people's pension

Climate Change Position Paper

March 2026

Contents

Introduction 3

Purpose of this position paper 3

Part 1: Setting the scene – the fiduciary landscape 3

Understanding our risk landscape 3

Recent industry and policy developments 4

Applying a system-level investing approach 4

Literature Review 5

Potential actions and associated trade-offs 5

Part 2: Strategic Framework 6

Net-zero ambition: our stance 6

Investment beliefs 6

Strategy 6

Reporting 6

Appendix 7

References 8

Literature Review 9

Introduction

The People's Pension Scheme ('the Scheme') is a defined contribution (DC) master trust open to all UK employers. The Scheme has close to 7m members and is growing by more than £3bn in contributions annually. As an open and growing master trust, it has a long-term investment outlook. The People's Pension Trustee Limited ('the Trustee') acts as fiduciary over the savings held in the Scheme.

As a primary directive, this Climate Change Position Paper (position paper) has been developed to serve the Scheme's main stakeholders - its members. However, due to the technical nature of the position paper, the information contained on the Scheme's website may better serve their needs. The main audiences for the position paper are therefore likely to be Scheme's asset managers, other service providers (ie, data and index providers, investment consultants), policymakers, and investee companies.

This position paper should be read in combination with the Scheme's (i) Responsible Investment (RI) Policy, of which this position paper should be considered a subset; and (ii) Climate Progress Report, which provides further details regarding the Scheme's climate-related governance, strategy, risk management, metrics and targets, and is required to be updated annually.

Note that for the remainder of this Climate Change Position Paper, a first-person narrative (eg, 'we', 'our') will be used, which will refer to either the Scheme or the Trustee. The use of bracketed numbers (eg, [1-5]) after select sentences links to the appropriate references in the Appendix.

This position paper will be reviewed and updated at least every three years or following any significant change in approach, policy, or the demographic profile of members.

Purpose of this position paper

In our Responsible Investment (RI) Policy, we identify climate change to be a systemic ESG risk with the greatest potential impact upon member outcomes. The RI Policy broadly outlines how climate is embedded into its investment decision-making across its three strategic pillars: portfolio construction, stewardship and reporting.

As a subset to the RI Policy, this paper further clarifies how we integrate climate into investment decision-making to improve member financial outcomes. It: (i) defines the forms of climate risk relevant to a long-term horizon, diversified investor; (ii) sets out practical tools and trade-offs[1]; and (iii) describes a proportionate framework for action. The scope is explicitly financial: climate is considered because, where material, it affects expected returns and risks.

Why a climate paper and not one for every long-term risk? First, climate combines physical and transition channels that can correlate across sectors and geographies, creating portfolio-level exposures that warrant a clear approach. Second, ambiguity in definitions, data and policy signals increases the risk of inconsistent decisions. For this reason, this paper codifies how we will treat climate alongside other risks within our market-driven investment philosophy.

Part 1: Setting the scene – the fiduciary landscape

Our fiduciary duty is to act in members' best financial interests.[2] Practically, that means identifying financially material[3] risks and opportunities, taking actions that are effective and proportionate, and evidencing the rationale. Legal commentary across the UK/EU confirms trustees must consider financially material ESG factors, including climate risks, within prudent decision-making. [1–5]

Guidance such as the Legal Framework for Impact (United Nations Environment Programme Finance Initiative (UNEP FI)/ Freshfields) and the Institutional Investors Group on Climate Change's (IIGCC) fiduciary resources emphasises long-term portfolio stability where short-term returns create identifiable risks to enduring value. [6–7]

We apply a market-aware philosophy: in large, liquid markets we assume prices broadly[4] reflect available information, so any deviations from market cap weights need to be considered carefully and with humility; in less efficient areas we allow for more discretion.

In navigating this fiduciary landscape, we use the following criteria when making investment decisions (hereafter referred to as MEPT criteria), and we document the criteria accordingly for significant climate-related decisions:

- **Materiality** (robust evidence the risk matters to returns or volatility for the exposure considered);
- **Efficacy** (the proposed action likely reduces risk or improves returns);
- **Proportionality** (scale of action commensurate with delivering maximum value against allocated resources); and,
- **Tracking Error** (deviation from the reference market portfolio, within budget).

Understanding our risk landscape

Definitions used consistently throughout the paper:

- **Climate dependency:** the effect of climate on the company
- **Climate impact:** the effect of the company on climate (eg, emissions)
- **1.5 vs Paris-aligned portfolio:** A Paris-aligned portfolio is an investment strategy designed to meet the goals of the 2015 Paris Agreement, which means limiting the global temperature increase to 'well below 2°C' above pre-industrial levels, while 'pursuing efforts' to limit it to 1.5°C. A 1.5°C portfolio target is the more ambitious goal and a specific, more rigorous form of a general 'Paris-aligned' strategy. Refer to Part 2 as to our specific position on this, which is more nuanced than what is being presented above. Therefore, these definitions are for reference purposes only.

1. Further details on trade-offs can be found in Part 2 of the RI Policy.
2. The duty to act in members' best financial interests is best seen as short hand for a range of fiduciary duties, most importantly: duty to exercise investment powers for proper purposes; duty to take account of factors which are relevant to these purposes; and duty to act with prudence.
3. To us as investors
4. In the round, recognising that climate change may be the exception to the rule on a case-by-case basis

- **Systemic versus idiosyncratic exposures:** economy-wide or multi-sector versus diversifiable or hedgeable.
- **Adaptation versus mitigation:** actions aimed at reducing dependency and improving resilience versus actions aimed at reducing impact and emissions.
- **Market mispricing:** a persistent gap between market price and fundamental value, where the former can represent either under or overpricing relative to fundamental value depending on the asset.
- **Systemic risk:**[5] the potential for a single institution or sector failure to trigger a widespread collapse, spreading contagion through the entire financial system
- **Universal owner:** An institutional investor (such as a large pension fund or sovereign wealth fund) that has such a large, diversified, and long-term portfolio that it is, as a result, dependent on the wellbeing of the economy as a whole.
- **Transition risk:** risks that result from the transition to net zero, eg, money needed to shift from gas to solar energy.
- **Physical risk:** risks that result from more frequent extreme weather events causing disruption, eg, a flood stopping a factory from operating.
- **Liability risks:** risks that come from people or businesses seeking compensation for losses they may have suffered as a result of physical or transition risks. These may be third-party liabilities (ie, those seeking compensation for damages of physical risks) or direct liabilities (ie, those seeking compensation for financial losses).

Positioning within our market-driven investment philosophy

Climate-related exposures are assessed alongside sector, factor, and geography. As a well-diversified investor with universal owner characteristics, both climate dependency and impact are material to our approach.[6] However, in alignment with our RI objectives and to avoid blanket conflation between the two, different implementation levers are used with no material financial detriment as a key underpin to both. Where climate dependency is particularly acute, underweights or exclusions may be justified if not fully priced in; where climate impact is the concern, stewardship is our key lever, holding our fund managers to account for their engagement objectives and escalation paths as outlined in our RI Policy. Understanding of physical and liability risks is still at a relatively nascent stage for both investors and investee companies relative to transition risk, and therefore stewardship is the key lever to address it.[7]

With regard to mispricing, evidence is mixed. Some studies and practitioner work suggest underpricing of climate risks due to disclosure gaps and policy uncertainty; others show instances of overpricing of so-called green exposures or outperformance by brown assets. We therefore avoid blanket claims and act only where MEPT criteria supports doing so, notably when tracking error is within budget. [8–11]

Potential actions are unpacked further in the next section.

Recent industry and policy developments

Policy: Since 2015, progress has been uneven across regions. The UNEP Emissions Gap Report 2025 finds that, even with full implementation of current national pledges, global temperature rise is projected at 2.3–2.5°C, and 2.8°C under current policies; an overshoot of 1.5°C is likely without faster cuts. The report implies uncertain timing for transition risks and cautions against binary policy bets. [14–17]. It also implies that a strict '1.5°C aligned' portfolio (with limited to no overshoot) will increasingly deviate from the market portfolio, which may impact risk budgets. However, some academic evidence suggests that progress towards meeting the Paris Agreement goals reduces portfolio risk and indeed likely increases portfolio values [13].

The muted policy response to date presents two divergent scenarios for the future. Firstly, a scenario where delayed action leads to a more severe policy action down the line. Alternatively, less policy action now could be indicative of chronic structural issues and tensions that may always place limits on a policy response, implying less policy response later. This poses a risk to any portfolio positioning that is predicated on either more or less policy response in the future and suggests disciplined position sizing is essential.

Markets: The strategic business case for the energy transition has varied considerably in strength through time. Relative performance and valuations of climate-aligned exposures have varied (eg, climate indices). There have been episodes of uprating of conventional energy stocks outside Europe and sustained volatility among transition leaders (eg, offshore wind). We therefore do not presume a persistent green premium and place emphasis on valuation discipline and risk control. [18–19]

World Energy Outlook 2024 highlights that delayed or inconsistent transition policies risk continued capital misallocation across energy and industrial sectors, increasing both physical and transition risks for investors. Clean energy meets virtually all growth in energy demand in aggregate, but policy uncertainty and uneven investment, particularly in emerging markets, can amplify risk asymmetries and repricing events. [23–24]

Applying a system-level investing approach

System-level investing is increasingly articulated as fiduciary-aligned practice: shifting the focus from single issuers to the wider systems (financial, environmental and social) that drive long-term portfolio performance, and using investor influence to improve market structures, policy and norms. Formal resources from PRI and TIIP, and academic and practitioner commentary, describe governance and resourcing models to operationalise this. [25, 27–29]

UKSIF, Scottish Widows, and Canbury propose a portfolio-resilience framework for systemic risks, emphasising that diversified asset owners should identify and address undiversifiable, cross-market risks and align stewardship,

5. Also referred to as "system-level risks"- both terms are used interchangeably in this position paper. Not to be confused with systematic risk - often called market risk or undiversifiable risk, which is the inherent, unavoidable uncertainty that impacts the entire financial market or a large segment of it. Caused by uncontrollable macroeconomic factors like recessions, inflation, or geopolitical events, it has overlapping characteristics with systemic risk, as both cannot be addressed through diversification alone, but they should not be conflated.
6. This emphasises the importance of prioritisation in our stewardship approach. For further details on this, please refer to the RI Policy.
7. Key focus areas are holding fund managers to account for improving company disclosures for the most material sectors and working with industry actors to improve investment tools to assess physical risk.

manager oversight and policy engagement accordingly. Rathbones argues that collaboration across companies and policymakers can strengthen system resilience and protect long-term portfolio value. [30–33]

What is our main business case for adopting a systems investing approach? This connects to our RI belief outlined in our RI Policy: being a well-diversified investor with universal owner characteristics means that we are dependent upon these wider systems to drive long-term portfolio performance. Systemic stewardship is the main lever by which this is implemented, which is outlined further in the next section.

Systemic stewardship and the investment case

Systemic stewardship (engagement across companies, financiers and policymakers) is emerging as a core lever alongside issuer-level engagement, particularly for well-diversified investors. The Net Zero Asset Owner Alliance calls for expanding investor engagement beyond single issuers to policy and sector or value-chain engagement and for aligning asset managers with asset owners' long-term interests, noting issuer engagement alone has limits. The Thinking Ahead Institute sets out the pillars of effective stewardship, with explicit focus on systemic-stewardship resourcing and coalition approaches. [34–36]

What is our main investment case for taking a systemic stewardship approach? Beyond the reasons outlined in the previous section, there is also a strong efficacy and proportionality argument (as part of our MEPT criteria). Climate change is a systemic risk that cannot be addressed by acting at the level of a single investment or company – therefore, prioritising our stewardship resources for engagement with policymakers and regulators and engagement across entire sectors (such as mining) or systems that span multiple sectors (such as food, water, energy or critical minerals) is deemed the most efficient approach to deliver maximum impact. We hold both ourselves and our asset managers accountable for this type of robust prioritisation. We acknowledge the above-noted trade-offs at a company level (refer to 'limitations to universal owner claims') [37, 38]. Refer to RI Policy and Principles 1 and 2 of the Asset Owner Statement on Climate Stewardship for further detail.

Literature review

We take into account both supportive and sceptical voices, including critiques of universal-owner assumptions and of portfolio-level net-zero targets that focus on financed rather than real-economy emissions, as highlighted by IIGCC's Net Zero Investment Framework (NZIF) 2.0[8] [20–22]. Refer to the References and the Appendix for the literature review, which informed the contents of this position paper.

Potential actions and associated trade-offs

We consider a menu of potential tools we could employ and select case-by-case using MEPT criteria and the below noted trade-offs:

1. Investment Actions

a) Rules-based, data-driven climate factor tilts are applied in index portfolios where there is reasonable evidence that these may improve risk-adjusted returns and are insufficiently priced by the market, to reduce exposure to high transition dependency, sized within an appropriate risk budget. Other climate-related factors (eg, physical risk) will be considered for inclusion on an ongoing basis as data and financial materiality arguments improve.

b) Targeted exclusions or underweights where dependency risk is deemed to be material and persistent to future returns and is also mispriced by the market, and exclusion does not create undue concentration or cost.

c) Fundamental active decisions where managers have a demonstrable edge linking climate factor drivers to cash flows and valuation, with disciplined position sizing (alongside other investment factors)

d) Non-index allocations (solutions or adaptation themes) only where return drivers are robust, valuations reasonable, and liquidity and sizing appropriate.

2. Stewardship Actions

a) Prioritisation of industry and policy engagement (systemic stewardship approach) where there is a plausible pathway to improving the investment environment and a reasonable expectation of efficacy relative to cost. Refer to the RI Policy for further detail.

b) Holding our fund managers to account for company-level engagement via focus lists where either (i) there is materiality in terms of climate risk posed to the portfolio and efficacy of the selected actions or (ii) the ask contributes to positive climate impacts but is neutral to returns. This approach aligns with our primary and secondary RI objectives. Refer to the RI Policy for further detail.

Trade-offs

1. **Tracking error:** departures from the market portfolio introduce performance dispersion. We budget for tracking error for climate tilts in the same way we do for other investment exposures and review outcomes; we avoid cumulating many small tilts that unintentionally exhaust the risk budget.

2. **Opportunity cost:** if climate-tilted factors de-rate or policy progress stalls, climate-aligned positions may underperform; conversely, abrupt policy shifts can penalise portfolios that ignore transition exposures. We manage path risks through sizing and diversification.

3. **Implementation and governance:** complex screens or bespoke indices raise cost and complexity; we favour simple, auditable rules and clear manager accountability.

4. **Limits to universal-owner claims (including taking a systemic stewardship approach):**

   a). We avoid relying on blanket statements that all climate risks are material or non-diversifiable in every situation. Our framework recognises this and focuses action where it adds value. [12–13]

   b). Addressing portfolio-level systemic risks may introduce trade-offs at a company level. To address this, we recognise that our investee companies can only pursue a net zero strategy insofar as technological, economical and policy constraints allow. Refer to the RI Policy (company expectations on climate) for further detail.

8. Emphasises focus on financing reduced emissions rather than only reducing financed emissions.

Part 2: Strategic Framework

Net-zero ambition: our stance

As a general yardstick for managing climate dependency and impact in the portfolio, we retain a Paris-aligned ambition, implemented bottom-up to reflect differences across markets, asset classes and sectors. Target setting will be pursued using this bottom-up guideline (investment strategy-led followed by target-setting feasibility assessments). This means we will no longer pursue a top-down '1.5°C aligned portfolio' (with limited to no overshoot) investment constraint.

Progress against this ambition depends on an enabling policy environment and company actions. Implementation will remain flexible, avoiding binary policy bets and focusing on risk-adjusted returns. We will outline these dependencies/barriers to progress in our yearly Climate Progress Report, which is broadly the same disclosure expectation we have of investee companies.[9]

Consistent with NZIF 2.0, our emphasis is on financing reduced emissions rather than solely reducing financed emissions; capital allocation to credible transition and adaptation opportunities will be evidence-led.

Investment beliefs

The core investment belief that drives our positioning is that climate risk is a systemic risk that cannot be eliminated through diversification alone.

In practice, this means:

- We manage left-tail risk with disciplined tilts and position sizing within a defined risk budget.
- Where mispricing exists, we will act, but we will avoid timing bets on policy or factor regimes.
- We do not adopt blanket divestment, notably in carbon-intensive sectors, which remain critical to the energy transition. Targeted exclusions or underweights may be used case by case, where climate dependency risk is acute. Refer to the RI objectives and beliefs section in the RI Policy (and Exclusions in the Appendix) for further detail.
- We will investigate the benefits of an investment strategy of favouring transition leaders within carbon-intensive sectors where fundamentals, valuations and evidence support downside protection and potential upside. Stewardship remains a core tool to drive real economy outcomes.
- We will focus on financing reduced emissions, not reducing financed emissions, to achieve real-world outcomes.
- We will evolve our scenario analysis[10] in line with industry developments.

Strategy

The following are the guidelines we will implement at an investment strategy level:

Objectives first: In alignment with the RI Policy's primary objective, climate is integrated as a risk/return input alongside other factors; it does not override investment objectives. In practice, this means protecting member outcomes by addressing financially material climate risks while maintaining disciplined exposure to the reference market. We aim to reduce avoidable left-tail risks without making uncompensated bets on specific transition pathways.

Flexible and evolving: We apply the MEPT criteria in identifying the potential actions we will deploy as outlined in the previous section. We will review implementation (eg, tracking error budgets) at least annually and after major policy/market developments.[11] An illustration of how this works in practice is provided below.

MEPT in practice:

- Materiality: define the risk channel (physical or transition), identify exposures, assess financial relevance to the portfolio, and specify the time horizon.
- Efficacy: for tilts and exclusions, estimate risk reduction; for engagement, set asset objectives, milestones and escalation; for policy work, specify the target change and our leverage.
- Proportionality: scale actions to risk size and confidence level; avoid complexity that outweighs benefits.
- Tracking error: set and monitor risk budgets by asset class and mandate

Manager - led implementation: mandates set clear expectations on climate risk management,[12] including engagement objectives and reporting; we monitor delivery and escalate where needed. Refer to the RI Policy for further detail.

Systemic stewardship: we prioritise industry and policy engagement to strengthen market functioning and resilience, aligning asset manager activity with our long-term interests. Refer to the RI Policy for further detail.

Reporting

We will embed MEPT into manager guidelines and oversight and report annually[13] on climate actions, including cases where we chose not to act due to insufficient materiality or efficacy.

9. Refer to RI Policy for further detail.
10. With respect to our Climate Progress Report in line with TCFD requirements.
11. RI Policy also highlights annual review – refer to Page 24 under 'Shareholder value'.
12. This includes reference to not compromising investment objectives in its pursuit.
13. Predominantly through our annual Climate Progress and RI Reports.

Appendix

References

[1] Financial Markets Law Committee (FMLC). Paper for Pension Trustees (2024).

[2] Sackers (2024). Fiduciary duties guidance for trustees (UK).

[3] Dentons – Saunders, C. (2025). Mansion House Accord: balancing UK growth and fiduciary duty.

[4] Colarusso-Kaperonis (2025). Fiduciary duty and sustainable investment in pension fund management.

[5] Karamally, A., and Franco, V. (2025). C2ES: Redefining Fiduciary Duty: Climate Risk, Stewardship, and the Transition Imperative.

[6] UNEP FI and Freshfields (2022–25). Legal Framework for Impact.

[7] IIGCC. Fiduciary duties resources for asset owners (various, 2024–25).

[8] Eren, Merten and Verhoeven (2022). BIS: Pricing of climate risks in financial markets — summary of the literature.

[9] Campiglio (2022). Climate-related risks in financial assets.

[10] MSCI (2024). Climate Risk Outlook Study.

[11] Bauer, Gödker, Smeets and Zimmermann (2024). IZA DP 17030: Mental Models in Financial Markets — experts' reasoning about climate-risk pricing.

[12] Hawley and Williams (2000). The Emergence of Universal Owners.

[13] Gosling (2024). Universal Owners and Climate Change (notably Section 4); Net zero, lawyers, and fiduciary duty.

[14] UNEP (2025). Emissions Gap Report 2025: Off Target.

[15] UNEP-CCC (2025). Emissions Gap Report 2025 (download site).

[16] New Climate Institute (2025). Emissions Gap Report 2025 — overview.

[17] Suggested citation: UNEP (2025). Emissions Gap Report 2025: Off Target — continued collective inaction...

[18] Robeco (Nov 2025). How sustainable investing can stay the course amid disruption.

[19] Market data sources on Ørsted and energy sector performance (e.g., MarketScreener; Google Finance, 2025).

[20] IIGCC Insights (Dec 2024). NZIF 2.0 approach to financed emissions.

[21] AIGCC (Jun 2024). Updated NZIF 2.0 guidance press release.

[22] IIGCC (Jun 2024). NZIF 2.0 overview.

[23] IEA (2024). World Energy Outlook 2024 — report and key findings.

[24] IEA (2024). Overview and key findings — WEO 2024.

[25] PRI/SAIL cohort deck (Feb 2023): system-level investing overview.

[26] Tideline and TIIP resources on system-level investing (2023–25).

[27] Columbia SIRI (2025): System-level investing — redefining the role of institutional investors.

[28] MIT Sloan (2025): What is systemic investing, and why are impact investors taking notice?

[29] AI-CIO (2025): What System-Level Investing Is — and Why It's Different...

[30] UKSIF (May 2025): Systemic risks — a framework for portfolio resilience.

[31] Scottish Widows (Aug 2025): Getting to grips with systemic risks.

[32] Scottish Widows Insights (2025): Why systemic risks matter for investors.

[33] Rathbones (Jul 2025): From risk to resilience — systems investing for long-term value.

[34] UNEP FI (Apr 2022): The Future of Investor Engagement — systematic stewardship to address systemic climate risk.

[35] Net-Zero Asset Owner Alliance (Apr 2023): Aligning Climate Policy Engagement with Net-Zero Commitments.

[36] Thinking Ahead Institute (May 2024): The five pillars of effective stewardship, with a systemic-stewardship focus.

[37] Gordon, Jeffrey (2022 and 2023). Systemic Stewardship, Journal of Corporation Law, and Systematic Stewardship: It's Up to the Shareholders, a Response to Profs. Kahan and Rock, Columbia Law and Economics Working Paper No. 666.

[38] Kahan, M and Rock, E (2023). Systemic Stewardship with Tradeoffs, Journal of Corporation Law.

Literature Review

Introduction

This literature review was conducted by Canbury Insights Ltd, a sustainability consultancy. While not exhaustive, the purpose of this review was to gain an understanding of a wide spectrum of industry and academic voices that could help inform this position paper and to ultimately attempt to mitigate against unconscious bias in our decision-making. More specifically, in taking into account both supportive and sceptical voices, we can better understand the trade-offs inherent in any approach we choose to take and attempt to address them to the extent possible.

Research parameters

Timeframe: 2015-2025

Types of sources: Primarily academic, with practitioner/grey literature

Academic:

- Peer-reviewed journals
- Meta-analyses, systematic reviews, and industry reports

Practitioner/grey literature:

- Investor reports
- Think tanks and NGOs
- Consultancy and data providers
- Policy institutions

Research Categories

1. **Fiduciary landscape: integration of climate issues**
2. **Macro challenges in climate investing: market mispricing**
   - Global policy response
3. **Systems thinking: Climate change as a systemic risk**
4. **Systems thinking: use of systems investing approaches**
5. **Systems stewardship and the investment case**
6. **Other works not included in the overview**
   - Market mispricing
   - Paris alignment

Fiduciary landscape: integration of climate issues

Key points:

- **Climate risk is financially material, not optional**
- **Long-termism is now embedded in fiduciary expectations**
- **Universal ownership theory strengthens fiduciary expectations around climate**

The fiduciary landscape has developed to ensure that climate considerations form part of trustees' core duties and investment governance. The Financial Markets Law Committee Paper for Pension Trustees (2024) establishes that fiduciary duty requires trustees to assess all material risks to members' assets, including those related to climate change, as these risks affect the long-term sustainability of investment returns.

Legal practitioners are now central to clarifying fiduciary expectations. Sackers (2024) emphasise that trustees must integrate financially material ESG factors, including climate risks, within prudent decision-making. Dentons (Saunders 2025) further stresses, in analysis of the Mansion House Accord, that UK trustees must ensure any investments supporting national growth remain consistent with fiduciary duty and robust risk evaluation.

Legal commentary such as Colarusso-Kaperonis (2025) and Karamally and Franco (C2ES Report) shows that fiduciary frameworks in the UK and EU now embed long-termism, meaning that environmental and climate issues must be considered as financially material factors rather than discretionary concerns. In the United States, the interpretation of fiduciary duty remains contested. The C2ES finds that U.S. fiduciary obligations are gradually widening from a short-term financial focus to recognition of systemic climate risks, while the GRESB (2025) analysis highlights legal tension between fiduciary and antitrust frameworks as investors coordinate on climate action. Together, these sources show convergence toward the UK–EU view that climate risk is financially material and within trustees' duties.

The IIGCC Fiduciary Duties Report confirms that trustees may be required to prioritise long-term portfolio stability over short-term performance when short-term returns create identifiable risks to the enduring value of members' savings. The Legal Framework for Impact (UNEP FI & Freshfields 2022–25) provides a comprehensive cross-jurisdictional analysis of how law already requires investors to consider sustainability impacts where these affect financial outcomes. It identifies fiduciary duties as enabling, and in some contexts obliging, investors to act on climate and nature impacts.

Taken together, these sources confirm that integrating climate issues into fiduciary practice is a matter of legal and financial prudence.

Alongside this legal commentary, we can draw on universal owner theory (established by Hawley and Williams; drawn upon by Gosling and Quigley; applied to actual practitioners by AP7) to frame pension funds as large, long-horizon investors who cannot diversify away from systemic risks and externalities, making climate considerations material to their portfolio.

Additional evidence of fiduciary duty's expansion comes from Volans and the Generation Foundation's 2025 project on policy advocacy for systemic risk management. The initiative positions climate-related policy engagement as part of investors' legal duty to manage systemic risks, aligning with the Freshfields-authored Legal Framework for Impact, which concludes that investors may be required to pursue sustainability impacts when material to long-term returns.

Title	Author	Date	Type
Financial Markets Law Committee, FMLC Paper for Pension Trustees	FMLC	February 2024	Industry paper
Steering the "fiduciary duties" ship	Sackers	December 2024	Website article
The Mansion House Accord: balancing UK growth and fiduciary duty	Carolyn Saunders, Dentons	June 2025	Website article
The fiduciary's green thumb: reconciling fiduciary duty with sustainable investment in pension fund management	Kolarusso-Kaperonis	September 2025	Journal article
Redefining Fiduciary Duty: Climate Risk, Stewardship, and the Transition Imperative	Karamally and Franco, C2ES	August 2025	Industry report
Investor Climate Action Under Fire: How Fiduciary Duty and Antitrust Are Shaping the Debate	GRESB	October 2025	Industry article
IIGCC Insights: Fiduciary duties report offers clarity to asset owners on climate risk	Jane Murray, IIGCC.	15 February 2024	Industry article
A Legal Framework for Impact	UNEP FI & Freshfields	July 2021	Industry report
The Emergence of Universal Owners: Some Implications of Institutional Equity Ownership	Hawley and Williams	July 2000 – not within the threshold, but important foundation	Journal article
Universal Owners and Climate Change	Gosling	December 2024	Journal article
Universal Ownership in Practice: A Practical Guide for Asset Owners	Quigley	July 2020	Journal article
Universal Ownership: Systems thinking for asset owners	AP7	October 2025	Industry report
Mobilising investors to engage on real-economy policy for net zero	Volans	January 2025	Website article
Volans partnership summary – Fiduciary Duty and Policy Advocacy	Generation	February 2025	Website article

Counterpoints

While much recent commentary argues that climate considerations are now embedded within fiduciary duty, a parallel strand of legal scholarship cautions against expansive interpretations of fiduciary duty that some argue move beyond demonstrable financial materiality. Some authors state that treating climate as a core component of fiduciary duty may expose trustees to legal risk, particularly in jurisdictions where shareholder primacy remains dominant.

De Mariz et al. (2024) examine fiduciary obligations under U.S. and common law frameworks, finding that while ESG considerations may be permissible, they are not universally required unless a clear connection to financial performance can be demonstrated.

Hoyle (2023) similarly reviews recent fiduciary litigation and concludes that courts continue to apply a cautious and fragmented approach to ESG integration, suggesting that systemic or values-based climate objectives cannot yet be assumed to fall within trustees' core duties.

Ultimately, while climate risk is increasingly recognised as financially material, fiduciary duty remains fundamentally a legal duty grounded in case law and requires the Trustee to exercise its investment powers for proper purposes, which includes taking into account scheme-specific circumstances and relevant factors to reach a reasonable, justifiable investment decision. UK guidance (Law Commission) makes clear that trustees may consider environmental concerns as 'non-financial factors' under strict conditions and must avoid decisions that create a risk of significant financial detriment, leaving scope for narrower interpretations where materiality is contested (2017).

Even for long-term investors, the systemic nature of climate risk can paradoxically make financial materiality harder to demonstrate within conventional fiduciary frameworks, because the risk is diffuse, portfolio-wide and often realised through indirect or second-order channels rather than asset-specific losses.

Together, these sources challenge the view that fiduciary duty has fully converged around mandatory climate integration.

Title	Author	Date	Type
Fiduciary duty for directors and managers in the light of anti-ESG backlash	De Mariz et al.	2024	Journal article
The fiduciary's divestment dilemma: ESG and the age of climate change	Hoyle	2023	Journal article
Pension Funds and Social Investment	UK Law Commission	2017	Law Commission Report

Macro challenges in climate investing: market mispricing

Key points:

- Climate risks remain consistently and structurally underpriced
- Experts recognise mispricing, but markets still fail to reflect risks

Climate-related market mispricing remains a significant challenge in climate investing.

Eren, Merten and Verhoeven's BIS paper shows that climate risks are economy-wide, difficult to hedge and often underpriced because of incomplete disclosure and uncertainty about future policy responses. Campiglio finds that both physical and transition risks affect asset values and profitability but are still treated as diversifiable rather than systemic factors, leading to consistent undervaluation. The MSCI Climate Risk Outlook Study reports that while investors recognise these risks, integration into valuation and decision-making remains limited, resulting in a gap between awareness and market pricing. Bauer et al. (IZA Discussion Paper 17030) further observe that financial professionals continue to undervalue climate risks, showing persistent inconsistency between expert understanding and actual market pricing.

Together these findings show that climate risks remain systematically mispriced across markets, distorting capital allocation and undermining effective transition planning.

Title	Author	Date	Type
Pricing of climate risks in financial markets: a summary of the literature	Eren, Merten and Verhoeven. BIS	December 2022	Journal article
Climate-related risks in financial assets	Campiglio	July 2022	Journal article
Climate Risk Outlook Study	MSCI	October 2024	Industry report
Mental Models in Financial Markets: How Do Experts Reason about the Pricing of Climate Risk	Bauer, Gödker, Smeets, and Zimmermann. IZA	May 2024	Journal article

Counterpoints

Although much of the literature argues that climate risks remain systematically underpriced, some recent academic work presents an alternative view, suggesting that markets may price climate risk in complex and heterogeneous ways rather than ignoring it entirely. This literature questions whether observed outcomes reflect mispricing or instead represent rational risk premia shaped by uncertainty and disagreement.

Lontzek et al. (2023) develop an asset pricing model in which disagreement about climate damages and policy responses leads to variation in carbon risk premia across investors and assets. Their findings imply that climate risk can be priced even when outcomes appear inconsistent or incomplete. Fliegel (2025) provides empirical evidence that transition risk is reflected in equity prices over time, with green firms outperforming brown firms, indicating that markets respond dynamically to climate-related information rather than persistently underpricing risk. These studies challenge claims of uniform or structural mispricing.

Title	Author	Date	Type
Asset pricing with disagreement about climate risks	Lontzek et al.	2023	Journal article
Brown risk or green opportunity? Dynamic pricing of climate transition risk	Fliegel	2025	Journal article

Macro challenges in climate investing: global policy response

Key points:

- Weak, inconsistent, or unstable climate policy increases transition risks
- Current global policies fall short of transition pathways, embedding long-term risk

Global policy response is a major constraint on effective climate investing.

The OECD's Investing in Climate for Growth and Development report finds that inconsistent or weak national commitments deter private capital and increase transition risks, while coordinated policy action supports growth and resilience. The NBER Working Paper on Environmental Policy Uncertainty shows that unstable climate policy reduces clean technology investment and raises market volatility. The Too Hot to Think Straight, Too Cold to Panic report highlights that short political cycles and fragmented international coordination delay capital reallocation and weaken investor confidence. The World Energy Outlook 2024 confirms that existing policy trajectories fall short of 1.5°C goals, locking in physical and transition risks across sectors. Together these findings show that clear, consistent and coordinated policy frameworks are essential to enable investment and manage systemic climate risk.

Title	Author	Date	Type
Investing in Climate for Growth and Development	OECD	June 2025	Industry report
Does environmental policy uncertainty hinder investments towards a low-carbon economy?	Noailly, Nowzohour and van den Heuvel. NBER	August 2022	Journal article
Too Hot to Think Straight, Too Cold to Panic	Benayad et. al	March 2025	Journal article
World Energy Outlook	IEA	October 2024	Industry report

Counterpoints

Global policy uncertainty is often framed as a constraint on climate investing because it can weaken confidence in transition pathways and raise the risk of stranded assets. Some schools of thought complicate this picture by showing that uncertainty can also accelerate parts of the transition, particularly where it shifts relative expectations toward tighter future constraints or encourages substitution away from fossil exposure.

Pata (2024) analyses the United States using monthly data (2002 to 2022) and finds that climate policy uncertainty is associated with increased renewable energy consumption and an acceleration of the shift toward low-carbon energy sources, with the direction and strength of effects varying across quantiles and time horizons.

Bai et al. (2023) study Chinese A-share industrial firms (2011 to 2020) and find that climate policy uncertainty positively contributes to firms' green innovation, with stronger effects in non-state enterprises, energy-providing industries, and technology-intensive firms, operating partly through increased environmental regulation intensity and higher R&D investment.

Together, these papers act as effective counterpoints because they challenge the assumption that unstable policy environments primarily suppress transition activity, instead showing conditions under which uncertainty can catalyse innovation and renewable uptake.

Title	Author	Date	Type
Comparative impacts of energy, climate, and economic policy uncertainties on renewable energy	Selin Karlilar Pata	2024	Journal article
Climate policy uncertainty and corporate green innovation: Evidence from Chinese A-share listed industrial corporations	Dongbei Bai, Lizhao Du, Yang Xu, and Shujaat Abbas	2023	Journal article

Systems thinking: Climate change as a systemic risk

Key points:

- Climate impacts are economy-wide and unhedgeable
- Delayed transition policy locks in larger systemic risks

Climate change is a material and systemic financial risk with impacts extending across the economy and financial system.

The Bank for International Settlements' Green Swan Report (2020) identifies climate change as a source of complex and unhedgeable risks that cannot be captured by conventional financial models, with the potential to cause system-wide disruption if unmanaged. The IPCC AR6 Synthesis Report (2023) provides evidence that physical impacts and transition pressures from climate change affect productivity, asset values and financial stability across sectors.

The World Energy Outlook 2024 (IEA) finds that delayed transition policies increase physical and transition risks through continued capital misallocation in energy and industry sectors. Together these sources establish that climate change presents a systemic risk that must be addressed through integrated governance and investment strategies.

Title	Author	Date	Type
IPCC AR6 Synthesis Report: Climate Change 2023	IPCC	March 2023	Industry report
The green swan: Central banking and financial stability in the age of climate change	BIS	January 2020	Industry report
The IEA's World Energy Outlook 2024	IEA	16 October 2024	Industry report

Counterpoints

D'Orazio (2025) finds that while physical and transition risks are associated with weaker financial stability indicators, stronger climate-related financial policies improve resilience, including through lower non-performing loans and improved liquidity. This challenges the view that climate risks are inherently unhedgeable or unmanageable within conventional stability frameworks and instead supports the argument that institutions and policy settings materially shape systemic outcomes. Liu et al. (2024) provide a complementary counterpoint by showing, across listed banks in G20 countries, that climate policy uncertainty is associated with lower bank systemic risk, consistent with a "systemic risk reduction" channel where banks respond via greater climate-related disclosure and sustainable investments.

While climate change can create, present, large, systemic risk to investors, some financial impacts from climate change can depend on asset-level exposure, geography and adaptive capacity, meaning investors can reduce sensitivity through portfolio construction (ie, to increase portfolio resilience) and risk transfer. Recent NBER research shows that lowering spatial concentration and reducing within-portfolio correlation of hazards can materially reduce exposure to climate-related losses (demonstrated for wildfire risk), implying that at least some physical climate risk can be managed through diversification and structuring rather than treated as inherently unhedgeable (2025). This does not deny the systemic nature of climate change, but it weakens the claim by showing that some risk is heterogeneous and partially manageable and that realised impacts depend heavily on adaptive investment and policy frameworks.

Together, these studies do not deny climate risk, but they counter the strongest form of the systemic-risk claim in the existing literature by showing that (1) resilience can be built through policy and supervisory frameworks, and (2) policy uncertainty does not uniformly amplify systemic instability.

Title	Author	Date	Type
Climate risks and financial stability: Evidence on the effectiveness of climate-related financial policies	Paola D'Orazio	2025	Journal article
Climate policy uncertainty and bank systemic risk: A creative destruction perspective	Yulin Liu, Junbo Wang, Fenghua Wen, and Chunchi Wu	2024	Journal article
Adaptation using financial markets: climate risk diversification through securitization	Matthew E. Kahn, Amine Ouazad, and Erkan Yönder	2025	Working paper

Systems thinking: use of systems investing approaches

Key points:

- System-level investing is increasingly defined as fiduciary practice
- Strengthening system resilience protects long-term portfolio value

The fiduciary landscape is expanding to include systems-based approaches to investment as a means of managing long-term value and resilience. The PRI's What is System-Level Investing? defines this approach as shifting focus from individual firms to the wider financial, environmental and social systems that determine overall portfolio performance, requiring investors to influence market structures, policy and norms to manage undiversifiable risks such as climate change. UKSIF, Scottish Widows, and Canbury's Systemic Risks: A Framework for Portfolio Resilience (2025) argues that asset owners, in particular universal owners, should be thinking about and addressing systemic risk – and proposes a framework to do so. Rathbones' From Risk to Resilience report adds that long-term investors can protect value by collaborating with companies and policymakers to strengthen system-level resilience, turning systemic vulnerabilities into drivers of stability.

Together, these sources demonstrate that integrating systems investing into fiduciary practice supports the management of systemic risks and aligns with trustees' duty to safeguard the long-term financial interests of beneficiaries.

Title	Author	Date	Type
What is System-Level Investing?	PRI	October 2024	Website article
Systemic Risks: A Framework for Portfolio Resilience	UKSIF, Scottish Widows, Canbury	May 2025	Industry report
From Risk to Resilience	Rathbones	May 2025	Industry report

Counterpoints

Systems investing is frequently presented as a fiduciary response to undiversifiable risks such as climate change, with the aim of strengthening system resilience to protect long-term portfolio value. Some recent academic work provides a counterpoint by highlighting conceptual and empirical limits to this approach, including challenges around financial justification and the effectiveness of investor intervention.

Gosling (2024) proposes a two-part test for universal ownership arguments and finds that applying widely adopted climate objectives, such as limiting warming to 1.5°C, is difficult to justify on both components. It is uncertain whether that objective is financially optimal at the portfolio level, and even if it were, investors may have limited efficacy to achieve the desired system-level outcome. This challenges the view that system-level investing is straightforwardly fiduciary and reliably value-protective.

While systems stewardship is increasingly presented as part of fiduciary practice, some sources state that asset owners should be cautious about overstating their roles in managing climate-related 'system' issues. Sachs et al. (2025) distinguish planetary, economic and financial market risks, noting that these risks differ in time horizons, transmission channels and, crucially, who is mandated and positioned to respond; they also note that conflating categories can muddy accountability and lead to poorly targeted strategies. An implication is that asset owners can legitimately use stewardship to manage financial climate risks and to support wider resilience where it aligns with beneficiaries' interests but should pair this with clear internal decisions on risk appetite, asset allocation, manager mandates and escalation pathways, rather than relying on engagement as a catch-all route to addressing planetary and economic risks that may sit more squarely with public policy and other institutions.

Title	Author	Date	Type
Universal owners and climate change	Tom Gosling	2024	Journal article
Distinguishing Among Climate Change-Related Risks	Sachs, Hearn, Goldklang & Toledano	2025	Industry article

Systems stewardship and the investment case

Key points:

- System stewardship is becoming accepted as part of fiduciary duty
- Engagement across companies, financiers and policymakers is more effective than divestment alone

The fiduciary landscape increasingly supports systems stewardship as a legitimate and necessary investment approach for managing long-term value. Recent legal debate also reinforces the stewardship imperative. ShareAction's 2025 fiduciary-duty amendment to the Pension Schemes Bill seeks to codify trustees' responsibility to consider long-term, system-level factors—such as climate and social stability—when acting in beneficiaries' best interests. The proposal clarifies that prudence and loyalty encompass systemic-risk management, not just portfolio-level returns.

The Pensions for Purpose Systemic Stewardship Report finds that asset owners recognise the importance of addressing systemic risks such as climate change through stewardship but face challenges of fragmented approaches, resource constraints and weak alignment between asset owners and managers. It identifies stronger governance, clearer expectations and greater collaboration as key to effective systemic stewardship. McDonnell and Gupta's review of institutional investor strategies shows that investors can influence the fossil fuel transition through multiple levers, including engagement with companies, the financial sector and policymakers, rather than relying on divestment alone.

Title	Author	Date	Type
Pension Schemes Bill: Our Fiduciary Duty Amendment Has Been Tabled.	ShareAction	2025	Website article
Systemic stewardship – challenges & strategies for change	Pensions for Purpose, Robeco	March 2025	Industry report
Beyond divest vs. engage: a review of the role of institutional investors in an inclusive fossil fuel phase-out.	McDonnell and Gupta	December 2022	Journal article

Counterpoints

Some argue that systems stewardship is ultimately a duty of policymakers and regulators, not investors, because system stability (eg, climate resilience) is a public good that depends on enforceable rules, public investment and coordinated governance. UK Parliament analysis treats climate and environmental risks as cross-cutting governance challenges requiring public-sector coordination (2024), while the Grantham Research Institute (LSE) frames climate change as a systemic financial risk demanding macroprudential policy responses beyond firm-level action (2023). Oxford research on cascading climate risks further reinforces that these risks require national resilience planning and policy interventions that investors cannot substitute for (2025), and the academic literature highlights that market failures and missing markets make government action necessary to enable transition at scale (2022).

Title	Author	Date	Type
Climate and environmental risks: governance challenges	Jonathan Wentworth (UK Parliament)	2024	Government report
Climate-related systemic risks and macroprudential policy	Paul Hiebert and Pierre Monnin	2023	Industry Report
Towards UK Systemic Resilience to International Cascading Climate Risks: The Role of Infrastructure and Supply Chains	Nicola Ranger, Jasper Verschuur, Roosa Lambin, Mathias Weidinger, Gregory Briffa and Juan Sabuco	2025	Academic research report
Towards a carbon neutral economy: How government should respond to market failures and market absence	Nicholas Stern	2022	Journal article

Other works not included in the overview

Market Mispricing

Source	Summary
CFA Institute Research & Policy Centre – Carbon Emissions, Net-Zero Transition, and Implications for Equity Portfolio Risk (Campos et al.)	Links carbon emissions and climate-news flow to equity-risk metrics, showing pricing sensitivity to transition signals.
CFRAC External Advisory Committee Report – Key Themes 2023-2024	Summarises US public- and private-sector perspectives on managing climate-related financial risk and data needs.
US Senate Budget Committee – Testimony of Robert B. Litterman (Feb 2023)	Highlights the systemic nature of climate risk and the need for effective carbon pricing to mitigate fiscal exposure.
FCA, PRA, TPR & FRC – Joint Statement on Climate Change Adaptation (Oct 2021)	UK regulators define expectations for governance, disclosure, and adaptation reporting across financial sectors.
Robeco White Paper (2024) – Transition Investing: Exploring Alpha Potential	Presents a framework for capturing alpha from transition leaders rather than only 'green' assets.
LSE – 15 Years on from the Stern Review (2021)	Revisits the economic rationale for proactive climate policy and green growth; contrasts with persistent underpricing.
PRI – Financial Markets Are Mispricing Climate Risk (2019)	Argues markets rely on outdated scenarios and underestimate policy-response risk; introduces IPR framework.
Man Group – Climate News Anomaly (2023)	Identifies return premium linked to climate-news attention, showing under-reaction to information flow.
UK Cabinet Office – Forests and Climate Leaders' Partnership (COP27, 2022)	Coalition advancing forest and land-use finance as integral to global transition risk management.
UK BEIS – Net Zero Strategy: Build Back Greener (2021)	The UK's detailed policy roadmap for achieving net-zero; contextual baseline for investment analysis.
Bilal & Känzig (2024) – The Macroeconomic Impact of Climate Change	Empirically estimates GDP losses from global warming, reinforcing rationale for carbon pricing and transition.
Institute and Faculty of Actuaries & University of Exeter – Planetary Solvency (2025)	Integrates climate, nature, and economic risks into a solvency-style prudential framework.
Bank of England – Breaking the Tragedy of the Horizon (2015)	Foundational framing of climate risk as a financial-stability issue; introduces physical, transition, and liability risks.
IMF Blog – Further Delaying Climate Policies Will Hurt Economic Growth (2022)	Demonstrates macroeconomic benefits of early, credible climate policy versus delayed action.
Grantham Research Institute – Preventing a 'Climate Minsky Moment' (2022)	Examines prudential tools and exposure limits to mitigate systemic climate-transition risks.

Paris Alignment

Source	Summary
Inevitable Policy Response – Quarterly Forecast Tracker	Ongoing tracker of near-term climate policy developments across major economies. Quantifies expected force and timing of responses shaping transition pathways.
Climate Action Tracker – Net Zero Target Evaluations (Nov 2023)	Evaluates the integrity and credibility of national net-zero targets, highlighting ambition gaps and offset reliance versus 1.5°C pathways.
European Commission – The European Green Deal	Comprehensive EU strategy for climate neutrality by 2050 covering energy, industry, transport, and finance.
Carbon Border Adjustment Mechanism (CBAM)	EU policy introducing carbon pricing on imports to prevent carbon leakage and drive global pricing convergence.
United Kingdom Climate Change Commitments – 2035 NDC & Seventh Carbon Budget	Summarises statutory targets and carbon budgets guiding the UK's 2050 net-zero path under CCC oversight.
International Energy Agency – World Energy Outlook 2024	Global scenario analysis comparing STEPS, APS, and NZE trajectories; outlines the capacity to accelerate the energy transition.
Net Zero Tracker – Data Explorer	Aggregates data on net-zero commitments and integrity metrics for countries, regions, cities, and corporates.
LSE Grantham Research Institute – Why is Net Zero So Important?	Explains carbon budgets, the logic of net zero, and implications for climate stabilisation.
International Court of Justice – Advisory Opinion on Obligations of States (Cleary Gottlieb Insights)	Reviews legal proceedings on state obligations under international law for climate protection
Möller, Högner & Schleussner (2024) – Achieving Net Zero Greenhouse Gas Emissions Critical to Limit Climate Tipping Risks	Analyses interaction between tipping elements and mitigation feasibility; underscores urgency of net-zero targets.
Transition Pathway Initiative – State of the Corporate Transition 2025	Benchmarks corporate decarbonisation progress; finds most firms misaligned with 1.5°C pathways without stronger plans.