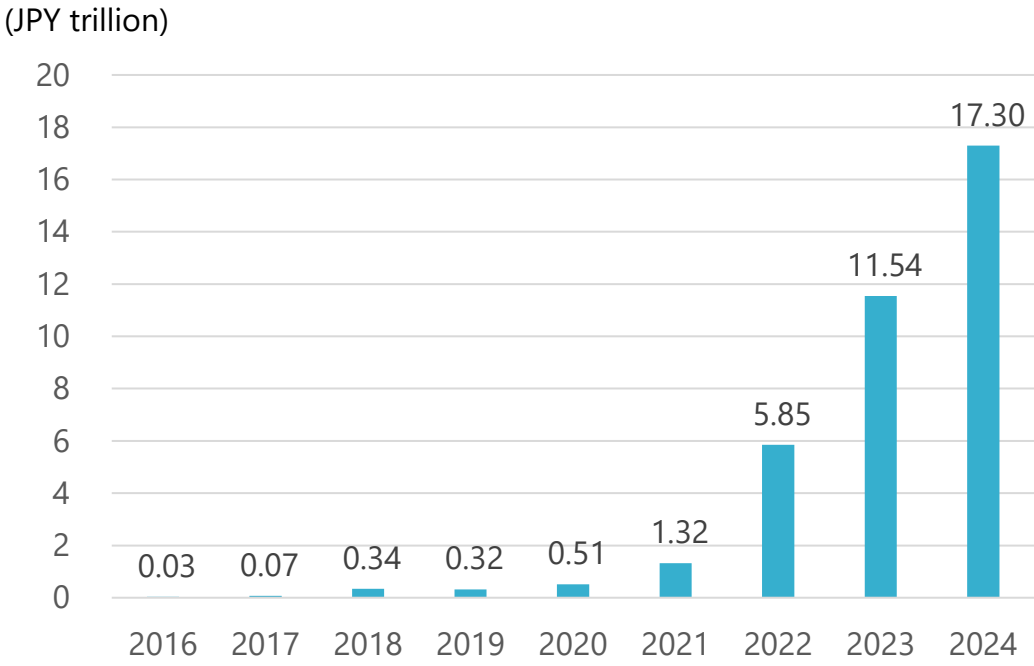
- The impact investing market is expanding globally, including in Japan.
- Note that the survey methodologies differ between the global and Japan data; therefore, the figures are not necessarily directly comparable.

Trends in Impact Investing AUM (Global)



Note: Estimated by GIIN. Years indicate the publication year of the survey report (reporting year).
Source: Compiled based on GIIN (2019, 2022, 2024) "Sizing the Impact Investing Market" ; GIIN (2020) "Annual Impact Investor Survey 2020"

Trends in Impact Investing AUM (Japan)



Note 1: The scope of aggregation here may not fully align with that used by GIIN and may also differ from the approach set out in the JFSA's Basic Guidelines.
Note 2: Based on questionnaire surveys and therefore not necessarily suitable for time-series comparison. N=22 (2016), N=24 (2017), N=20 (2018), N=16 (2019), N=26 (2020), N=31 (2021), N=46 (2022), N=58 (2023), N=59 (2024).
Source: Compiled based on the annual surveys "Current State and Challenges of Impact Investing in Japan" by the G8 Social Impact Investment Taskforce Japan National Advisory Board (2016), GSG-NAB Japan (2017–2024), and GSG Impact JAPAN National Partner (2025).

Regional Distribution of Impact Investing (Global)

- By investor headquarters location, Europe accounts for the largest share of impact investing AUM, followed by North America.
- East Asia, including Japan, remains relatively small but increased significantly from the 2022 report to the 2024 report.

Impact Investing AUM by Investors' Headquarters Location

Headquarters Location	Share of Impact AUM	
	Reported in 2022	Reported in 2024
Western, Northern, & Southern Europe	55%	53%
U.S. & Canada	37%	35%
East Asia	1%	6%
Sub-Saharan Africa	2%	2%
Middle East & North Africa	1%	2%
Latin America & Caribbean (including Mexico)	1%	1%
Southeast Asia	1%	1%
Oceania	2%	1%
South Asia	0.5%	<1%
Eastern Europe & Central Asia	0.1%	<1%

Note: Years indicate the publication year of the survey report (reporting year). N=1,013 (2022), N=1,475 (2024).
Source: Compiled based on GIIN (2022, 2024) "Sizing the Impact Investing Market"

Share of Capital Supplied to Impact Investing by Player Type (Global, 2024)

- Pension funds were the largest providers of capital to impact investing in 2024.

Share of Capital Supplied by Player Type (Global, 2024)

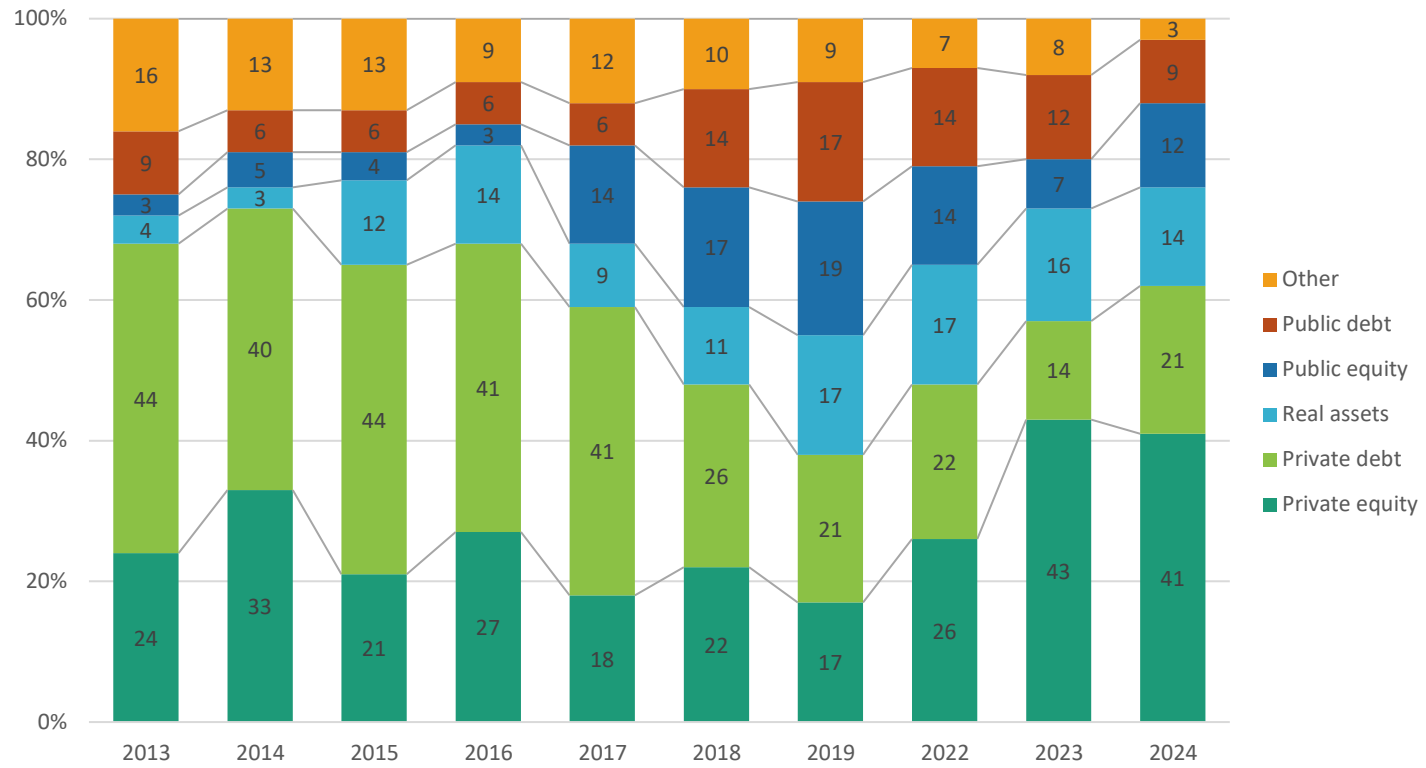
Organization Type	Sources of Capital in 2024
Pension or retirement fund	35%
Bank	14%
Insurance company	12%
Intergovernmental or government agency	11%
Family office	8%
Foundation	3%
High-net-worth individual	2%
Sovereign wealth fund	2%
Corporate balance sheet	1%
Endowment	1%
Other	12%

Note: N=136.
Source: Adapted from GIIN (2025) "State of the Market 2025: Trends, Performance and Allocations"

Share of Impact Investing by Asset Class (Global)

- Private markets have traditionally accounted for a large share.
- The share of public markets increased around 2019, but the share of private markets has risen again in recent years.

Trends in the Share of Impact Investing AUM by Asset Class (Global)



Note: Based on questionnaire surveys and therefore not necessarily suitable for time-series comparison. N=124, AUM=USD 46 billion (2013) ; N=145, AUM=USD 60 billion (2014) ; N=153, AUM=USD 50 billion (2015) ; N=203, AUM=USD 64 billion (2016) ; N=224, AUM=USD 141 billion (2017) ; N=259, AUM=USD 131 billion (2018) ; N=289, AUM=USD 221 billion (2019) ; N=303, AUM=USD 198 billion (2022) ; N=293, AUM=USD 290 billion (2023) ; N=359, AUM=USD 218 billion (2024).
Source: Compiled based on J.P. Morgan & GIIN (2014) "Spotlight on the Market: The Impact Investor Survey" ; J.P. Morgan & GIIN (2015) "Eyes on the Horizon: The Impact Investor Survey" ; GIIN (2016-2020) "Annual Impact Investor Survey" ; GIIN (2023) "2023 GIINsights" https://thegiin.org/publication/research/2023-giinsight-series/ (last accessed January 30, 2026) ; GIIN (2024-2025) "State of the Market: Trends, Performance and Allocations"

Share of Impact Investing by Sector (Global)

- Impact investing spans a wide range of sectors, with particularly large shares in financial services (including microfinance) and energy.

Trends in the Share of Impact Investing AUM by Sector (Global)

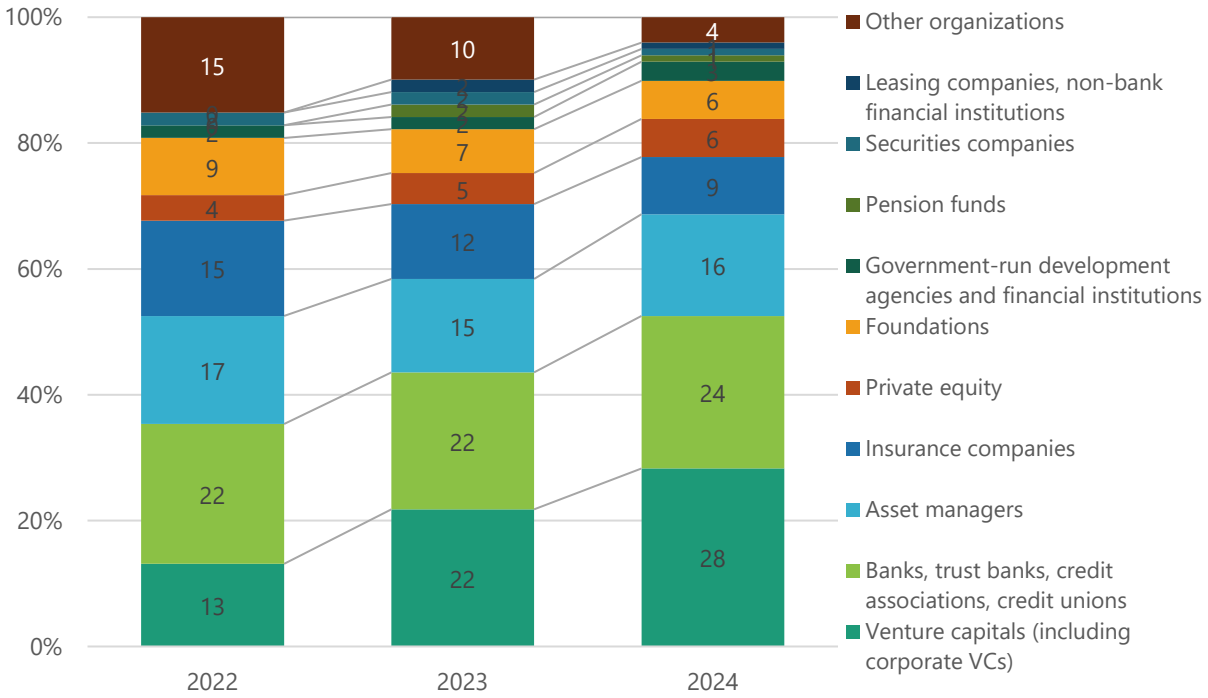
Sector	2015	2016	2017	2018	2019	2022	2023	2024
Financial services	10%	10%	19%	11%	12%	13%	14%	21%
Microfinance	21%	21%	9%	13%	8%	8%	—*1	—*1
Energy	14%	13%	14%	15%	16%	17%	21%	20%
Food & agriculture	7%	6%	6%	10%	9%	7%	5%	11% *2
Healthcare	6%	7%	5%	6%	7%	9%	12%	11%
Housing / Construction	12%	11%	8%	7%	8%	6%	14%	8% *3
Information & communication technologies	2%	2%	3%	2%	3%	5%	4%	5%
Manufacturing	2%	2%	3%	2%	3%	4%	3%	5%
Education	4%	4%	4%	4%	3%	2%	5%	3%
Infrastructure / Transportation	1%	2%	5%	4%	4%	7%	4%	2% *4
Water, sanitation & hygiene	1%	1%	4%	7%	6%	2%	1%	2%
Other	20%	21%	19%	20%	21%	19%	16%	12%

Note 1: Microfinance has been included in financial services since 2023.
Note 2: Figures for Food & agriculture are shown through 2023; figures for Agriculture & forestry are shown for 2024.
Note 3: Figures for Housing are shown through 2023; figures for Construction are shown for 2024.
Note 4: Figures for Infrastructure are shown through 2023; figures for Transportation are shown for 2024.
Note 5: Based on questionnaire surveys and therefore not necessarily suitable for time-series comparison. N=153, AUM=USD 50 billion (2015) ; N=203, AUM=USD 64 billion (2016) ; N=226, AUM=USD 228 billion (2017) ; N=259, AUM=USD 131 billion (2018) ; N=289, AUM=USD 221 billion (2019) ; N=303, AUM=USD 198 billion (2022) ; N=293, AUM=USD 289 billion (2023) ; N=359, AUM=USD 218 billion (2024)
Source: Compiled based on GIIN (2016-2020) "Annual Impact Investor Survey" ; GIIN (2023) "2023 GIINsights" https://thegiin.org/publication/research/2023-giinsight-series/ (last accessed January 30, 2026) ; GIIN (2024-2025) "State of the Market: Trends, Performance and Allocations"

Share of Impact Investing by Player Type and Asset Class (Japan)

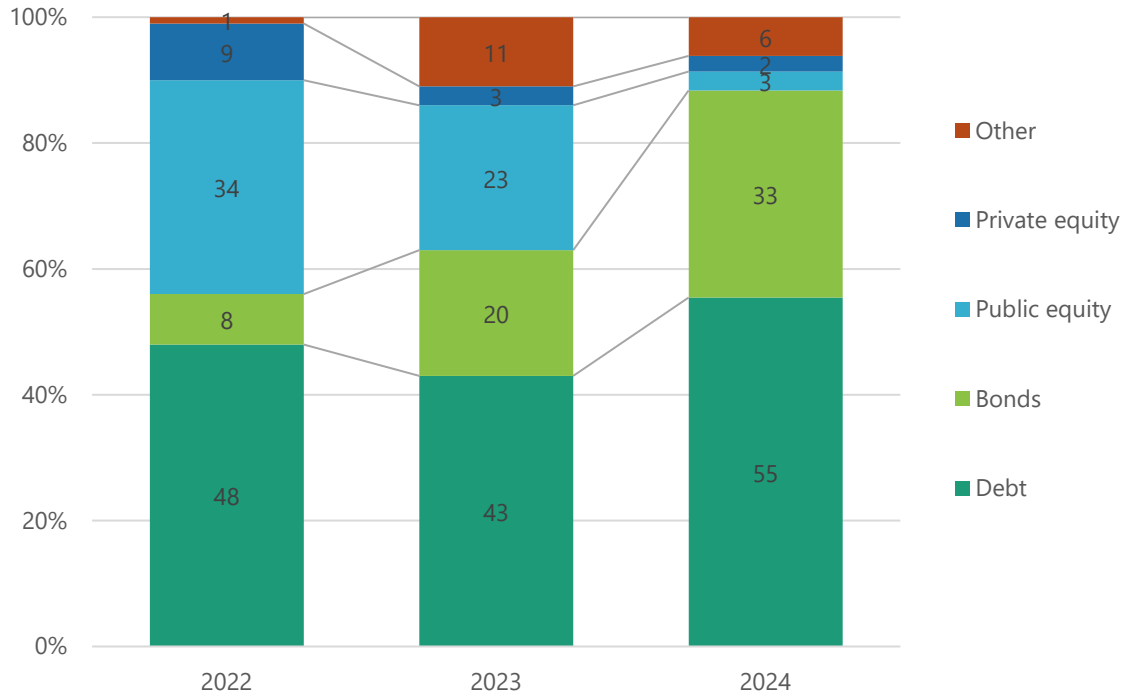
- In Japan, venture capital firms and banks account for a large share of impact investing participants by number of players.
- By asset class, debt and bonds account for more than 80% of total impact investing assets. (Debt includes instruments such as Sustainability-Linked Loans and Positive Impact Finance.)

Trends in Impact Investing by Player Type (Japan, by Number)



Note 1: The scope of aggregation here may not fully align with that used by GIIN and may also differ from the approach set out in the JFSA's Basic Guidelines.
Note 2: Based on questionnaire surveys and therefore not necessarily suitable for time-series comparison. N=46 (2022), N=59 (2023), N=68 (2024)
Source: Compiled based on annual survey "Current State and Challenges of Impact Investing in Japan" by GSG-NAB Japan (2023–2024) and GSG Impact JAPAN National Partner (2025).

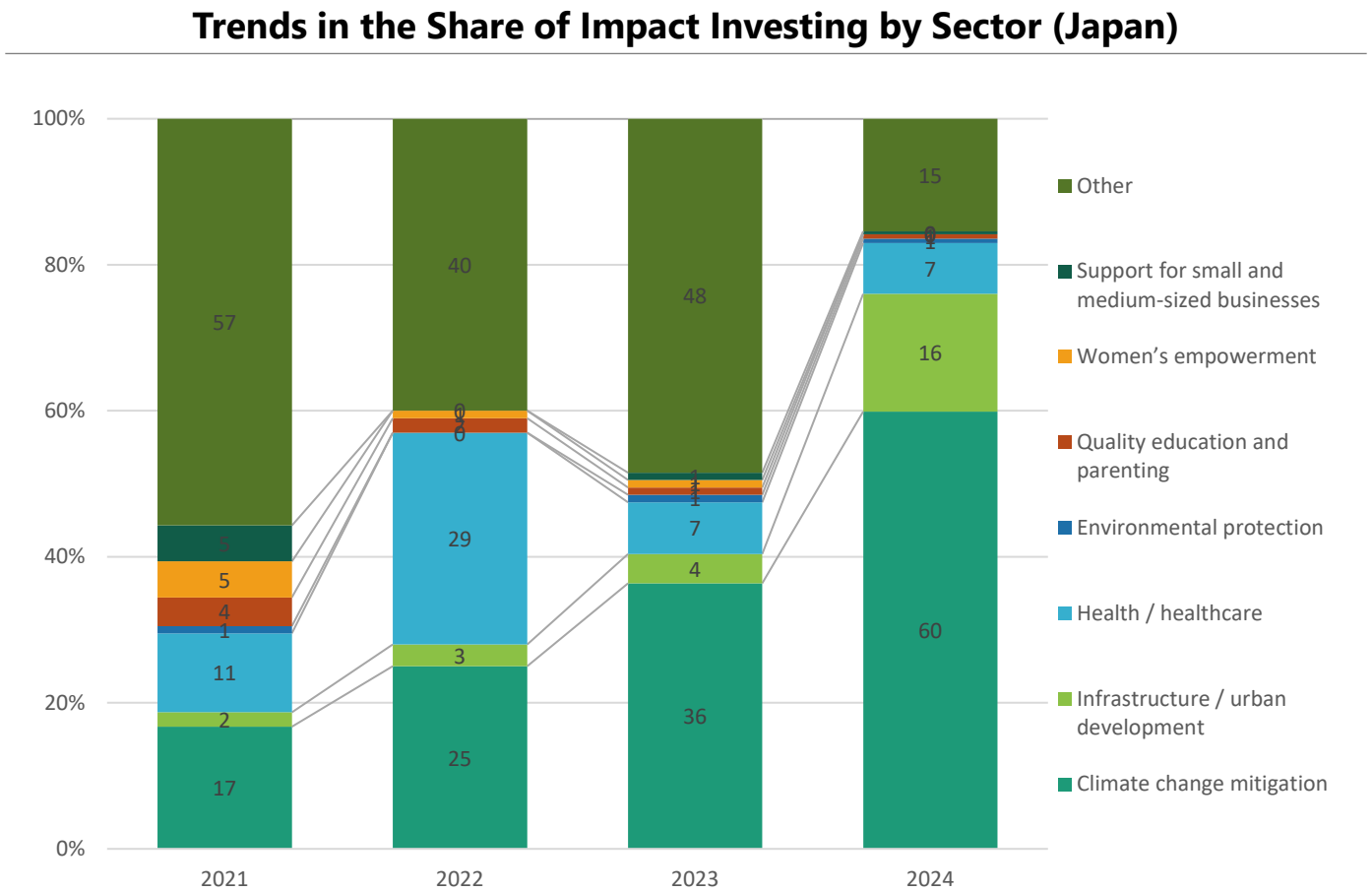
Trends in Impact Investing by Asset Class (Japan)



Note 1: The scope of aggregation here may not fully align with that used by GIIN and may also differ from the approach set out in the JFSA's Basic Guidelines.
Note 2: Based on questionnaire surveys and therefore not necessarily suitable for time-series comparison. N=39, AUM=JPY 2,854,952 million (2022) ; N=50, AUM=JPY 4,389,716 million (2023) ; N=67, AUM=JPY 7,205,017 million (2024)
Source: Compiled based on annual survey "Current State and Challenges of Impact Investing in Japan" by GSG-NAB Japan (2023–2024) and GSG Impact JAPAN National Partner (2025).

Share of Impact Investing by Sector (Japan)

- In Japan, climate change mitigation accounts for approximately 60% of impact investing by sector.

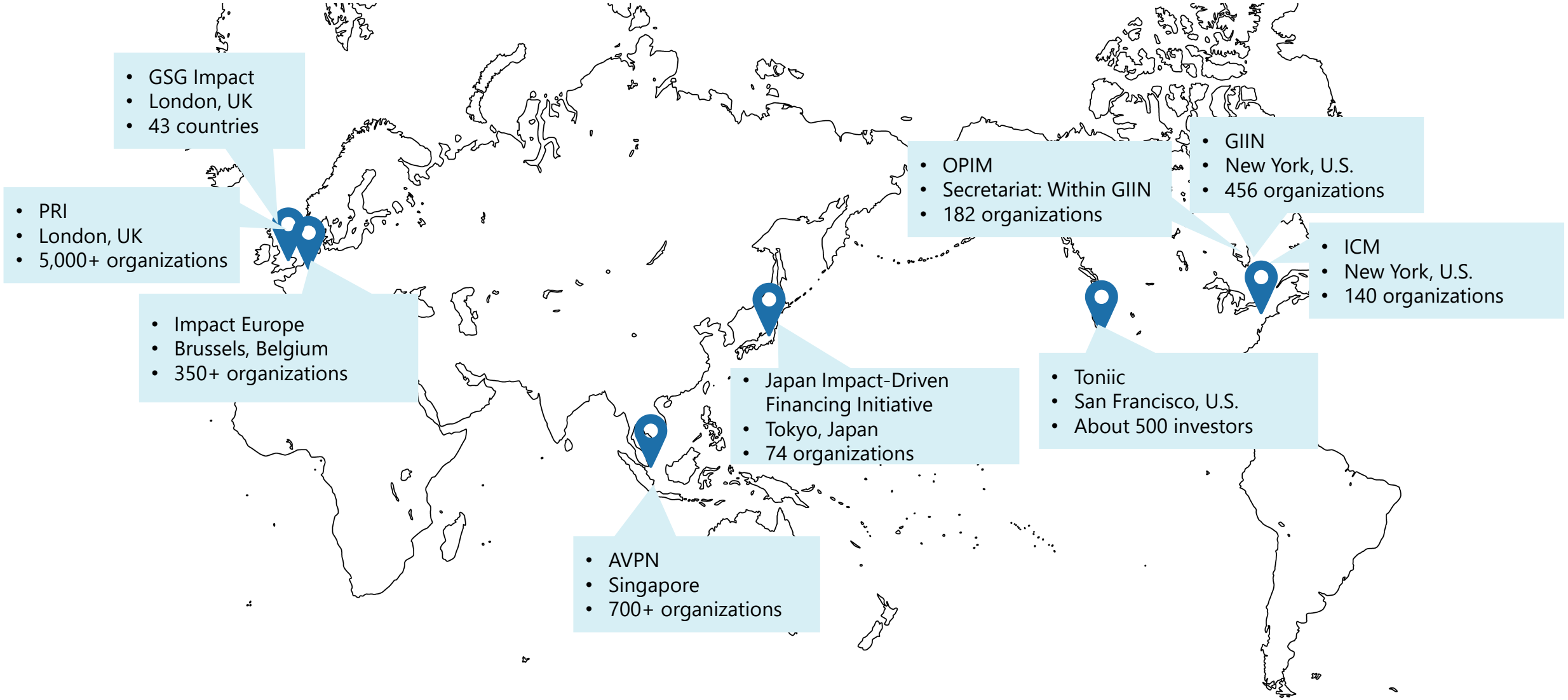


Note 1: The 2021 figures for Climate change mitigation include adaptation.
Note 2: The scope of aggregation here may not fully align with that used by GIIN and may also differ from the approach set out in the JFSA's Basic Guidelines.
Note 3: Based on questionnaire surveys and therefore not necessarily suitable for time-series comparison. N=25, AUM=JPY 94,212 million (2021) ; N=36, AUM=JPY 1,887,029 million (2022) ; N=46, AUM=JPY 3,567,892 million (2023) ; N=51, AUM= JPY 3,042,197 million (2024)
Source: Compiled based on annual survey "Current State and Challenges of Impact Investing in Japan" by GSG-NAB Japan (2022–2024) and GSG Impact JAPAN National Partner (2025).

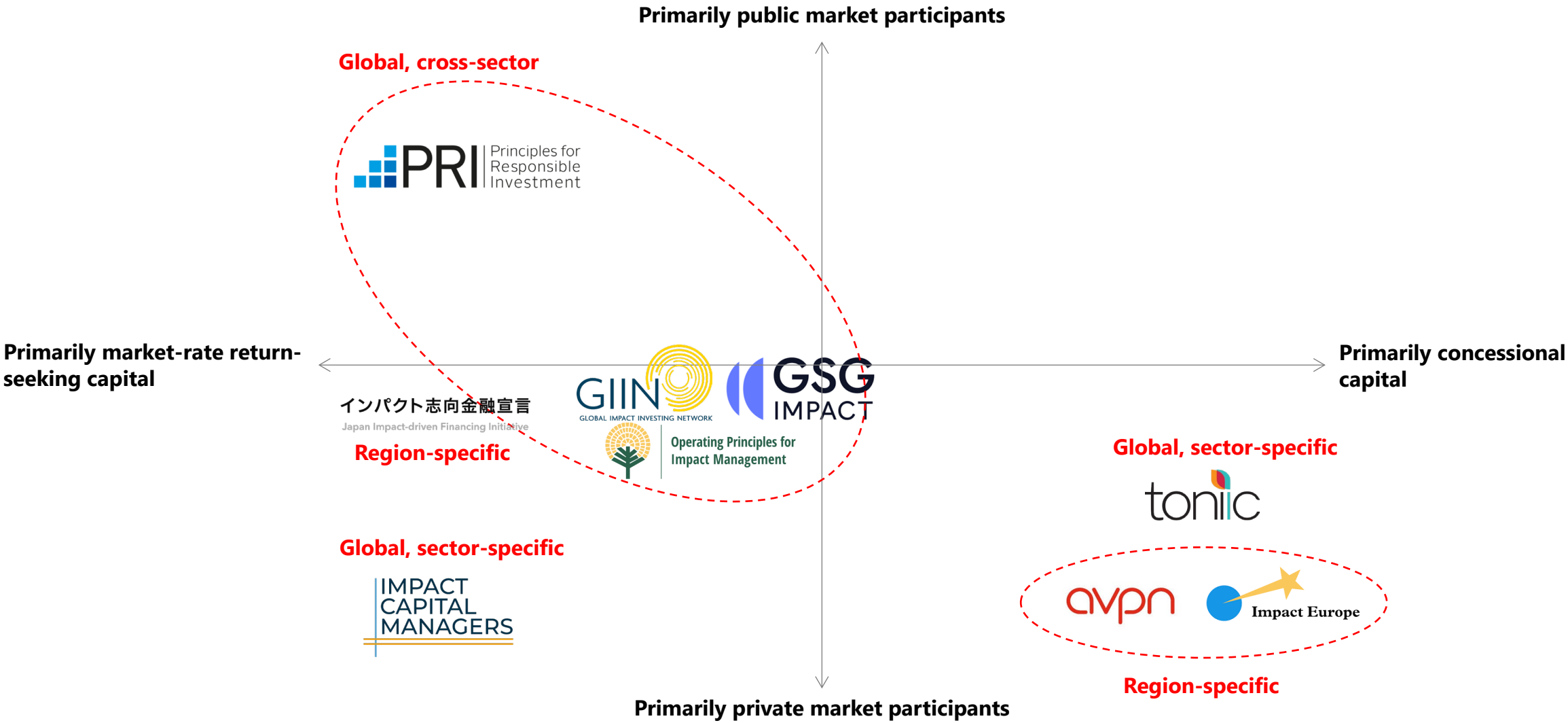
Key Industry Organizations in Impact Investing

Name	Founded	HQ	Members (As of Survey Date)	Key Features
GIIN：Global Impact Investing Network	2009	New York, U.S.	456 organizations (Asset owners, asset managers, and service providers)	• **One of the world's largest membership organizations dedicated to impact investing** • GIIN's definition of impact investing and its core characteristics are widely referenced • Conducts market research on impact investing, provides guidance, and develops and offers IRIS+, a tool that supports impact measurement and management
OPIM：Operating Principles for Impact Management	2019	New York, U.S. (Within GIIN)	182 signatories (Asset owners, development finance institutions, multilateral development banks, and asset managers)	• **Sets out nine principles for impact management, covering strategic intent, origination and structuring, portfolio management, impact at exit, and independent verification** • Originally developed under the leadership of the International Finance Corporation (IFC), with secretariat functions now transferred to the GIIN
PRI：Principles for Responsible Investment	2006	London, UK	5,000+ signatories (Asset owners, asset managers, and service providers)	• **One of the world's largest membership organizations for sustainable (responsible) investment** • Sets out six principles for incorporating ESG factors into investment • Advocates the concept of Investing for Sustainability Impact (IFSI) • Recognizes that sustainable investment serves multiple objectives, and classifies them into three categories—risk management, addressing system-level risks, and pursuing impact—to support the evolution of investor practices aligned with each objective
GSG Impact	2013	London, UK	43 countries (Countries with a National Partner)	• Envisions a world where impact is a core factor in all investment, business, and public spending decisions, and **aims to build an impact economy** • **Establishes, accredits, and supports National Partners** as the central organizations promoting the impact economy in each country (present in 43 countries, including Japan)
Impact Europe	2004 (formerly EVPA)	Brussels, Belgium	350+ organizations (Foundations, impact funds, financial institutions, corporations, public institutions, etc.)	• A membership organization, **mainly in Europe**, for **capital providers seeking to create impact, covering not only investments but also donations, grants, and other forms of funding**
AVPN：Asian Venture Philanthropy Network	2011	Singapore	700+ organizations (Foundations, government-related institutions, impact funds, corporations, universities, etc.)	• A membership organization, **mainly in Asia**, for c**apital providers seeking to create impact, covering not only investments but also donations, grants, and other forms of funding**
ICM：Impact Capital Managers	2018	New York, U.S.	140 organizations (GPs of funds with AUM of USD 25 million or more)	• A membership organization dedicated to **general partners (GPs) managing funds** that seek both competitive market-rate returns and impact creation
Toniic	2010	San Francisco, U.S.	Approximately 500 investors (High-net-worth individuals, family offices, etc.)	• A membership organization dedicated to **high-net-worth individuals, family offices**, and others seeking to create impact
Japan Impact-Driven Financing Initiative	2021	Tokyo, Japan	66 signatories (Financial institutions) 8 signatories (Non-financial institutions)	• An initiative of financial institutions, **mainly in Japan**, aimed at advancing impact-driven finance in practice • Signatories endorse a seven-point declaration, and the initiative promotes information sharing and case studies among participating institutions

Key Industry Organizations in Impact Investing (Continued)



Key Industry Organizations in Impact Investing (Continued)



Note: Mapping is based on qualitative judgment.

Impact Investing Policies and Regulations in Selected Countries

Country	Size of Impact Investing Market	Key Features / Policies / Regulations
United States	JPY 85.25 trillion (USD 550 billion) *As of 2024*	▪ The impact investing market has grown significantly over the past 15 years, spanning diverse asset classes, risk-return profiles, impact themes, and market participants. ▪ The policy environment has shifted significantly following the 2025 administration transition. Under the previous Biden administration, policies conducive to impact investing—such as affordable housing, climate action, and green industrial investment—were actively promoted. Under the second Trump administration, some of these initiatives are being reviewed, increasing uncertainty around the policy environment for impact investing.
Australia	JPY 24.335 trillion (USD 157 billion) *As of 2025*	▪ The impact investing market has grown approximately eightfold over the past five years. Around 90% of the market consists of GSS bonds (green, social, and sustainability bonds). In addition to institutional investors, foundations and family offices have traditionally played a significant role. ▪ In 2023, the Department of Foreign Affairs and Trade launched Australian Development Investments (ADI), a fund of approximately JPY 25 billion, to provide early-stage concessional capital to impact funds addressing climate and gender issues in the Indo-Pacific (e.g., Vietnam, Indonesia, the Philippines, and Bangladesh).
EU	JPY 129.053 trillion (USD 832.6 billion) *As of 2024*	▪ Impact investing began to expand in the late 2000s, and in recent years the market has grown faster than in North America. ▪ In 2025, a proposed revision to the Sustainable Finance Disclosure Regulation (SFDR) was released, clarifying the position of impact investing for the first time. Certain financial products classified as Transition (Article 7) and Sustainable (Article 9) are expected to be recognized as impact investing.
Netherlands	JPY 27–32.4 trillion (EUR 150–180 billion) *As of March 2022*	▪ The impact investing market has expanded, led by institutional investors. A survey of domestic investors shows that pension funds account for the largest share of impact investing assets, followed by asset managers and public investors (such as national / regional funds and development finance institutions). ▪ Pension funds such as ABP and PFZW actively promote impact investing. The pension reform law enacted in 2023 transitions the system to a defined-contribution model, increasing participants' interest in pension asset management and potentially supporting further expansion of sustainable investments, including impact investing.

Note 1: Converted using the following exchange rates (as of end-2025): USD 1 = JPY 155, EUR 1 = JPY 180, AUD 1 = JPY 101.
Note 2: Impact investing market size is based on the following sources. Figures may not be directly comparable due to differences in methodologies.
United States / Netherlands: GSG Impact (2025) "Impact Economies Traction & Trends: Insights from 34 GSG National Partners"
Australia: Impact Investing Australia (2025) "Impact investing surges eightfold + COP30 and COP31 + $6 billion in new impact commitments"
https://impactinvestingaustralia.com/impact-investing-surges-eightfold-cop30-and-cop31-6-billion-in-new-impact-commitments/ (last accessed January 9, 2026)
EU: GIIN (2024) "Sizing the Impact Investing Market 2024"

Impact Investing Policies and Regulations in Selected Countries (Continued)

Country	Size of Impact Investing Market	Key Features / Policies / Regulations
UK	JPY 15.5904 trillion (GBP 76.8 billion) *As of 2023*	• The impact investing market has continued to expand in recent years, growing by approximately 1.3 times over the past three years. Pension funds are playing an increasingly important role. Under the Local Government Pension Scheme (LGPS), multiple pension funds operate, some of which promote "Place-Based Impact Investing" that prioritizes contributions to local economies and social issues. • In 2023, the Financial Conduct Authority (FCA) published the final rules for the Sustainability Disclosure Requirements (SDR) and Investment Labels, which introduced a "Sustainability Impact" label as one of the classifications for investment products. • In 2025, the government established the Office for the Impact Economy to support the development of the impact economy.
France	JPY 6.228 trillion (EUR 34.6 billion) *As of 2023*	• Impact investing assets more than doubled year-on-year. Both public and private financial institutions are actively expanding their impact investing. • France has a public certification system for social enterprises that aim to address social challenges. Within employee savings schemes, there is a mechanism known as solidarity investment funds, which are required to allocate a portion of their assets to certified social enterprises and similar organizations.
Sweden	—	• In 2023, approximately half of domestic venture capital investment reportedly flowed to impact startups, particularly those developing technologies to address climate change. The government and major financial institutions actively promote renewable energy through the use of green bonds. • A 2019 amendment to the AP Funds Act stipulates that AP Funds must manage assets "in an exemplary manner" that serves as a model for other institutional investors, explicitly supporting sustainable development.
Japan	JPY 17.3016 trillion *As of FY2024*	• The impact investing market has expanded rapidly, growing approximately 34-fold over the past four years. Major banks and life insurers have increased financing to listed companies addressing social challenges. A notable feature is the high share of bonds and loans within total impact investing assets. • Impact investing became part of the government's policy agenda following its mention in a 2021 policy speech by then–Prime Minister Fumio Kishida. In 2023, the government launched the Impact Consortium. In 2024, the Financial Services Agency published the Basic Guidelines on Impact Investing (Impact Finance).

Note 1: Converted using the following exchange rates (as of end-2025): GBP 1 = JPY 203, EUR 1 = JPY 180.
Note 2: Impact investing market size is based on the following sources. Figures may not be directly comparable due to differences in methodologies.
UK: Impact Investing Institute (2024) "The UK Impact Investing Market: Size, Scope, and Potential 2024 edition"
France: GSG France (2024) "Impact France Overview 2024"
Japan: GSG Impact JAPAN National Partner (2025) "Current State and Challenges of Impact Investing in Japan: FY2024 Survey"

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Key Points – Chapter 4: Case Studies of Overseas Impact Funds

- This chapter examined representative impact funds operating overseas across both **traditional asset classes (listed equities and fixed income)** and **alternative asset classes (private equity, real estate, and infrastructure)**.
- The survey reviewed the setting of impact objectives and strategies, the development, measurement, and use of impact-related metrics and utilization of frameworks, and the relationship between financial returns since inception and the pursuit of impact.
- The approaches taken by the funds in these areas vary widely. Overall, the findings suggest that funds are experimenting and developing their own unique approaches while seeking to achieve both investment returns and impact creation.

Note: Chapter 4 contains information on individual funds, and such information has been omitted.

Selection of Survey Targets

- In selecting the survey targets, we referred to the PCG Impact Database (part of Phenix Capital Group, based in the Netherlands) and other relevant sources. From funds investing in developed markets or global markets that are internationally recognized and considered to provide extensive disclosures, including impact reports, the following funds were selected with consideration given to the balance across asset classes.
- This research is intended solely as a case analysis. The selected funds do not necessarily represent the overall market, nor does their inclusion imply that their initiatives are superior to those of funds not covered in this study.

Asset Class		Fund Name / Asset Manager (Headquarters)
Traditional assets (Public markets)	Public equity	*Note: As the information pertains to individual funds, it has been omitted.*
	Fixed income	
Alternative assets (Private markets)	Private equity	
	Real estate	
	Infrastructure	

NISSAY ASSET MANAGEMENT

Research Items

- The general flow and research items for impact investing are as follows.

- Fund overview
- Asset manager overview
- Impact report content and frequency, etc.

- Impact objectives and strategy of the fund

- Setting, measurement, and utilization frameworks for impact-related metrics
- Investment returns since inception and their relationship with impact objectives

Overview of Findings from Funds Survey

Pursuit of Investment Returns and Impact:

- All funds reviewed **pursue both investment returns and impact simultaneously**. While many funds view solutions expected to generate impact as investment opportunities, no concessional funds—willing to sacrifice investment returns for impact—were identified.

Fund-Level Objectives and Strategy:

- All funds reviewed set **qualitative impact objectives at the fund level**. **No funds were identified that establish quantitative impact targets (numerical targets) for creating positive impact at the fund level**. However, as discussed later, some funds set numerical targets at the individual investee level.

- Based on these objectives, **the strategies and investment selection approaches** adopted by the funds were expressed using various terms (e.g., theory of change) and methodologies

Fund-Level Metrics and Measurement:

- As noted above, fund-level objectives are qualitative. However, based on these objectives and strategies, many funds **establish portfolio-wide impact-related metrics at the fund level** and track changes in these metrics over time.

- However, portfolio-wide impact-related metrics are not necessarily established in all funds. Differences in the nature of the objectives set by each fund may also influence whether such metrics are established (a more detailed discussion of this point is provided on the following page).

Metrics and Measurement at the Investee Level:

- As noted above, fund-level objectives are qualitative. However, **at the investee level**—selected based on the fund's objectives and strategies—**impact-related metrics are often established** and tracked over time in addition to the portfolio-wide impact-related metrics described above. In some cases, **quantitative targets are also set at the individual investee level**.

- However, impact-related metrics established at the investee level are often specific to each investee, and in many cases may not be suitable for aggregation or consolidation at the fund's overall portfolio level.

Overview of Findings from Funds Survey (Continued)

Differences by Asset Class: Public (Listed Equity / Fixed Income) vs. Private (Private Equity / Real Estate / Infrastructure)

- When comparing funds investing in public markets with those investing in private markets, the former tend to **set a threshold for the share of a portfolio company's business that aligns with the fund's impact objectives** as an investment condition. This may reflect the greater diversification of business activities among public market companies.

- Among impact funds investing in bonds, portfolios tend to have a relatively high share of GSS bonds (green, social, and sustainability bonds), whose use of proceeds is restricted. **GSS bonds may be preferred because their alignment with impact objectives is clearer**.

- Funds investing in private markets tend to **establish and measure impact-related metrics in a more granular manner**. In addition to measuring realized impact in physical units, approaches also include estimating future impact projections or converting impact into monetary value. One possible reason is that private market investments allow investors to exert greater influence on portfolio companies and obtain information more directly. In contrast, in public market investments, it is often difficult to obtain information directly from investee companies for impact measurement. As a result, investors tend to rely more on publicly available information, which could make it more challenging to establish and measure detailed impact metrics.

Differences in the Nature of Funds' Impact Objectives: Specific vs. Broad Impact Objectives

- **Funds with specific and narrowly defined impact objectives tend to measure impact at the fund level across the portfolio using a relatively small set of common impact metrics**.

- In particular, for funds investing in real estate or infrastructure, the nature of the asset class tends to make impact objectives more specific (e.g., a real estate fund targeting the promotion of affordable housing).

- In contrast, **funds with broad impact objectives tend to use a wide range of impact metrics across investments**. As these metrics are difficult to compare or aggregate, portfolio-wide impact measurement at the fund level can be more challenging.

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Key Points – Chapter 5: Case Studies of Overseas Pension Funds

- This chapter examined initiatives related to impact investing among major overseas pension funds through case studies.
- **Among the 10 pension funds examined, investments in so-called impact funds were identified**. This is consistent with existing market research showing the expansion of the impact investing market and the significant role of pension funds as capital providers as discussed in Chapter 3. It is also consistent with the growing range of initiatives by asset managers related to impact funds as described in Chapter 4, suggesting that the presence of many pension funds investing in such funds is consistent with expectations.
- At the same time, **pension funds differ in their stance on whether to formally commit to impact investing**. Some pension funds invest in so-called impact funds without formally using the term "impact investing."
- **Interviews revealed three broad perspectives underlying these approaches: an "instrumental perspective," its subtype, the "universal owner-type perspective," and an "ultimate ends perspective."** These findings are consistent with the framework discussed in Chapter 2. Regardless of perspective, **there was a broad consensus among funds that, from a fiduciary duty standpoint, they do not compromise on risk-return expectations simply because an investment is categorized as impact investing**.
- Initiatives such as establishing impact strategies (e.g., a theory of change), setting quantitative targets for positive impact, defining and measuring portfolio-wide metrics, and publishing impact reports were limited among pension funds. However, **efforts to demonstrate contributions through investments in local or domestic economies were observed among several surveyed funds**. Whether such initiatives will expand further among pension funds remains an important point to watch.

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Selection of Overseas Pension Funds for the Study

- In selecting overseas pension funds to be included in the study, publicly available information was reviewed for funds ranked within the top 30 globally by AUM, as well as sovereign pension funds among those ranked 31st to 300th, regarding: (i) PRI signatory status, (ii) GIIN membership, (iii) investment activities explicitly labeled as impact investing, and (iv) whether they identify as universal owners.
- Signatory status to the PRI was confirmed for 25 funds (60% of the total), membership in the GIIN for 2 funds (5% of the total), investment activities explicitly labeled as impact investing for 4 funds (10% of the total), and self-identification as universal owners for 14 funds (33% of the total).

AUM Rank	Name	Headquarters	AUM (in US$ million)	Sovereign Pension Fund	PRI Signatory	GIIN Member	Impact-Labeled Investment Activities	Self-Identification as Universal Owner
1	Government Pension Investment Fund	Japan	1,593,141	✓	✓	-	-	✓
2	Government Pension Fund	Norway	1,584,524	✓	✓	-	-	✓
3	National Pension	South Korea	801,864	✓	✓	-	-	-
4	Federal Retirement Thrift	U.S.	782,835	-	-	-	-	-
5	ABP	Netherlands	552,376	-	✓	✓（APG）	✓	✓
6	Canada Pension	Canada	477,676	✓	✓	-	-	-
7	California Public Employees	U.S.	452,453	-	✓	-	-	✓
8	Central Provident Fund	Singapore	432,509	✓	-	-	-	-
9	National Social Security	China	364,351	-	-	-	-	-
10	California State Teachers	U.S.	309,931	-	✓	-	-	✓
11	PFZW	Netherlands	262,261	-	✓	✓（PGGM）	✓	✓
12	New York City Retirement	U.S.	247,999	-	✓	-	-	✓
13	Employees Provident Fund	Malaysia	247,268	✓	✓	-	-	-
14	New York State Common	U.S.	246,307	-	✓	-	-	✓
15	Pension Fund Association for Local Government Officials	Japan	226,803	-	✓	-	-	✓
16	AustralianSuper	Australia	204,631	-	✓	-	-	✓
17	Florida State Bord	U.S.	194,659	-	-	-	-	-
18	Ontario Teachers	Canada	186,897	-	✓	-	-	-
19	Texas Teachers	U.S.	181,656	-	-	-	-	-
20	Labor Pension Fund	Taiwan	176,267	✓	-	-	-	-
21	Employees' Provident	India	176,246	✓	-	-	-	-
22	Australian Retirement Trust	Australia	173,844	-	✓	-	✓	-
23	Washington State Board	U.S.	167,033	-	-	-	-	-
24	Public Institute for Social Security	Kuwait	144,911	✓	-	-	-	-
25	Future Fund	Australia	144,312	✓	-	-	-	-
26	Public Service Pension Plan	Canada	134,566	-	✓	-	-	-
27	Wisconsin Investment Board	U.S.	130,932	-	-	-	-	-
28	New York State Teachers	U.S.	130,783	-	-	-	-	✓
29	Alecta	Sweden	126,614	-	✓	-	-	-
30	North Carolina	U.S.	126,472	-	-	-	-	-
41	AP Fonden 7	Sweden	106,015	✓	✓	-	-	✓
42	Employees' Pension Fund	India	102,968	✓	-	-	-	-
90	Social Insurance Funds	Vietnam	56,057	✓	-	-	-	-
106	AP Fonden 3	Sweden	49,877	✓	✓	-	-	✓
109	AP Fonden 4	Sweden	48,792	✓	✓	-	-	-
124	AP Fonden 1	Sweden	44,748	✓	✓	-	-	-
132	AP Fonden 2	Sweden	41,824	✓	✓	-	-	✓
139	New Zealand Superannuation	New Zealand	40,274	✓	✓	-	-	-
171	FEFSS	Portugal	32,930	✓	-	-	-	-
211	Fonds de Comp./Securite Sociale	Luxembourg	26,709	✓	-	-	-	-
225	State Pension	Finland	25,172	✓	✓	-	-	-
243	FRR	France	23,403	✓	✓	-	✓	-

Note 1: As of November 2025.
Note 2: Information from each pension fund's website was referenced only when available in Japanese or English.
Note 3: In this report, "sovereign pension funds" refer to funds established by national authorities for the purpose of fulfilling pension liabilities.
Note 4: The two Japanese funds are included for comparison and are not candidates for the case studies.
Source: Compiled based on Thinking Ahead Institute (2024) "The world's largest pension funds – 2024," the PRI website, the GIIN website, the websites of individual pension funds, and other relevant materials.

Selection of Overseas Pension Funds for the Study (Continued)

- After identifying funds listed on the previous page that are signatories to the PRI or members of the GIIN, and that either conduct investment activities explicitly labeled as impact investing or identify themselves as universal owners, two additional funds from the UK and one from Australia—whose engagement in impact investing was confirmed through publicly available information—were added.
- Taking geographic diversification and other considerations into account, the following ten funds were ultimately selected for the study.

List of Pension Funds Selected for the Study

Country	Name	PRI Signatory	GIIN Member	Impact-Labeled Investment Activities	Self-Identification as Universal Owner
U.S.	California Public Employees' Retirement System (CalPERS)	✓	-	-	✓
	California State Teachers' Retirement System (CalSTRS)	✓	-	-	✓
	New York State Common Retirement Fund (NYSCRF)	✓	-	-	✓
UK	Brunel Pension Partnership (BPP)	✓	-	✓	-
	Greater Manchester Pension Fund (GMPF)	✓	-	✓	-
The Netherlands	ABP	✓	✓ (APG)	✓	✓
	PFZW	✓	✓ (PGGM)	✓	✓
France	Fonds de réserve pour les retraites (FRR)	✓	-	✓	-
Sweden	Andra AP-fonden (AP2)	✓	-	-	✓
Australia	Rest Super	✓	-	✓	✓

Note 1: As of November 2025.
Note 2: Only information available in Japanese or English on each pension fund's website was referenced.
Source: Compiled based on the PRI website, GIIN website, each fund's website, and other materials

Initiatives in Impact Investing: Categorization of Approaches

- Overseas pension funds' initiatives in impact investing and related activities* can be broadly classified into the following three categories.

  * Includes not only investments explicitly labeled as impact investing, but also investment activities that may not be formally designated as impact investing but are considered to place emphasis on generating positive impact.

- Regardless of the category, a common feature is the existence of investment cases in so-called impact funds.

Categorization of Impact Investing Initiatives by Pension Funds

Category 1 **Promoting investments explicitly labeled as impact investing**	**BPP, GMPF, ABP (APG), FRR, Rest Super**
Category 2 **Integrating impact considerations across the entire portfolio**	**PFZW (PGGM)**
Category 3 **Promoting solution-oriented investments (not necessarily labeled as impact investing)**	**CalPERS, CalSTRS, NYSCRF, AP2**

Note 1: Based on information available as of February 2026.
Note 2: The classification here is based solely on investment activities and does not consider differences in underlying objectives or philosophies.
Source: Compiled based on pension fund websites and other materials

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Approach to Impact Investing: Focus Areas, Investment Targets, and Asset Classes

- Key focus areas are primarily climate-related, with additional attention to nature-related and local (domestic) contributions.
- While private markets appear to account for a relatively large share of the asset classes used for implementation, investments are not necessarily limited to them. (Interview findings indicate that even when impact investing through public markets is not currently undertaken, public markets are not necessarily excluded and may be considered as potential investment options in the future.)
- Some respondents in the interview survey also noted that, although investor contribution is often considered less visible in public markets, the key issue is the impact generated itself, and the degree of investor contribution is not necessarily the primary concern.

Category	Name	Focus Areas	Disclosure of Investment Targets or Indicative Amounts	Asset Classes Implemented
1	BPP	Climate change Biodiversity & nature Human rights & social issue	(Not specified)	(Not specified)
	GMPF	Local (place, jobs, economic development)	5% of AUM	SME finance, real estate, housing, infrastructure
	ABP (APG)	Climate transition Conservation of Nature & biodiversity The Netherlands	€30 billion (including €10 billion for climate transition, €1 billion for nature & biodiversity conservation, and €1 billion for the Netherlands)	Private equity, real estate, infrastructure, alternative credit, real assets (Specified in the Impact Investing Policy, January 2024)
	FRR	Fostering energy and ecological transition Protection of social equity Protecting biodiversity	(Not specified)	Public markets, private markets (Specified in the Responsible Investment Strategy 2024–2028)
	Rest Super	(Not specified)	1% of AUM	Examples include listed equities, private equity, infrastructure, and real estate.
2	PFZW (PGGM)	Climate transition Human and health Nature and biodiversity	All AUM	All asset classes
3	CalPERS	Climate solutions - Mitigation - Adaptation - Transition	USD 100 billion	Listed equities, bonds, private equity, real estate, infrastructure, private debt
	CalSTRS	Climate solutions and others	1% of AUM	Private equity, real estate, infrastructure (Specified in the Sustainable Investment and Stewardship Strategies (SISS) Portfolio Policy, May 2024)
	NYSCRF	Climate solutions and others - Resources and environment (climate and environment, resource efficiency, pollution and waste management) - Human rights & social inclusion (education, demographic empowerment, health and wellbeing) - Economic development (financial inclusion, sustainable infrastructure, affordable housing)	USD 40 billion	(Not specified)
	AP2	Climate solutions Biodiversity solutions	(Not specified)	Private equity, green bonds, forestry assets, infrastructure

Note 1: Based on information available as of February 2026.
Note 2: The "Focus Areas" column includes investments considered to directly contribute to positive impact creation, even if the pension fund itself does not explicitly label them as impact investing.
Source: Compiled based on pension fund websites and other relevant materials.

Rationale Behind the Initiatives

Rationale Behind the Implementation of Impact Investing and Related Activities

- While approaches vary across pension funds, three main perspectives can be broadly identified (these are not mutually exclusive, and some funds pursue initiatives based on multiple perspectives).

Instrumental perspective	✓ Expectation of new investment and return opportunities ✓ Expectation of diversification benefits in investment strategy as an asset owner
Universal owner-type perspective	✓ View that generating positive impact is important to reduce systemic risks (e.g., promoting climate solutions is important to mitigate climate change risks)
Ultimate ends perspective	✓ View that, in addition to investment returns, a livable community, society, and global environment are important for beneficiaries (some funds conduct beneficiary surveys and reflect the results when identifying priority impact areas)

- At the time of this research, reforms to the Local Government Pension Scheme (LGPS) in the UK indicated a policy direction that places greater emphasis on investment in the UK and local regions. As a result, impact investing and other related activities targeting regional development may expand within LGPS funds, including GMPF.

Rationale Behind Disclosing Investment Targets or Indicative Amounts

- Pension funds that disclose investment targets or indicative amounts expressed the following views:
  - ✓ Effective in raising awareness among internal investment staff (however, investments are not made solely to meet the target; they are executed only when attractive opportunities arise)
  - ✓ Helps ensure that potential investment opportunities that may emerge in the future are captured
  - ✓ External disclosure can increase opportunities for approaches from asset managers and other stakeholders
- It was also noted that investment targets or indicative amounts are not necessarily allocated entirely to new investments; existing investments may also be included if deemed eligible and appropriate.

Note 1: Based on information available as of February 2026.
Note 2: Includes investments considered to directly contribute to positive impact creation, even if the pension fund itself does not explicitly label them as impact investing.
Source: Compiled based on interview research and other relevant materials.

Setting Quantitative Targets

- Regarding target setting for positive impact creation, most pension funds present general directions or qualitative targets. Examples where pension funds have established quantitative targets remain limited, except for the cases below.
  - ✓ PFZW promotes "3D investing" (3D refers to the three dimensions of risk, return, and impact) and has established portfolio-wide impact metrics and quantitative targets through 2030 across all asset classes (bottom left).
  - ✓ ABP has stated in its Impact Investing Policy that it plans to set quantitative targets for 2030 (bottom right). However, as of the time of this research, specific details on these targets have not been disclosed publicly.

PFZW's Impact Metrics and Quantitative Targets to 2030

Climate transition	• Avoid 15 megatons of CO_2 emissions by 2030
People / Health	• Automate 6,000-10,000 full-time employment jobs to reduce pressure on a strained system • Gain 0.27 quality-adjusted life years per patient in The Netherlands, measured by third-party analytics • Add 1,000 units of senior living or housing suitable for people with acute and urgent health needs
Nature / Biodiversity	*(Under Consideration)*

Source: Compiled based on PFZW (2025) "Jaarverslag 2024," and GIIN (2024) "Pursuing Impact Within a Portfolio: Insights From Institutional Asset Owners"

ABP's Statement on Quantitative Impact Targets

ABP's Impact Investing Policy (January 2024) (Excerpt)

3. Objectives for impact investing

(Excerpt)

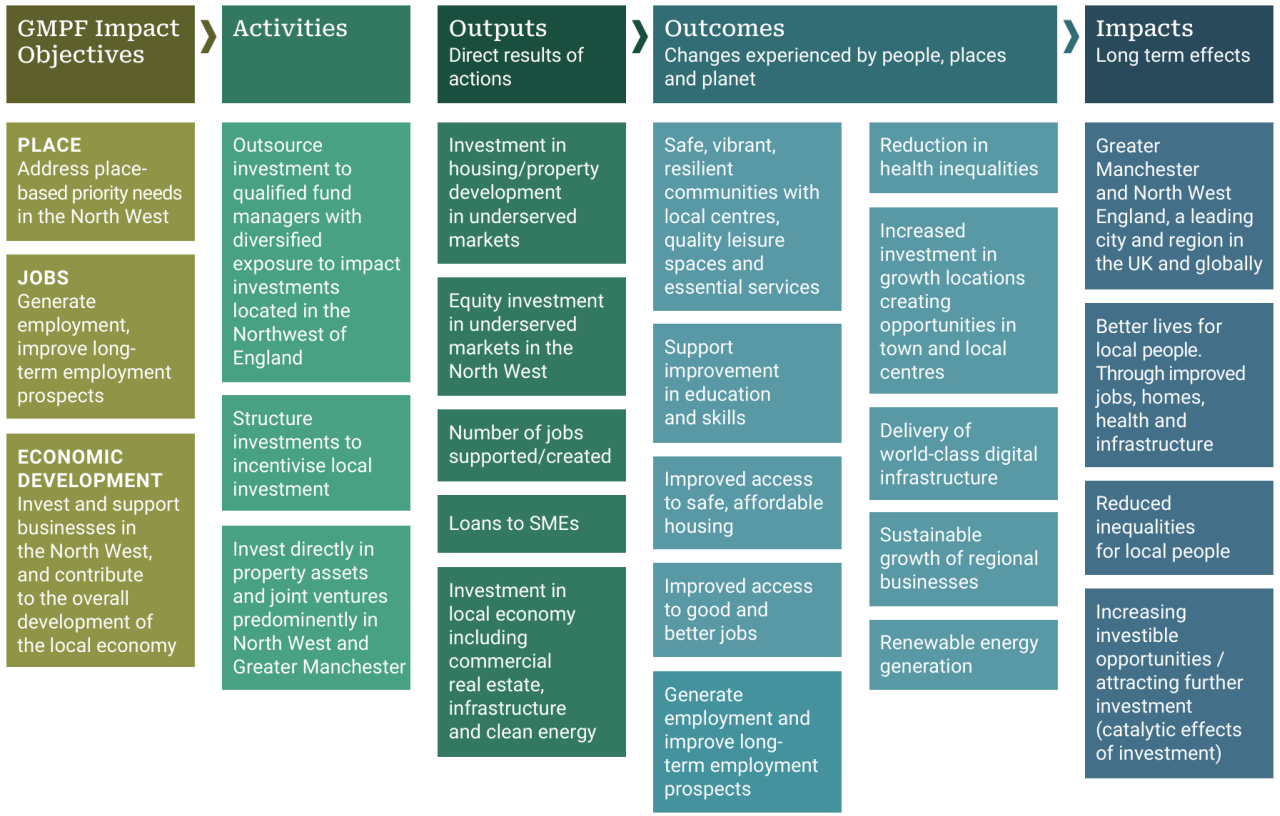
- By 2025 at the latest ABP aims to have a clear picture of the positive effect of its impact investments in terms of social and environmental performance. In 2025 ABP will establish further complementary objectives as required for social and environmental performance up to 2030. Possible examples include CO2 emissions avoided, hectares of nature reserve protected or the number of people gaining access to affordable housing.

Source: Adapted from ABP (2024) "Impact Investing Policy"

Strategy Formulation

- GMPF does not set quantitative targets for local impact creation but has developed and disclosed a theory of change as its strategy (bottom left).
- However, the explicit use of the term "theory of change" to articulate an impact strategy was limited among the pension funds reviewed.
- ABP states in its Impact Investing Policy that a theory of change will be established for each individual investment (bottom right).

GMPF's Theory of Change



Source: The Good Economy (2025) "Greater Manchester Pension Fund: Annual Assessment of The Place-Based Impact of GMPF's Local Investment"

ABP's Statement on Its Theory of Change

ABP's Impact Investing Policy (January 2024) (Excerpt)

5. Governance of impact investing

(Excerpt)

- For every impact investment a credible ToC must be drawn up. A part of this relates to how ABP can contribute to the positive social and/or environmental impact.

Source: Adapted from ABP (2024) "Impact Investing Policy"

Measurement and Disclosure of Metrics

- Portfolio-wide measurement and disclosure of impact-related metrics at the pension fund level remain limited among the funds surveyed. Key examples include the following:
  - ✓ GMPF collaborates with external specialists to measure and disclose the impact created in local communities (bottom left).
  - ✓ APG, which manages investments for ABP, discloses that it has internally developed metrics used for impact investing (measurement results not disclosed).
  - ✓ Interviews also noted that even when final impact measurement is difficult, supplementing with output and outcome metrics is important.
- In addition, some pension funds provide case disclosures on the funds in which they invest (bottom right).
- Interview findings also indicate that while pension funds receive impact measurement reports from individual funds in which they invest—which is meaningful—there are challenges in aggregating metrics across funds due to differences in metrics and concerns about double-counting.

Example of Impact Measurement and Disclosure by GMPF

Figure 7: Cumulative homes invested[12] in by the Local Investment portfolio (2022–2024)

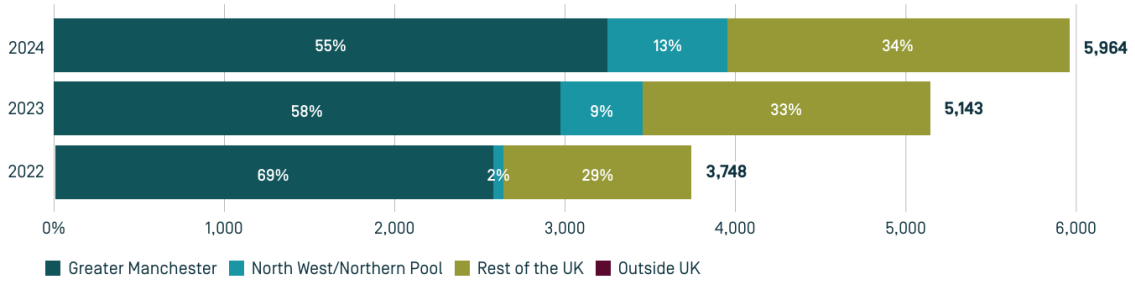
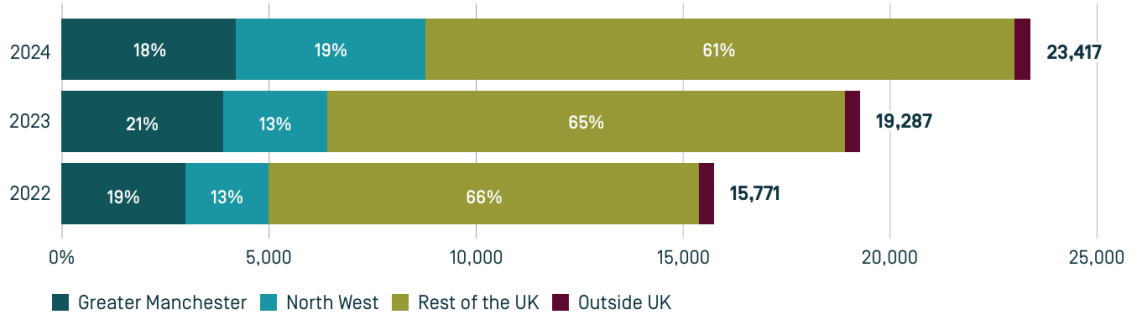


Figure 8: Total jobs[19] supported by GMPF (2022-2024)



Source: The Good Economy (2025) "Greater Manchester Pension Fund: Annual Assessment of The Place-Based Impact of GMPF's Local Investment"

Example of Case Disclosure by AP2

Examples of investments made by AP2 in sustainable infrastructure

Sandbrook Capital is a leading fund in sustainable infrastructure that has so far invested in five platforms, where they add capital and help companies scale up:

NeXtWind is a green independent power generation company focused on acquiring and renewing older wind farms in Europe. The company aims to build a portfolio of over 1 gigawatt (GW) of renewable energy assets by working with local communities and partners to improve the performance and extend the life of existing wind turbines, primarily in Germany.

Cloverleaf Infrastructure develops sustainable solutions for large electricity customers by offering ready-to-build sites with access to green energy and storage. The company focuses on property acquisition, grid connection, storage and on-site energy production. The aim is to deliver scalable clean electricity through strategic investments in power transmission, grid connection, land, on-site power generation and energy storage.

rPlus Energies is a diversified renewable energy development company focusing on solar, wind, battery and hydro power in the US. The company's goal is to supply renewable electricity to help governments, utilities and large industries meet the demands of the modern energy transition. Their portfolio has a total capacity of over 15 GW.

Havfram is a Norwegian company specialising in the development of offshore wind power. They offer transport and installation solutions for the wind power sector and own and operate ships for the installation of future wind turbines (WTIVs). They are currently developing two vessels, the first of which is expected to be ready in 2025.

Voltwise develops, builds and operates large-scale battery storage systems for the electricity grid. The company operates in Europe, with a focus on the UK and Germany. Their goal is to accelerate the transition to net zero emissions by providing intelligent, safe and reliable energy storage solutions. The Voltwise portfolio has a total capacity of over 10 GW.

Source: AP2 (2025) "Sustainability Report 2024"

Measurement and Disclosure of Contributions to the Local (Domestic) Economy

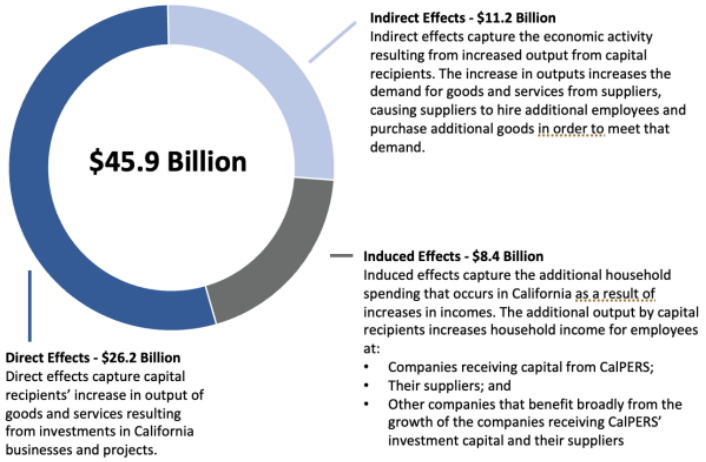
- Several pension funds disclose information on the amount invested in the local (domestic) economy and the resulting impact, including funds that do not explicitly set local impact creation as an objective. Interviews indicated that such disclosures are made partly in response to requests from stakeholders, including beneficiaries.

Example of Disclosure by CalPERS

Total Economic Impact of CalPERS Private Markets Investments in California

CalPERS' private markets investments in California generate an estimated $45.9 billion in economic activity across the state through the multiplier effect —the direct effects, indirect effects, and induced effects within the California economy are described in the chart below. A more detailed explanation of the methodology employed by Tideline to estimate total economic impact is included in the Research Methodology and Analytical Assumptions appendix.

Breakout of Total Economic Impact in California[36]



Source: CalPERS (2024) "CalPERS for California 2024"

Example of Disclosure by NYCRF

Investing in New York

Whenever possible, the Comptroller guides the Fund to invest in New York-based business ventures, companies and other programs that spur economic growth and create and retain jobs.

In-State Private Equity Investment Program

This program invests in private equity funds that target technology-based startups and established businesses in the State seeking expansion capital, spurring private sector investments and jobs across the state.

Program Highlights

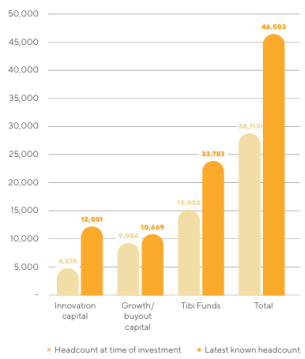
- $2.64 billion committed to the program (as of March 31, 2025)
- $1.9 billion invested in 600 New York State companies (as of March 31, 2025)
- Over $650 million available to invest (as of March 31, 2025)
- Employees increased from approximately 29,500 to over 46,000 (as of March 31, 2025, or when the Fund exited the investment)
- Over 300 completed investments, returning $1.7 billion for the Fund on $910 million invested (as of March 31, 2025)
- Approximately 10% internal rate of return (as of March 31, 2025)

Source: NYSCRF (2025) "Investing in New York"
https://www.osc.ny.gov/common-retirement-fund/investing-new-york
(last accessed February 17, 2026)

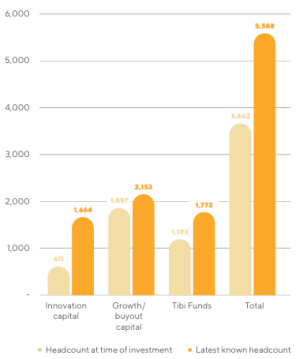
Example of Disclosure by FRR

These programmes have helped to create jobs, as quantified below since the date of investment in the vehicles and at the end of 2023:

Change in headcount since capital investment

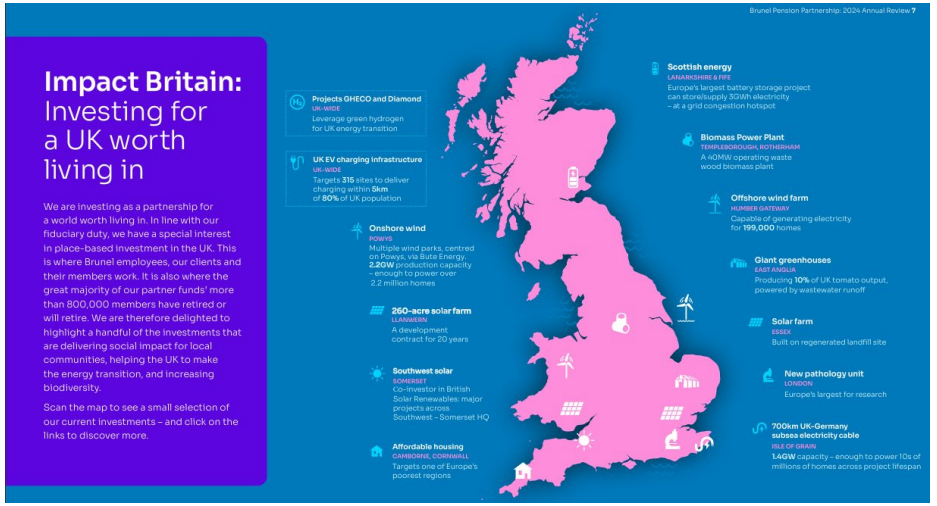


Change in FRR share of headcount since capital investment



Source: FRR (2025) "Annual Report 2024"

Example of Disclosure by BPP



Source: BPP (2025) "Review 2024-25"

Example of Disclosure by GMPF

How our investments support the Region

Supporting jobs through SME finance
- **15,303** jobs supported, **38%** by businesses in the North West
- A further **2,033** jobs supported in infrastructure assets
- **3,923** jobs created, **43%** by businesses in the North West
- **73%** of businesses that have received funding demonstrate job growth.

Property-led economic development
- **22** commercial real estate assets, supporting **8,555** jobs, **84%** in the North West.

Supporting place-based priority development needs
- **3,752** homes completed, in development or planned, of which **76%** in the North West
- **7** nurseries with 646 childcare spaces
- **1** SEN school with capacity for 60 children
- **1** primary healthcare facility in Greater Manchester with capacity to serve a population of **13,500** people
- **4** digital infrastructure assets, **2** of which operate in the North West serving **233,000** customers.

Source: The Good Economy (2025) "Greater Manchester Pension Fund: Annual Assessment of The Place-Based Impact of GMPF's Local Investment"

Relationship with Fiduciary Duty and Universal Ownership

Relationship with Fiduciary Duty	• The view that there should be no compromise on investment risk–return was broadly shared across all pension funds. • On that basis, the following views were expressed regarding the relationship with fiduciary duty: ✓ Impact is not the objective itself; rather, it is a means to identify and capture new investment opportunities, diversify investment strategies, and reduce systemic risks. ✓ The term impact investing may sometimes imply concessional investment; therefore, some funds intentionally avoid using the term. ✓ It is important to identify impact areas with strong investment attractiveness (e.g., new investment opportunities or risk mitigation). Which areas offer such opportunities may also change depending on external conditions. ✓ For beneficiaries, both investment returns and impact (e.g., livable communities, society, and the global environment) are important; therefore, both financial returns and impact creation are pursued. (Some funds, including ABP and PFZW, explicitly state this approach in their disclosures.) • Some funds also noted that allocations to impact investing and related activities remain very small relative to total assets under management, and therefore have only a limited impact on overall portfolio returns. • In addition, GMPF, which aims to generate local impact, discloses that while the overall fund target return is set at CPI + 2–2.5%, the benchmark for local investments is RPI + 4%. Given that RPI tends to be higher than CPI, this suggests that the fund does not regard local investments as concessional.
Relationship with the Concept of Universal Ownership	• Among some of the pension funds interviewed, the concept of universal ownership was cited as one of the rationales for implementing impact investing and other related activities. • In addition, some funds noted that, under the concept of universal ownership, generating positive impact (e.g., promoting climate solutions) is important for addressing systemic risks such as climate change.

Note 1: Based on information available as of February 2026.
Note 2: Includes investments considered to directly contribute to positive impact creation, even if the pension fund itself does not explicitly label them as impact investing.
Source: Compiled based on interview research and other relevant materials.

Selection and Evaluation of External Asset Managers and Investment Returns

Selection and Evaluation of External Asset Managers	• The following views and observations were expressed regarding the selection and evaluation of external asset managers: ✓ It is important to assess actual investment behavior and practices related to impact considerations, rather than whether the manager or fund explicitly labels itself as an impact investor. Similarly, for investments such as green bond, the substance of the investment should be assessed rather than the presence of a label. ✓ In addition to the standard evaluation process for external asset managers, some funds have established a separate evaluation process specifically for impact considerations. ✓ Managers and funds are assessed based on their impact-related objectives, strategies, metrics, investment processes, governance structures, capabilities, experience, and track record. ✓ Asset managers and funds are evaluated with reference to the nine principles of the OPIM, although managers are not required to be OPIM signatories. • PGGM, which manages investments for PFZW, discloses that it evaluates external asset managers based on seven criteria: Philosophy, People, Process, Performance, Planet, Platform/Organization, and Price/Cost (PGGM (2021) "Responsible Investment in External Management"). • In terms of governance, impact specialists or dedicated teams—separate from asset class investment teams—review the appropriateness of fund investments from an impact perspective, in some cases with veto authority.
Investment Returns from Impact Investing through External Asset Managers	• In interviews on perceptions of impact investment returns to date, no respondents indicated that impact investing has underperformed other investments in the long term simply because it is "impact investing". • Some respondents noted that impact investing such as affordable housing may offer lower returns than typical real estate investments, but also involve relatively lower risk, resulting in favorable risk-adjusted returns. • When impact investment returns underperform in the short term, respondents indicated they are generally treated in the same manner as other investments, with assessments made from a long-term perspective, including whether the decline is temporary and whether the asset manager is taking appropriate corrective actions.

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Contents

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3. Market, Industry Organizations, and International Policies and Regulations

4. Case Studies of Overseas Impact Funds

5. Case Studies of Overseas Pension Funds

6. Concluding Remarks

Concluding Remarks

- This research provides a foundational overview of impact investing and related investment approaches, presenting a multi-faceted “snapshot” of the current landscape, compiled from multiple perspectives through both a literature review and original interview surveys. In particular, the interview surveys with major overseas pension funds revealed a wide range of practices, including each fund's philosophy and actual initiatives.

- While a certain degree of common understanding of impact investing has emerged through definitions by the GIIN and basic guideline issued by the JFSA, the field remains highly dynamic, with recent developments including concepts such as systems thinking-based investing. Chapter 2 reviews the latest developments and relationships among these concepts.

- Chapter 3 reviews trends in the impact investing market, initiatives by industry organizations, and the latest policy and regulatory developments in other countries. The market continues to expand, and pension funds play a significant role as capital providers. Various initiatives by industry organizations are also underway, while policy and regulatory approaches across countries remain diverse.

- Chapter 4 examines case studies of leading impact funds in other countries. The approaches taken by these funds vary widely, and many are pursuing innovative strategies through ongoing experimentation to achieve both financial returns and impact creation.

- Chapter 5 analyzes the approaches of major overseas pension funds to impact investing. Based primarily on interview surveys, and regardless of whether they formally use the term “impact investing,” the surveyed funds were found to invest in impact funds while maintaining risk-return discipline under their fiduciary duties. These approaches are underpinned by three broad perspectives: the “instrumental perspective,” its subtype the “universal owner-type perspective,” and the “ultimate ends perspective.”

- The defining feature of impact investing is the expectation of generating impact—such as improving the well-being of people or enhancing the state of the natural environment. Whether impact creation is the ultimate objective of investment or instrumental in achieving financial returns, this expectation represents a key distinction from other forms of investment.

- It is hoped that this report will support asset owners—including GPIF—as well as broader market participants, policymakers, and other ecosystem stakeholders in their future consideration and practice of impact investing, and ultimately contribute indirectly to the creation of impact.

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