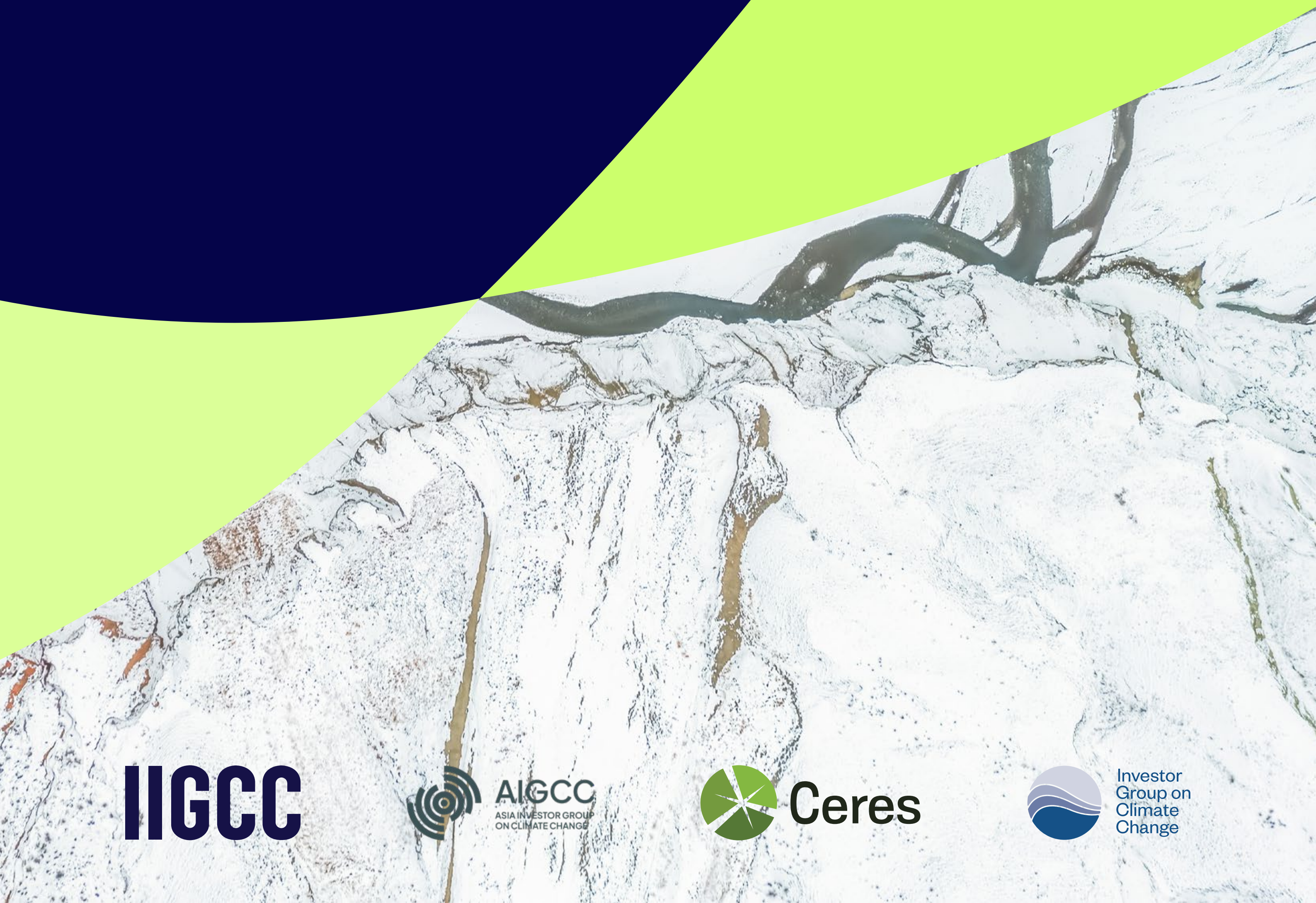
NZIF 2.0

The Net Zero Investment Framework



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About Paris Aligned Investment Initiative

The Paris Aligned Investment Initiative (PAII) is delivered by four investor networks, supporting individual investors globally to implement the Net Zero Investment Framework 2.0. It was established in May 2019 as an investor-led forum, to support investors to align their individual portfolios and investment activities to the goals of the Paris Agreement.

IIGCC

IIGCC – Europe

The Institutional Investors Group on Climate Change (IIGCC) brings the investment community together to work towards a net zero and climate resilient future. We create change the world needs by unlocking investor action on climate change. IIGCC has more than 400 members, mainly pension funds and asset managers, across 27 countries, with over €65 trillion in assets under management.

Our work supports investors in generating returns for clients and beneficiaries, which in turn provides financial wellbeing for future generations. We work with our members to address climate risk and ensure they are well positioned to make the most of investment opportunities offered by climate mitigation and adaptation efforts.

www.iigcc.org.

Ceres

Ceres – North America

Ceres is a nonprofit organization working with the most influential capital market leaders to solve the world's greatest sustainability challenges. Through our powerful networks and global collaborations of investors, companies and nonprofits, we inspire action and drive equitable market-based and policy solutions throughout the economy to build a just and sustainable future.

www.ceres.org

AIGCC
ASIA INVESTOR GROUP ON CLIMATE CHANGE

Asia Investment Group on Climate Change – Asia

The Asia Investor Group on Climate Change (AIGCC) is an initiative to create awareness and encourage action among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing. AIGCC provides capacity for investors to share best practice and to collaborate on investment activity, credit analysis, risk management, engagement and policy. With a strong international profile and significant network, AIGCC represents the Asian investor perspective in the evolving global discussions on climate change and the transition to a greener economy. AIGCC has 49 members from 11 markets representing over US13 trillion in assets under management.

www.aigcc.net

Investor Group on Climate Change

Investor Group on Climate Change – Australasia

The Investor Group on Climate Change (IGCC) is a collaboration of Australian and New Zealand institutional investors and advisors, managing over $2 trillion in assets under management and focusing on the impact that climate change has on the financial value of investments. IGCC aims to encourage government policies and investment practices that address the risks and opportunities of climate change.

www.igcc.org.au

Acknowledgements

IIGCC would like to thank the Steering Group of the Paris Aligned Investment Initiative and the co-leads of working groups for their guidance, support and leadership in the development of the Framework.

Introduction

Evolution of NZIF 2.0

The Net Zero Investment Framework (NZIF) is the most widely used net zero framework by investors who have made net zero commitments to set targets and produce related net zero strategies and transition plans. In the context of their own strategies, agendas, starting points, client mandates and regulatory considerations from which and with which, they make their own unilateral decisions regarding the ways and means with which they will set and reach net zero targets.

Since NZIF's release in April 2021, new components have been developed for asset classes not initially covered, and supplementary guidance has been released as the investor networks gain more experience through implementation.

This "NZIF 2.0" document supersedes the original version and is an evolution, based upon three years of implementation experience.

The text has undergone revisions, new figures have been created, and recommended action points and disclosures have been updated in line with industry best practice.

What is new in NZIF 2.0

Asset class and thematic guidance

Most of the noticeable changes are to asset class guidance, specifically an update to the Sovereign Bond guidance which has evolved with the advent of improving analysis tools and stewardship practices. There are also further updates and clarifications to our Real Estate guidance.

In addition, we have included asset class components released during the last three years:

- Infrastructure (2023)
- Private Equity (2023)
- Private Credit (2024)

There is also reporting guidance for Hedge Funds and Derivatives (2023), along with the inclusion of more detailed metrics on Climate Solutions for Listed Corporate Debt and Equity (2023).

Targets and objectives

The most substantial changes and clarifications for investors and service providers using NZIF are around target and objective types. The 'Portfolio Decarbonisation Reference Target' has been repositioned as the 'Portfolio Decarbonisation Reference Objective'. However, this has not altered its original purpose which was always orientated towards performance assessment and not reducing financed emissions year-on-year as a form of target setting, operationalised through divestment.

We continue to recommend that investors use all targets and objectives together, on the basis that they serve different purposes. However, it is understood that for various reasons, ranging from capacity to specialty, all cannot be set at once, especially target setting across all asset classes.

Finally, an important update integrated into NZIF 2.0 is the reclassification of Agriculture, Forestry and Fishing (NACE section A, Divisions 1 – 3) as material, high impact sectors. This means increased criteria must be met along NZIF's maturity scale, highlighting the importance of nature impacts and dependencies on net zero ambition.

Future work

As is demonstrated in this update to NZIF, the PAII investor networks and their members are continually developing and iterating the framework. Planned future work includes including guidance around investment themes such as nature, emerging markets, just transition and index investing.

Work will also continue on better defining metrics and targets for increasing investment in Climate Solutions across broader asset classes. Components and supplementary guidance will be released as they are completed and will be updated into future iterations of NZIF.

How to use this guide

This document is an overall summary of what is necessary to implement NZIF at a high-level. However, in isolation it is insufficient to operationalise NZIF. It should be used in conjunction with supplementary guidance, investor expectations guidance, and policy materials made available by the PAII investor networks. These are complemented by surgeries, events and webinars where the networks and members can share best practice and discuss impediments.

Net Zero Investment Framework

The NZIF outlines key components of a net zero strategy for investors, with two key objectives:

- Transitioning investment portfolios in a way that is consistent with the mitigation goals of the Paris Agreement, focusing on real economy decarbonisation.
- Increasing investment in the range of climate solutions to enable the transition.

NZIF recognizes that investors have a range of levers at their disposal to contribute to the transition, although many are indirect and not easily attributable to the specific actions of a single investor. These levers will have various levels of effectiveness throughout the financial value chain at different times and in different locations. NZIF provides a suite of options for different types of investors, with different strategies, to manage climate risks in the economic interests of their clients and beneficiaries, as well as making financial flows consistent with the goals of the Paris Agreement.

Using NZIF

NZIF is designed to be implemented at the organisation level via an 'implement or explain' approach. It can also be flexibly applied at fund or asset class level. Essential action points are those considered essential to the fulfilment of the Paris Aligned Asset Owners Initiative (PAAO) and Net Zero Asset Managers Initiative (NZAM) commitment statements. Advanced action points are additional recommendations which would benefit users and external stakeholders but are not essential to fulfilling commitment statements.

Asset owners are encouraged to use the full framework and ensure investment consultants and asset managers are supporting or implementing mandates accordingly.

Asset managers should, to the greatest extent possible:

- Use NZIF across all AUM.
- Develop aligned products, funds, and strategies.
- Educate clients on these offerings.
- Seek net zero aligned client mandates.

Investment consultants should integrate NZIF into advisory services including asset manager recommendations, and work with clients on NZIF adoption.

Investors setting targets using NZIF should update these targets every five years and best efforts to include new asset classes for targets should be made within 18 months of their release.

Paris-aligned decarbonisation pathways

Net zero-aligned decarbonisation pathways ('net zero pathways') refer to science-based emissions, technology, and/or investment trajectories that limit global average temperature rise to 1.5°C above pre-industrial levels with a sufficiently high probability.

Net zero pathways enable rigorous net zero objectives, strategies and targets, allowing investors to:

- Set decarbonisation and climate solutions objectives.
- Assess alignment of, and set, asset-level targets.
- Ensure market service providers use a proper analytical basis.
- Contextualise target setting.

When setting net zero goals and objectives, NZIF continues to recommend the IPCC 1.5°C Special Report illustrated pathways, the IEA's Net Zero by 2050 roadmap and the One Earth Climate Model. These global net zero pathways are consistent with global carbon emissions reaching net zero by 2050 with low or no overshoot and thus limiting warming to 1.5°C.

Recent developments with national-level net zero pathways are noted and NZIF recommends these are used if they are of sufficient quality. The use of such pathways is important to ensure emerging and frontier markets are not expected to decarbonise in the same manner as developed markets. It is important that national-level net zero pathways take into account fair share considerations to facilitate a just transition.

It is important to note most net zero pathways are not specifically developed for transitioning investment portfolios to net zero, and per all forward-looking scenarios, they are illustrative and informative of possible futures, not deterministic. They are modelled using the best available physical science, with various economic overlays and assumptions. They are subject to both technical and political review by various stakeholders in reaching consensus.

As such, and per standard use of projections in building risk management and investment strategies, it is appreciated that multiple scenarios may be used by investors, and the structure of NZIF is designed to be used in relation to any forward-looking climate model.

NZIF recommends transparency on utilised pathways, including associated assumptions and limitations. Engagement with pathway providers will become an increasingly important activity for investors as they continue to navigate the transition across a broad range of markets with differing characteristics and circumstances.

Governance & Strategy

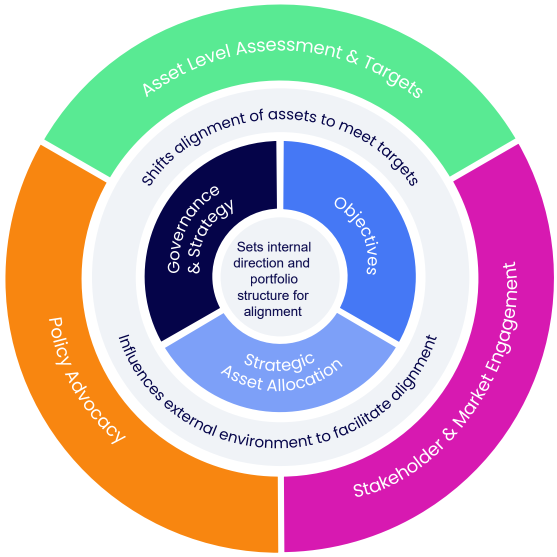
Introduction

This section establishes the basis, legitimacy, and actions required by investors to address climate-related transition risks. It explores setting ambition towards global net zero emissions, provides direction and basis for action. Together with NZIF sections on 'Objectives and Targets' and 'Strategic Asset Allocation', it forms part of NZIF's lever of 'Setting internal direction and portfolio structure for alignment'.

Essential action points

NZIF recommends the following actions for investors using the framework and considers them essential:

- Assess and disclose climate financial risk assessment in line with legal obligations, fiduciary duties, and industry best practice (e.g. TCFD and ISSB)[1].
- Commit to achieving net zero portfolio emissions by 2050, or sooner, and gain explicit endorsement by the board[2].
- Assign implementation responsibility for net zero strategy to the investment committee and implementation oversight to the board.
- Ensure senior leadership have sufficient knowledge to effectively oversee implementation of a transition plan.
- Disclose transition plan comprising each NZIF section and lever, explaining implications and reasons for any omissions.
- Incorporate transition plan into mandates and objectives for investment and portfolio managers, and review progress over time.
- Develop investment products and funds aligned with net zero objectives, strategy, and targets; and educate clients accordingly.
- Integrate net zero goals, objectives, strategies, and targets into asset manager selection, appointment, and monitoring processes.
- Seek to gain net zero aligned investment mandates, if a fiduciary.



Advanced action points

NZIF recommends the following advanced actions specific to governance. These may initially be difficult when beginning to implement net zero strategies (when attention is likely to be placed on implementing essential action points), but would ultimately prove beneficial over the long term:

- Establish explicit mandates for developing energy investment[3] and deforestation policies[4] and disclose these appropriately.
- Establish an internal system to periodically monitor implementation of the net zero strategy in its ability to deliver net zero objectives (including reviewing and updating net zero objectives, strategy, and targets).
- Establish a plan to ensure appropriate resources, skills, competencies and knowledge exist across the organisation to effectively implement net zero strategies.
- Integrate net zero objectives and strategy, and targets into remuneration incentives, as appropriate and with care to avoid unintended consequences.
- Establish progress reporting plans for net zero objectives, strategy, and targets to the board, senior management, and external stakeholders, including intended and unintended outcomes.
- Obtain independent review or third-party assurance of net zero objectives and strategy. This can be in the form of an audit or by another entity, such as a research or policy think tank.
- Integrate climate considerations into the process for selecting a portfolio/fund custodian.

NZIF recommends the following advanced actions specific to strategy. These may initially be difficult when beginning to implement net zero strategies (when attention is likely to be placed on implementing essential action points), but would ultimately prove beneficial over the long term:

- Describe the current constraints on net zero strategy and what actions will be taken to overcome these.
- Define the relationship of the net zero objectives, strategy, and targets to other organisational goals and objectives.
- Make plans to ratchet up net zero targets to include additional target types, asset classes, and AUM until 100% is covered by asset alignment targets.
- Review implications of assumptions and dependencies within a transition plan, including implications if assumptions are not realised.
- Review consistency of transition plan assumptions with those used in financial accounts, capital expenditures, and investment decisions.
- Update supporting financial plans, budgets, and related financial targets which will affect efficacy of a transition plan.
- Define how scenario analysis will be used to inform investments.
- Assess and communicate achievability of the transition plan using scenario analysis.

Objectives

Introduction

This section establishes net zero objectives over a ten-year period, enabling net zero strategy and target performance assessment. It establishes climate objectives but not the means to achieve these (for this, see sections: 'Asset Level Assessment & Targets', 'Policy Advocacy', and 'Stakeholder & Market Engagement').[5] Together with 'Governance and Strategy' and 'Strategic Asset Allocation', it forms part of NZIF's lever of 'Setting internal direction and portfolio structure for alignment'.

Essential action points

NZIF recommends the following actions for investors using the framework and considers them essential:[5]

- Disclose baseline portfolio scope 1 and 2 financed emissions, with portfolio scope 3 emissions disclosed separately, and sovereign-related assets disclosed separately.
- Disclose the methodology used to calculate portfolio level objectives, including quality of underlying information used.
- Set medium term reference objectives to inform asset allocation and monitor progress, based on portfolio scope 1 and 2 emissions and disclosing its associated rationale:
  - Portfolio Decarbonisation Reference Objective: <10 year CO_2e emissions reduction objective[6].
  - Allocations to Climate Solutions Objective: <10 year objective for allocating capital to climate solutions[7].
- Define the influence of portfolio level objectives over investment decision-making and communicate to investment managers.
- Disclose a target to reduce operational scope 1 and scope 2 emissions in line with a suitable global net zero pathway[8].

Advanced action points

NZIF recommends the following advanced actions specific to 'Objectives'. These may initially be difficult when beginning to set net zero objectives (when attention is likely to be placed on implementing essential action points), but would ultimately prove beneficial over the long term:

- Assess and disclose the relative strengths and weaknesses of the methodology, metrics, and data used to set portfolio level objectives.
- Disclose - via a dashboard approach[9] - the AUM committed to be managed in line with net zero (portfolio scope 1 and 2 emissions, with portfolio scope 3 emissions disclosed separately).
- Disclose how targets represent fair share contributions towards global GHG emissions reduction efforts.
- Disclose performance against targets over time, and any updates or adjustments to objectives that are relevant, on at least an annual basis.
- Disclose factors behind changes in emissions performance via attribution analysis when possible.
- Develop a strategy to manage portfolio scope 3 emissions[10].
- Develop a policy to define the circumstances and frequency for recalculating baseline financed emissions to ensure the consistency, comparability, and relevance of the reported GHG emissions data over time.

- Disclose reasons for any assets uncommitted under portfolio level targets, including the process, progress, and timeline for inclusion.
- Assess and disclose financed emissions of uncommitted assets relative to those of committed assets.
- For Sovereign Bonds, incorporate consumption emissions into the design of the Portfolio Decarbonisation Reference Objective on a best effort basis.

Absolute emissions reductions metrics

NZIF recognises that to set objectives and evaluate progress, it is useful to employ a 'dashboard' range of metrics, each of which provides important insights. This includes the broad consideration of whether to use absolute- or intensity-based metrics and whether to use production or financial denominators.

Whilst some advocate for absolute metrics as the more direct way to measure performance, investor experience indicates that a sole focus on absolute emissions and linear reductions may inadvertently lead to:

- Capital flight from emerging and frontier economies,
- Aversion to financing climate solutions (e.g. clean energy),
- Restricting needed transition finance for high impact sectors.
- Ignore differing investor profiles, progress, and risk tolerances.

This could paradoxically undermine progress towards achieving Article 2.1a and 2.1c of the Paris Agreement. Consequently, a dashboard approach whereby a range of metrics are collectively used and considered is broadly recommended. It is also recognised that due to industry expectations (e.g. due to TCFD or PCAF), the headline figure will tend to be a financed emissions approach using a financial denominator (either WACI or EVIC); however, it is noted that these metrics themselves have limitations.

Reporting on portfolio (financed) emissions

Due to the above, investors may wish to add nuance to the way they report against their Portfolio Decarbonisation Reference Objective.

A global scale up of climate solutions, such as renewable energy and electric transportation, will lead to an increase in emissions within these sectors in the short term. Manufacturing and installation will be the largest source of lifetime emissions for many of these activities, particularly in emerging markets and developing countries.

Some forms of transition finance, though not yet well defined, may mean more carbon intensive assets are acquired or remain in portfolios in order to enable decarbonisation.

Due to the systemic long term decarbonisation effects of these solutions, Portfolio Decarbonisation Reference Objectives should not dissuade this type of investment. Investors are encouraged to increase investment in these areas in aligning financial flows with the Paris Agreement.

Investors may consider reporting total financed emissions on an ongoing basis, and provide complementary calculations excluding finance for solutions, transition and emerging markets (or ex-STEM).

This type of reporting will only be valuable to stakeholders if these categories are well defined and genuinely denote activities that contribute to achieving global decarbonisation.

It is not envisaged that these activities should exclude assets from the alignment criteria in the Portfolio Coverage Target, which is outlined below.

The PAII investor networks are continually working together and with broader stakeholders on the definitions of these categories, and appropriate methodologies in their calculation will be forthcoming in supplementary guidance.

Decarbonisation attribution analysis and re-baselining

Attribution

It is recommended that investors seek to understand which factors are driving the changes in financed emissions attached to their portfolios. This can be done through attribution analysis[11]. Performing attribution analysis can support investors in a number of ways:

- Increase investor understanding of portfolio decarbonisation to quantify real economy impact and recognise the achievement of climate goals.
- Inform net zero investment strategies and capital allocation decisions.
- Guide external engagements with underlying assets, external managers, and data vendors.
- Guide internal engagements with fund managers, board members and analysts.
- Inform policy advocacy that promotes real economy and sustainable finance policy measures supporting the net zero transition.
- Prevent greenwashing by ensuring credit is not taken for emissions reductions not attributable to investor actions.
- Enhance transparency and support public reporting with key stakeholders, including clients and trustees.

Re-baselining

The PCAF Standard requires a policy defining the circumstances that trigger a recalculation of base year financed emissions to improve consistency, comparability, and relevance of reported GHG emissions data over time, such that underlying progress can be assessed[12].

NZIF recommends that baselines reflect a portfolio's composition and any changes be attributed to allow equivalent comparison. Some reasons to re-baseline are:

- Substantial changes to data coverage, availability, or quality.
- Significant shifts in sectoral or industry exposure.
- New money or portfolio growth (for absolute targets), requiring attribution for targets.

NZIF recommends that a re-baselining policy be established, either dynamically, periodically, or on an ad hoc basis.

Portfolio Decarbonisation Reference Objective

This establishes a <10 year objective for decarbonisation efforts expressed in absolute (CO_2e) or emissions intensity (e.g. tCO_2e/$mn invested) terms. A five year stocktake is recommended to facilitate assessment of progress. NZIF endorses PCAF's financed emissions metrics as suitable standards for apportioning 'financed emissions' to Listed Corporate assets and Sovereign Bonds.

No minimum performance expectation for decarbonisation is provided as this depends on various factors (e.g. the methodology used for target setting, as well as asset mix and location). Inclusion of portfolio scope 1 and 2 emissions is considered necessary for comparison with a contextually relevant net zero pathway and consideration of fair share principles.

Key design decisions when making a Portfolio Decarbonisation Reference Objective are 1) to adopt a self-decarbonisation or benchmark relative approach, and 2) to adopt a cumulative emissions[13] or point-in-time reduction approach.

Portfolio Decarbonisation Reference Objective setting guidance is directed towards operational scope 3 category 15 emissions, despite recommending targets also be set on operational scope 1 and 2 emissions. This is because this is typically most material to their carbon footprint. However, those directly owning or managing assets may have elevated operational scope 1 and 2 emissions and so may find utility in setting a Portfolio Decarbonisation Reference Objective on these emissions.

NZIF considers that for corporate assets, its Portfolio Decarbonisation Reference Objective must include portfolio scope 1 and 2 emissions. It is recommended that portfolio scope 3 emissions be phased into net zero efforts at the portfolio level, as data availability, quality, and consistency allow. However, it is currently recommended that they be measured apart from portfolio scope 1 and 2 emissions and a separate strategy is created to manage these due to measurement, aggregation, and agency challenges (including double counting).

Sovereign Bonds should have their own baseline and decarbonisation objective as aggregation with other assets may over-reward changes in sovereign alignment versus other assets. It is expected that the baseline reports on production emissions (including and excluding land use, land use change, and forestry (LULUCF)) and then include consumption emissions on a best effort basis, if desired. It should also take into account fair share principles and use processes, such as normalisation weights, to ensure equitable treatment of annex and non-annex I countries[14]. Any process to account for fair share principles should be transparently disclosed.

Strategic asset allocation

Introduction

This section integrates net zero objectives into the asset allocation process alongside traditional risk/return objectives.

Together with 'Governance and Strategy' and 'Objectives and Targets', it forms part of NZIF's lever of 'Setting internal direction and portfolio structure for alignment'.

Some recommended actions will be irrelevant for asset managers not undertaking strategic asset allocation for clients; but relevance can still exist for those involved in similar activities (e.g., portfolio optimisation).

Judgement is necessary to ensure any optimal portfolio is not over-exposed to specific risk factors and is well-diversified across regions, technologies and sectors, and not over-exposed to policy reversals.

Essential action points

NZIF recommends the following actions for investors using the framework and considers them essential:

- Undertake scenario analysis to update capital market assumptions, asset-level risk/return expectations, and stress test portfolios.
- Supplement standard financial objectives with portfolio level net zero objectives.
- Update investment mandates and benchmarks to ensure that climate-related objectives are specified in sufficient detail and performance objectives are clearly defined.

Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult when beginning to update strategic asset allocation (when attention is likely to be placed on implementing essential action points), but would ultimately prove beneficial over the long term:

- Consider different asset classes and investments when constructing portfolios, such as primary issuances of corporate bonds and renewable energy infrastructure, given the role these have in driving real economy decarbonisation.
- Specify asset class variants using systematic approaches to increase climate solutions exposure and reduce carbon intensity (e.g., custom benchmarks, climate-tilted indices, climate-focused variants).
- Integrate net zero objectives into portfolio construction alongside standard indicators. Additional alignment objectives should ideally cover both decarbonisation and climate solutions.
- Review constraints to achieving alignment within the context of portfolio optimisation to understand if they are strictly necessary.

- Monitor achievement of alignment objectives, including portfolio carbon intensity and allocation to climate solutions.
- Supplement standard financial objectives with forward-looking non-financial metrics capturing some dimensions of alignment, such as:
  - Exposure to fossil fuel production or reserves.
  - Percentage of material corporates within portfolio with methane commitments[15].
  - Percentage of portfolio with net zero science-based targets.
  - Aggregate management indicators score.
  - Level of capex relating to relevant taxonomies.
  - Proportion of portfolio companies with clean energy commitments.
  - Percentage of material corporates within portfolio with deforestation related commitments.

Asset Level Assessment and Targets

Introduction

This aims to help investors shift the activities of the underlying holdings (assets) to be consistent with net zero goals and objectives. Due to specificities, guidance is unique for each asset class, although the overall target remains the same and aggregation across asset classes remains possible.

Essential action points

NZIF recommends the following actions for investors using the framework and considers them essential:

- Set the scope of assets within each asset class for alignment action.
- Regularly assess the current and forward-looking alignment of existing and prospective assets using the specified criteria relevant to each asset class.
- Define and disclose which sectors have been considered as high impact.
- Set short term targets (<5 years) and implement approaches to improve alignment of assets by asset class[16]:
    - Asset alignment target: a 5-year target for increasing the % of AUM (or financed emissions) in material sectors that are at least 'aligned to a net zero pathway'.
    - Engagement target: a minimum proportion of assets (based on % financed emissions are assessed as achieving or aligned to a net zero by 2050 pathway, or are subject to engagement.

Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult when beginning to set and implement net zero targets (when attention is likely to be placed on implementing essential action points), but would ultimately prove beneficial over the long term:

- Describe the science-based scenario(s) or pathway(s) used to guide target setting and assess the alignment of companies, including how these meet key parameters, and critical assumptions used[17].
- Disclose why any assets are uncommitted under asset level targets, including the process, progress, and timeline for inclusion.
- Assess and disclose alignment of uncommitted assets relative to those of committed assets.
- Describe metrics and targets methodologies used to assess and track alignment of assets according to each asset class, and the extent to which these are consistent with NZIF's target setting methodology.
- Describe portfolio construction approaches implemented and/or products developed to facilitate allocation to products that support net zero aligned investing.
- Describe engagement, stewardship and direct management actions undertaken, performance in relation to the engagement threshold, and key outcomes achieved.

- Disclose where divestment or exclusion has been used, the rationale, and the extent to which this has been the means to achieve targets.

Performance expectations

With the asset alignment target it is expected by 2040 that 100% of assets are, as a minimum, aligned to a net zero pathway. This expectation aims to enhance the probability that 100% of assets are achieving net zero by 2050 and thus consistent with investors transitioning their individual portfolios in a manner consistent with global net zero goals.

Within the engagement threshold target, it is expected that investors set an engagement threshold target which immediately ensures that at least 70% of scope 1, 2 and 3 financed emissions in material sectors are originating in assets that are either categorised as achieving net zero, aligned to a net zero pathway, or are subject of direct or collective engagement and stewardship actions. This threshold should increase to at least to at least 90% by 2030 at the latest.

However, these expectations are not requirements of NZIF itself, which is designed to serve those fulfilling commitments made under the Paris Aligned Asset Owners and Net Zero Asset Managers initiatives. However, investors are recommended to disclose their alignment against this glidepath, explaining the reasons for any divergence.

Investors utilise a range of approaches and face a number of constraints, some of which they do not have full agency to address. Consequently, singular performance expectations are not considered possible.

Selective divestment

NZIF does not recommend divestment from secondary markets for equity as a primary approach to drive alignment in individual portfolios. However, investors could consider divestment or exclusion based on their own strategies and client/beneficiary needs and:

- As a consequence of climate financial risk assessment.
- As a consequence of escalation following engagement.
- For companies whose primary activity is incompatible with a credible net zero pathway, with exclusions identified over relevant timeframes.

NZIF recommends investors develop a deforestation and energy investment policy to inform strategies and activities as associated transition risks may become more acute in the future as the likelihood of a disorderly transition increases.

Alignment assessment criteria

NZIF uses ten forward-looking criteria to assess assets, but only a subset to determine alignment. The subset alters across each asset class due to specificities and whether assets are in high or low impact sectors.

A subset is used as the approach is data intensive and availability/quality can be problematic (e.g., within emerging markets). High impact sectors require more criteria as they underpin economies via their inputs, and thus are vital to wider decarbonisation efforts. Low impact sectors use fewer criteria to reduce the data dependency of the alignment process and because they are expected to decarbonise as inputs into economies decarbonise, such as energy.

NZIF flexibly endorses that investors to choose both the precise indicators and the data source to assess them by, however the assessment must cover scope 1, 2 and material scope 3 emissions. Information on these indicators should be found within corporate transition plans and should be chosen until decisions on the alignment of an asset can be adequately made. Investors should disclose, as appropriate, the indicators used to determine the fulfilment of alignment criteria.

Criteria underpinning NZIF asset alignment

The ten forward-looking criteria used by NZIF to assess assets are set out below. These are specified in more detail under each asset class to ensure they are contextually specific.

- Ambition
- Targets
- Emissions performance
- Disclosure
- Decarbonisation plan
- Capital allocation alignment
- Climate policy engagement,
- Climate governance
- Just transition
- Climate risk and accounts

The criteria laid out above provide a high level framework for the alignment assessment of companies, and their net zero transition plans. Indicators for each criterion are purposefully unspecified to allow investors the flexibility to determine what indicators suit their circumstances. However, investors should disclose the indicators they use due to the lack of standardisation this creates.

Alignment categories

The asset alignment framework is consistently applied across all approaches to realising targets (selection, management, and engagement).

- 'Achieving net zero': Typically, where assets meet all relevant criteria and have an emissions performance at net zero which can be expected to continue.
- 'Aligned to a net zero pathway': Typically, when current absolute or emissions intensity is at least equal to a relevant net zero pathway. This category broadly signifies that transition risk is being managed at an asset level; even under a 'disorderly' transition, GHG performance would tend to be favourable with revised national goals.
- 'Aligning to a net zero pathway': Typically refers to assets with emissions performance not equal to a contextually relevant net zero pathway. However, they have science-based targets, and are publicly disclosing their emissions performance.
- 'Committed to aligning': Refers to assets with a long term 2050 decarbonisation goal consistent with achieving global net zero.
- 'Not aligning': Refers to assets without a commitment to decarbonise in a manner consistent with achieving global net zero.

Material sectors

NZIF considers sectors covered by NACE codes A-H and J-L as material and should be covered at a minimum by net zero objectives and targets:

A. Agriculture, forestry and fishing

B. Mining and quarrying

C. Manufacturing

D. Electricity, gas, steam and air conditioning supply

E. Water supply; sewerage; waste management and remediation activities,

F. Construction

G. Wholesale and retail trade; repair of motor vehicles and motorcycles,

H. Transporting and storage

I. Information and communication

J. Financial and insurance activities

K. Real estate activities

High impact sectors

Within 'Asset Level Assessment and Targets', economic sectors are deemed high or low impact based on GHG emissions in their value chain. Transition of high impact sectors are critical to achieving net zero; and are those linked to the company focus lists of Climate Action 100+ and TPI, plus banks, real estate, agriculture, forestry, and fishing. Currently these sectors equate to:

- Agriculture, forestry, and fishing
- Airlines
- Aluminium
- Automobiles[18]
- Banking[19]
- Cement
- Chemicals[20]
- Coal mining
- Consumer goods & services
- Diversified mining[21]
- Electric utilities
- Food producers
- Industrials
- Oil and gas (plus distribution)[22]
- Paper
- Real estate[23]
- Shipping
- Steel[24]
- Transportation

Corporates in high impact sectors must satisfy more criteria to be classified as 'aligned to a net zero pathway' (decarbonisation plan and capital allocation alignment), as exposure to transition risk will be especially prevalent in these sectors.

Listed Equity & Corporate Fixed Income

Alignment target

- Asset alignment target: A 5-year target for increasing the % of AUM (or financed emissions) in material sectors that are at least 'aligned to a net zero pathway'.
- Engagement target: A minimum proportion of financed emissions are assessed as achieving or aligned to a net zero by 2050 pathway, or are subject to engagement.

Scope

- At a minimum it is recommended that material companies are those covered by sectors in NACE code categories: A-H and J-L.

Criteria underpinning alignment assessment

Criteria	Committed to aligning	Aligning to a net zero by 2050 pathway	Aligned to a net zero by 2050 pathway	Achieving net zero
Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance.				✔
* Emissions performance: Current absolute or emissions intensity is at least equal to a relevant net zero pathway.			✔	✔
Capital allocation alignment: A clear demonstration that capital expenditures are consistent with achieving net zero by 2050.			✔	✔
Decarbonisation plan: A quantified set of measures exists to achieve short and medium term science-based targets by reducing GHGs and increasing green revenues, when relevant.		✔	✔	✔
* Disclosure: Disclosure of operational scope 1, 2 and material scope 3 emissions.		✔	✔	✔
* Targets: Short and medium term science-based targets to reduce GHG emissions.		✔	✔	✔
Ambition: A long term 2050 goal consistent with achieving global net zero.	✔	✔	✔	✔
* Alignment criteria that a lower impact company needs to meet	Additional alignment criteria to be met to progress to that alignment category			

Data sources that investors may especially wish to consider, and which are publicly available for this asset class, are:

- The Climate Action 100+ Net Zero Company Benchmark and associated net zero standards.
- Transition Pathway Initiative Carbon Performance and Management Quality indicators.
- Science Based Targets Initiative (for assessing criteria: science-based targets, emissions performance, and disclosure).
- Carbon Tracker (for assessing capital allocation alignment).

Investors using private data vendors should disclose the provider and product when appropriate.[25] To represent best practice, data vendors providing assessments consistent with the alignment criteria should ensure and disclose their consistency with the latest detailed guidance on indicators from the Climate Action 100+ Net Zero Company Benchmark[26].

We anticipate continued evolution of indicators under each criterion, including subsequent enhanced guidance notes on indicators.

Company emissions reporting for Derivates and Hedge Funds

Neither derivatives nor hedge fund holdings constitute an asset class. Derivatives are financial instruments that offer indirect exposure to an underlying asset class, a portion of the market, or a specific security. Hedge funds are vehicles that offer a variety of investment strategies across different asset classes.

Though indirect exposure to assets through derivatives may not directly contribute to greenhouse gas emissions, it is tied to underlying assets, such as stocks or bonds, which do have associated emissions. Investors are encouraged to report separately[27]:

- Financed emissions – Attributed emissions from companies where the investor owns securities directly and can influence, whether purchased through secondary or primary markets.
- Long associated emissions – Associated emissions from companies where long exposure is gained via prime brokers or derivatives.
- Short associated emissions – Associated emissions from companies where short exposure is gained via prime brokers or derivatives.

Notably, long and short emissions should not be aggregated/netted, for financed emissions nor associated emissions.

Asset managers and hedge fund managers can choose to additionally report the aggregate of the direct and indirect long exposures, but they should ensure they also report them separately.

Climate solutions

Investors looking to increase allocation to climate solutions in listed equity and corporate fixed income may consider adopting a four-step approach to classifying and calculating allocation to climate solutions for Listed Equity and Corporate Fixed Income, and utilise the disclosure template shown in Figure 1. For more guidance on how to identify, classify and measure allocation to climate solutions, please see IIGCC’s guidance here.

Classification and measurement

- Step 1 - Solutions classification: Identify and classify activities, products and services that contribute to emissions reductions using net zero scenarios and/or local taxonomies.
- Step 2 - Contribution type: Assess the type of contribution those activities make to decarbonisation (transition of own performance and/or enabling).
- Step 3 - Corporate indicators: Assess contribution of a corporate using revenue and capex data.
- Step 4 - Portfolio/fund metrics: Aggregate corporate green activity up to portfolio or fund level, using "green ratio" or "financed green" metric.

Figure 1. Green revenues and green capex disclosure template

Metric	Classification	Activity type	Recommendation
Green revenue ratio ($m and/or %)	TSC-aligned	Transition of own performance	Recommended minimum disclosure if setting climate solutions targets under NZIF, in line with EU Taxonomy Regulation. Disaggregation of metrics by activity type is optional.
	Taxonomy-aligned		
	Taxonomy-equivalent	Enabling	
	Taxonomy-plus		
Financed green revenues ($m/ $m invested)	Taxonomy-eligible	Transition of own performance	Recommended minimum disclosure if setting climate solutions targets under NZIF. Disaggregation of metrics by activity type Is optional.
	Taxonomy-aligned		
	Taxonomy-equivalent	Enabling	
	Taxonomy-plus		
Data coverage % of AUM where revenue data is unavailable **% of AUM with no revenues from climate solutions**	N/A	N/A	Minimum required if setting climate solutions targets under NZIF.
Green capex ratio ($m and/or %)	Taxonomy-eligible	Transition of own performance	Recommended disclosure, as data availability improves, in line with EU Taxonomy Regulation. Disaggregation of metrics by activity type Is optional.
	Taxonomy-aligned		
	Taxonomy-equivalent	Enabling	
	Taxonomy-plus		
Financed green capex ($m/ $ invested)	Taxonomy-eligible	Transition of own performance	Recommended disclosure, as data availability improves. Disaggregation of metrics by activity type Is optional.
	Taxonomy-aligned		
	Taxonomy-equivalent	Enabling	
	Taxonomy-plus		

Source: IIGCC's Climate Solutions Guidance.

Investors can use a dashboard of climate solutions classifications and metrics to measure and communicate allocation to climate solutions and inform corporate transition plan analysis, stewardship and engagement, as well as policy advocacy and industry engagement.

Reporting and disclosures

To support clear and transparent disclosures and protect the integrity of climate solutions classifications, two core disclosure principles for investors using this guidance can be used:

- Transparency: Disclose assumptions and methodologies in a clear, fair and non-misleading manner when using a taxonomy-plus approach.
- Standardisation: Use a disclosure template to enhance standardisation of green revenue and green capex disclosures across the industry.

Approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment targets. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within.

Asset selection / portfolio construction

- Active. Screening and/or weighting new investments within a sector based on alignment criteria and climate solutions metrics.
- Invest in specialist products/funds (alignment/use of proceeds/climate solutions focused), that are consistent with regulatory labels when available.
- Passive and index investing. Apply benchmark with positive weightings for alignment criteria and climate solutions revenue.

Asset engagement

NZIF does not provide a definition for 'engagement'. This is for clients and their investment managers to discuss and perhaps formalise (e.g. via investment management agreements, investment policy statements, and fund prospectus material). However, NZIF does recommend the following actions for investors in relation to engagement:

- Set and publish an engagement strategy (including definitions, prioritisation process, clear milestones and an escalation process) which links to investment, weighting, and divestment decisions[28].
- Publish a NZIF-aligned voting policy and communicate this to relevant stakeholders[29].
- Publish voting actions and records (including rationale for policy deviation).
- Engage with companies, including on a value chain basis, to improve performance against alignment criteria and climate solutions activities (including announcing and explaining broad voting intentions).
- Join and actively participate in engagement initiatives, such as Climate Action 100+ and the Net Zero Engagement Initiative.
- Disclose to clients how assets have been managed in alignment with clients' stewardship and investment policies[30].
- Assess engagement and stewardship capacity of external funds and investment managers to ensure achievement of net zero objectives, strategy, and targets are not materially affected.

Engagement actions for listed corporate assets

Listed Equity

- Utilise routine votes, shareholder resolutions and other means when the corporate is insufficiently progressing towards 'aligned' status.
- Co-file and/or support shareholder resolutions in line with the criteria.
- Implement an escalation approach, including a time-bound escalation strategy.
- Consider alignment criteria when voting on M&A, including whether the post M&A company meets or can be expected to meet the criteria within a reasonable period.
- Ensure voting rights exist, including with external investment managers, to undertake the above actions.

Corporate Fixed Income[31]

- Engage issuers to secure agreement to alignment criteria and climate solutions activities including the potential use of covenants and verified labelled bonds (e.g. GSSS+ issuances) as mechanisms to ensure alignment criteria are met during the lifetime of the bond.
- Commence engagement well in advance of the issuance process itself and continue engagement across the financing lifecycle.
- Set clear expectations of companies in relation to alignment criteria and climate solutions activities that should be demonstrated to secure financing.
- Assess how issuances are aligned with the net zero objectives and targets of the issuer.

Sovereign Bonds

Alignment targets

- Asset alignment target: Set a 5-year target for increasing the % of sovereign bonds allocation to issuers that are categorised as 'aligned', or 'achieving' net zero.
- Engagement threshold target: Set a threshold of financed emissions from sovereign bonds in a portfolio and undertake engagement actions with the relevant countries and territories.

Scope

- Include sovereign bonds of all maturities issued in domestic or foreign currencies.
- All sovereign issuance from national governments is considered in scope. Holdings required for liability matching or regulatory purposes are subject to the same targets. However, inevitable restrictions are likely to exist that will affect the practical extent associated assets can be aligned and such situations should be disclosed.
- Sub-sovereigns, municipal or state authorities and supra-nationals that issue bonds are not explicitly covered, although investors may apply similar concepts on a best effort basis. As data availability improves, these will be considered in future workstreams.
- Where the issuer is a publicly (majority) owned company (i.e., state-owned enterprises), investors should follow the guidance for corporate fixed income and include it in targets associated with this asset class.
- It is recognised that several barriers inhibit the alignment of sovereign assets in the short term. Immediate efforts may focus on providing the foundation for implementation efforts, such as carbon accounting using the relevant PCAF standard.

Criteria underpinning alignment assessment

Criteria	Committed to aligning	Aligning to a net zero by 2050 pathway	Aligned to a net zero by 2050 pathway	Achieving net zero
Capital / budget allocation alignment: A clear demonstration that the investments of the country are consistent with achieving net zero emissions by 2050. Climate budget tagging. An ambitious share of the budget is green.				✔
Emissions performance: Current absolute GHG emissions trend is at least equal to a relevant net zero pathway, or converging in a manner that is satisfactory.			✔	✔
Decarbonisation plan: A robust quantified plan setting out the measures that will be deployed to deliver GHG targets (LT-LEDs).		✔	✔	✔
Disclosure: Comprehensive and timely disclosure of emissions eg data quality, historical data, LULUCF, etc.		✔	✔	✔
Targets: Short and medium term emissions reduction targets aligned with net zero. These are set at the production emissions level (scope 1) and should be consistent with the Paris Agreement. (NDCs).		✔	✔	✔
Ambition: A long term 2050 goal consistent with achieving global net zero, as well as interim goals and targets that are coherent with it. (NDCs absolute emissions targets).	✔	✔	✔	✔
	Additional alignment criteria to be met to progress to that alignment category			

Further guidance may qualify these criteria for some countries, based on principles of fair share and common but differentiated responsibilities and respective capabilities.

The criteria laid out above provide a high level framework for the alignment assessment of sovereigns, and their net zero transition plans. Methodologies used to assess the alignment of assets should include the above features.

The recommended existing data sources which are publicly available and can be used in the assessment of this asset class are: ASCOR, CAT, and CCPI.

However, whilst these are recommended sources, investors are free to choose the source of data that they wish to use and are not expected to use all to form an assessment. Additionally, it is not guaranteed that these sources of information allow an investor to make a comprehensive judgement on alignment.

Approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment targets. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within.

Portfolio construction

- Tilt portfolios towards higher performing issuers based on the alignment criteria.
- Explore allocations to climate solutions, such as verified labelled bonds, when possible, taking measures to assess their credibility.
- For indexed-based strategies, utilise a benchmark incorporating tightening alignment criteria requirements to inform portfolio weights that improve portfolio alignment over time.

While these actions are theoretically available to support alignment efforts, the limited issuer universe creates limits to the extent to which they can be practically used without exacerbating material risk factors (e.g. concentration risk).

Asset engagement

- Active engagement with highest impact sovereigns or largest exposures, based on % financed emissions, that do not perform well against the criteria.
- Participate in engagement efforts, both directly with governments or indirectly through investor network initiatives.
- Engage with issuers, investment banks and development agencies to increase issuance of labelled bonds, including SLBs with Paris-aligned KPIs.
- Commence engagement well in advance of the issuance process itself and seek opportunities to shape bond characteristics, such as KPIs for SLBs, in a manner that enhances climate ambition.

Stewardship

Broader stewardship is likely required for this asset class as currently several impediments to alignment exist. Some examples of stewardship topics are listed below:

- Advocate for data providers to develop and continuously improve indicators to assess criteria set out by the asset alignment target methodology.
- Advocate for the enhancement and standardisation of pathway tools to incorporate and make explicit the assessment of fair share principles within national level assessments.
- Advocate for the enhancement and standardisation of national disclosures based on the alignment criteria set out.
- Advocate for the improvement of land use, land use change, and forestry (LULUCF) and methane emissions reporting.
- Advocate for the improvement of consumption emissions disclosures.
- Advocate for the increased issuance of labelled bonds.

Real Estate

Alignment targets

- Alignment target: Set a 5-year asset alignment target for increasing the % of AUM that are categorised as 'achieving', or 'aligned' to a net zero pathway.
- Engagement target: A minimum proportion of financed emissions are assessed as achieving or aligned to a net zero by 2050 pathway, or are subject to engagement.

Scope

- Include individual direct investments, investments in assets pooled through a fund structure, investments in listed real estate companies, and real estate debt.
- Include all types of real estate: retail, office, industrial, residential, hotel, lodging, leisure & recreation, education, and technology/science.
- Include existing real estate assets and those in development.

Criteria underpinning alignment assessment

Criteria	Committed to aligning	Aligning to a net zero by 2050 pathway	Aligned to a net zero by 2050 pathway	Achieving net zero
Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance.				✔
Emissions performance: Current absolute or emissions intensity is at least equal to a relevant net zero pathway.			✔	✔
Decarbonisation plan: Development and implementation of a quantified plan setting out a decarbonisation strategy for scope 1, 2, and material scope 3 emissions.		✔	✔	✔
Governance: Governance/ management responsibility for targets and/or decarbonisation plan.		✔	✔	✔
Disclosure: Disclosure of scope 1 and 2 emissions, and disclosure of material scope 3, in line with regulatory requirements where applicable or the PCAF standard.		✔	✔	✔
Targets: Short and medium term targets for scope 1, 2 and material scope 3 emissions in line with science based 'net zero' pathway. These may be absolute, or intensity based: a) where available, a sectoral decarbonisation / carbon budget approach should be used; b) minimum for other assets is a global or regional average pathway.		✔	✔	✔
Ambition: Long term goal for the asset to be net zero emissions by 2050 or sooner.	✔	✔	✔	✔
LISTED REITs (Real Estate Investment Trust) only – Capital allocation alignment should be used instead of Governance.: Capital allocation alignment – A clear demonstration that the capital expenditure of the REIT is consistent with achieving net zero emissions by 2050.	Additional alignment criteria to be met to move to that alignment category			

Over time assets may move between 'aligned' and 'aligning' on the maturity scale, depending on an asset's decarbonisation plan (for example, undertaking renovation at future lease expiry).

Additional notes on alignment

Carbon reduction pathways should include scope 1, 2 and relevant scope 3 emissions. When assessing the alignment of assets, investors should consider:

- Current and forward-looking alignment based on carbon emissions and energy intensity in line with net zero pathways.
- For projections of future alignment, investors should account on a best-case basis:
  - Assumptions about the energy mix and demand in different buildings and locations.
  - Potential for, and plans relating to, retrofit and other investments to address emissions and energy use.
  - Fugitive emissions (f-gases) and transmission losses associated with the relevant energy system.

Investors may consider setting targets for and disclosing embodied carbon emissions of new construction and major retrofits and include this in their decarbonisation plan. Embodied carbon emissions performance against a net zero pathway should be accounted for when methodologies become available[32].

Methodologies used to assess the alignment of assets should include the above features. Currently, the recommended methodology for the assessment of this asset class is:

- The Carbon Risk Real Estate Monitor (CRREM).

In regions where CRREM is less established or reliable, investors could look to equivalent tools, though should disclose when this has occurred, what tool has been used, and explain how it is suitable.

Approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment targets. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an investor operates within.

Portfolio construction

- Collect necessary data to assess a portfolio using the relevant decarbonisation pathway, e.g. CRREM tool or equivalent standard, using estimations and approximations for missing data.
- Screen new investments using the CRREM model or equivalent standard to assess alignment and incorporate into decision-making in order to achieve targets over time.

Management

- Develop a clear timebound management and investment strategy supported with strong ESG policies and carbon reduction commitments that, over time, achieves a portfolio consistent with CRREM pathways, or equivalent standard.
- Translate strategies and plans adopted and implemented by all relevant stakeholders into agreements with relevant parties involved in the management of real estate assets.
- Align direct investments (and own buildings) via investment/management plans to improve energy efficiency and increase renewable energy use.

Engagement and stewardship

- Prioritise engagement based on stranding risk and exposure.
- For listed real estate companies, follow the Listed Equity and Corporate Fixed Income engagement guidance[33].
- For directly held assets, engage with tenants, prioritising engagement based on the level of alignment and size of exposure to assets, in order to:
  - Improve the data collection process for energy use by encouraging or even requiring tenants to share energy use data with building owners.
  - Facilitate actions and investments that reduce energy costs for tenants and owners and reduce emissions in line with net zero pathways.
  - Address any split incentive between building owners and tenants and allow the costs of retrofits to be shared through building service charges.
  - Encourage corporate tenants to adopt corporate emissions reduction targets consistent with net zero.
  - Strengthen the role of green leases.
  - Strengthen cooperative policy engagement to improve the policy framework around investments in building retrofits.
  - Report and disclose on GRESB tenant engagement indicators related to climate and energy use, with the objective of achieving a positive scoring.

Infrastructure

Alignment target

- Alignment target: Set a 5-year asset alignment target for increasing the % of AUM that are categorised as 'achieving', or 'aligned' to a net zero pathway.
- Engagement target: A minimum proportion of financed emissions are assessed as 'achieving' or 'aligned' to a net zero by 2050 pathway, or are subject to engagement.

NZIF recommends that for new assets where the general practitioner has significant influence, 100% of operational assets to be classified as 'aligned' or 'net zero' by 2030, or, for acquisitions after 2025, within 5 years of investment. Additionally, for fund of funds, the asset owner or asset managers should aim, by 2030 at the latest, to only invest with firms or fund managers who themselves are setting portfolio coverage targets.

Given the scale and impact of energy intensive infrastructure assets, it is additionally recommended that, for infrastructure investments, 100% of carbon-based energy and transport assets are the subject of collective or direct engagement.

Scope

- Infrastructure as an asset class should be broadly defined to incorporate equity and debt exposure held through direct or co-investments, listed and unlisted infrastructure funds, project finance or passive investments. It typically includes greenfield and brownfield investments in economic and social infrastructure.
- Potential crossover with other asset classes is high, which is why investors will need to assess which guidance methodology is most appropriate to their individual circumstances..

Criteria underpinning alignment assessment

Criteria	Committed to aligning	Aligning to a net zero by 2050 pathway	Aligned to a net zero by 2050 pathway	Achieving net zero
Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance.				✔
Emissions performance: Current and forecast emissions performance (scope 1, 2 and material scope 3) relative to target or net zero benchmark/pathway, or an asset's science-based target. An aligned asset would need to see emissions decline consistent with targets set to converge an asset with a net zero pathway.			✔	✔
Decarbonisation plan: Development and implementation of a quantified plan setting out a decarbonisation strategy for scope 1, 2, and material scope 3.			✔	✔
Governance: Governance/ management responsibility for targets and decarbonisation plan.		✔	✔	✔
Disclosure: Disclosure of scope 1 and 2 emissions, and disclosure of material scope 3, in line with regulatory requirements where applicable or the PCAF standard.		✔	✔	✔
Targets: Short and medium term targets for scope 1, 2 and material scope 3 emissions in line with science based 'net zero' pathway. These may be absolute, or intensity based: a) where available, a sectoral decarbonisation / carbon budget approach should be used; b) minimum for other assets is a global or regional average pathway.		✔	✔	✔
Ambition: Long term goal for the asset to be net zero emissions by 2050 or sooner.	✔	✔	✔	✔
	Additional alignment criteria to be met to move to that alignment category			

Greenfield assets

For greenfield assets, the highest status that can be achieved is 'aligning'. For this, operational criteria for ambition, targets, decarbonisation plan, and climate governance must all be met along with the following:

- The asset will be, or is being, constructed in a way that is designed to deliver an asset that can be aligned to a net zero pathway, including consideration of whole lifecycle emissions to minimise embodied emissions and avoid carbon lock-in[34].
- There is a decarbonisation or management strategy to minimise emissions in the construction phase.

In transitioning from greenfield to operational status, an investor needs to ensure scope 1, 2 and 3 emissions data are compiled and disclosed, as well as a target set to maintain aligning status. The most advanced status a greenfield site can reach is aligning. As an asset becomes operational, beyond meeting the required criteria for a greenfield asset to be aligning, an investor would need to ensure that scope 1, 2 and 3 emissions data are compiled and disclosed as well as a target set.

Although this is a distinct requirement, the first criteria for greenfield assets to be aligning requires a plan for the lifecycle of the asset to be consistent with net zero. Providing the asset follows the expected trajectory for emissions in the plan, the correct disclosures and establishment of a target should be consistent with aligning status being maintained in operation.

For both operational and greenfield assets, achieving emissions disclosure (and several other indicators) may take a significant period. Investors will need to use the best available data or estimates to address gaps and engage with companies, users, regulators as relevant to improve disclosure. It will be possible, over time, to credibly benchmark embedded emissions related to steel and concrete with a 1.5° scenario. It will be important for infrastructure investors to incorporate this into their assessment of the value chain.

Investors are expected to work towards their assets achieving these indicators as soon as possible. However, it is expected that assets will achieve these indicators progressively and targets relating to alignment can be set to take account of the timeframes it may take to achieve these.

Third party verification of an asset's disclosures associated with the criteria is recommended and should be annual if possible.

Brownfield assets

The approaches below can be used to achieve asset alignment target. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within:

Portfolio construction

- Negative screening:
  - Assess emissions intensity of the asset including scope 3 and facilitated emissions, and potential for the asset to align with net zero pathway. For greenfield assets, this assessment should consider full lifecycle emissions; where assets cannot be aligned, new investment should not be considered.

    - For debt investments, given more limited ability to influence during the holding period, the screening test should be higher, including whether the asset has an alignment target / strategy, or the investor has a reasonable expectation that they can engage the issuer to achieve this.
    - Undertake climate risk assessment and, to the extent possible, assess marginal abatement cost curves, and forecast internal rate of return (IRR) in a net zero scenario and only invest in assets where forecast IRR hurdles can be achievable in these net zero scenarios.
- Positive screening: Investors should seek to increase exposure in assets that are climate solutions.
- Conduct a Do No Significant Harm assessment: Where opportunities with credible strategies and/or pathways to address harm can be identified and implemented, investment is not precluded.

Management

- Define a net zero investment strategy and set portfolio/fund level targets and objectives.
- Assess and disclose current and ongoing scope 1, 2 and 3 emissions, net zero strategy and progress towards delivering against targets.
- For open ended funds, it is expected that emissions performance will be reported on an intensity basis. Where investors are setting portfolio level reference targets, a rebaselining policy for emissions intensity should take account of significant changes to fund exposure.
- For closed ended funds, where the end of fund date is sooner than the recommended target dates (2030, 2040), an appropriate shorter term end target should be set.

Engagement

- Investors should include infrastructure assets within the scope of the portfolio engagement goal; 100% of carbon-based energy and transport infrastructure.
- Assets should immediately be the subject of collective or direct engagement, or management interventions.
- Direct engagement to establish timebound KPIs for emissions measurement and disclosure, target setting, development, and implementation of strategies, possibly including support through training and knowledge sharing.
- Ensure governance and management responsibilities for climate change are defined for each asset/operator, including establishing remuneration linkage.
- Undertake collaborative stewardship and engagement with escalation strategy, based on achievement of alignment indicators.
- For debt holdings, use change/waiver processes to introduce relevant ESG requirements.
- Monitoring and reporting on carbon performance and achievement of milestones and actions defined in company strategies.
- Engagement of employees, suppliers, regulators and community to ensure a just and effective transition process.
- Engagement with suppliers and greenfield developers to advocate for reducing emissions from purchased materials and assets' embodied emissions.

Private Equity

Alignment target

- A % of invested/committed capital or financed emissions to be managed in alignment with net zero by 2030 and an increased % by 2040; achieve 100% net zero by 2050. GPs can also set this target for each fund.
- Complete the specified engagement actions for all (100%) applicable private equity investments.

Scope

- Establish the proportion of invested or committed capital to be managed in alignment with net zero ahead of each new fund launch, according to each individual's circumstance and fiduciary obligations.
- If in the best interest of the organization in accordance with fiduciary obligations, seek consent to manage legacy funds in alignment with net zero and disclose omitted legacy funds from net zero goals.
- Disclose any recent acquisitions excluded from progress reporting.
- Disclose alignment of portfolio companies (PCs) if they are included in milestone reporting but exit occurred before reporting period.

Managed in alignment with net zero

In addition to NZIF's typical system for asset alignment, a concept called "managed in alignment with net zero" is used to address the asymmetric information relationship between GPs and LPs with respective to underlying PCs.

PCs must progressively achieve each alignment category within a time limit. For new funds raised after committing to net zero, a GP must establish and disclose a target percentage of invested capital that will be managed in alignment with net zero.

Timelines and measurement of actions are based on a fund's cycle, reflecting that an investor's influence exists when the company is within their portfolio.

When investments span multiple influence bands the weighted average of invested capital based on the anticipated distribution should inform target setting.

Alignment target

Criteria	Committed to aligning	Aligning to a net zero by 2050 pathway	Aligned to a net zero by 2050 pathway	Achieving net zero
Asset with emissions intensity required by the sector and regional pathway for 2050 and whose operational model will maintain this performance.				✔
Emissions performance: Cumulative YoY reduction meets or exceeds the linear annual reduction established as the target for scope 1, 2, and material scope 3* emissions.			✔	✔
Climate strategy: A proportionate plan is established that sets out the measures to deliver the target. For high impact sectors, the strategy should be quantified and include CAPEX and OPEX required to achieve targets.			✔	✔
Disclosure: Annual disclosure to investors of scope 1, 2, and material scope 3* absolute GHG emissions. Public disclosure is best practice but not an expectation.		✔	✔	✔
Targets: 5– to 10-year Paris-aligned GHG emissions reduction target (scope 1, 2, and material scope 3*)		✔	✔	✔
Governance: Board oversight for climate risk and execution of climate strategy. Climate risk management and strategy are discussed by the Board at least once a year.	✔	✔	✔	✔
Ambition: Long term goal for the company to be net zero emissions by 2050 or sooner.	✔	✔	✔	✔

<table>
<tr><td rowspan="3">PCs meeting the portfolio alignment criteria listed above, within milestones established to the right, are considered “managed in alignment with net zero” and the capital invested in them will count towards coverage targets established by GPs.</td><td colspan="5">Fund vintage</td></tr>
<tr><td>Funds launched 2023–2029</td><td>1 year after deal close</td><td>2 years after deal close</td><td>By exit</td><td>Not required</td></tr>
<tr><td>Funds launched 2030–2050</td><td>1 year after deal close</td><td>2 years after deal close</td><td>4 years after deal close</td><td>No later than 2050</td></tr>
</table>

GPs and LPs have differing influence when encouraging PCs to decarbonise. Influence bands, each with objectives, account for these dynamics. They are ambitious yet reflective of practical conditions for each investment type. These affect the asset-level targets.

Each influence band has associated:

- Expectations for achieving alignment.
- Influence levels on portfolio coverage targets to be set.
- Engagement actions designed around the influence levers available.

Direct bands apply to investments made directly into a PC and are specific to board voting seat rights.

Indirect bands apply to investments where a GP exists between the investor and the PC. Different bands reflect relative investment size and if they have been made after fund closure.

Asset classes	Band	Criteria	Influence Level
DIRECT ■ GP buyout fund ■ GP growth fund ■ GP continuation fund	1a	> 50% of board voting seat appointments (usually the majority shareholder)	Strong (with PCs)
	1b	≤ 50% of board voting seat appointments (usually a significant minority shareholder)	Moderate (with PCs)
	1c	No board votes	Limited (with PCs)
INDIRECT ■ LP investments in buyout, growth or continuation funds ■ LP co-investment ■ GP fund of funds ■ LP-led secondaries	2a	Big ticket investors* and/or first close investors	Strong (with GPs)
	2b	Investment made during fundraise not included in 2a; co-investment	Moderate (with GPs)
	2c	Investment made through secondaries market	Limited (with GPs)

Asset engagement (for GPs)

Most GPs pursuing net zero may want to consider focusing their efforts on motivating and supporting PCs on net zero actions. GPs are strongly encouraged to proactively engage directly with their portfolio companies.

If the GP has >50% of Board votes, then the following engagement actions are recommended:

- Engagement directly with PCs is expected in pursuing alignment targets or portfolio reference targets but is not covered under the Private Equity Engagement Threshold Target.

If the GP has ≤50% of board votes, then the following engagement actions are recommended:

- Inform other board members of relevant firm-level net zero commitments.
- Request that climate risks and opportunities be a regular agenda item for board meetings.
- Request that the PC be managed in alignment with NZ and that as a first step, management is asked to develop a net zero proposal that should be presented to the board of directors for a formal vote. The proposal should include:
    - Importance of net zero and business benefits for the company.
    - Action plan for implementation
    - Estimates of cost and impact associated with the plan.
- If, prior to investment, the target company is in a high emitting industry and co-owners are not in agreement to manage the company in alignment with net zero, the investment's potential misalignment with the net zero commitment should be explicitly raised at the investment committee.

If the GP has no board votes, then the following engagement actions are recommended:

- Communicate with the largest co-owners/shareholders to share firm-level net zero commitments and express desire to have the portfolio company managed in alignment with net zero.
- If, prior to investment, the target company is in a high emitting industry and co-owners are not in agreement to manage the company in alignment with net zero, the investment's potential misalignment with the net zero commitment should be explicitly raised at the investment committee.

LP approaches to achieve asset level targets

The approaches below can be used to achieve asset alignment target. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within:

Manager and fund selection (for LPs)

- Seek to ramp up investment in funds managed in alignment with net zero as quickly as possible, to keep pace with the reductions that climate science states are necessary.
- Balance the need for fast action with an understanding that increased adoption of net zero practices across the private equity industry will be necessary to provide adequate investment options to LPs.
- Consider how existing GPs can be influenced to take up net zero commitments.
- Anticipate differences in GP net zero uptake across relevant and specific markets and/or geographies in which investments are held; and
- Consider fund duration - if all investments need to be net zero by 2050, commitments made to a 12-year fund in 2038 should plan to be 100% managed in alignment with net zero.

Manager engagement (for LPs)

Engaging GPs to adopt net zero practices is needed for LPs to meet their Portfolio Coverage Target. For in depth engagement guidance, please see [PAII Net Zero Investment Framework Component for the Private Equity Industry].

In summary, regardless of the investment approach, LPs can:

- Send a letter to senior leaders of relevant GPs to share firm-level commitments to net zero, any subsequent expectations of GPs, and how consideration of net zero could impact investment decisions going forward.
- Request that the GP make their own net zero commitment and have Limited Partnership Agreements stipulate a commitment to net zero.

Other recommended engagement actions are determined by various factors. When an investment is made before the end of fund raising, LPs can:

- Engage senior leaders of the GP to request the fund include a commitment to net zero within the Limited Partnership Agreement. If that is rejected, it is recommended to propose a side letter that stipulates a commitment by the GP to manage a portion of the invested capital in line with net zero.

If LP has an LPAC seat, it can at this moment:

- Request that climate-related performance is integrated into LPAC reporting for the fund.
- If the GP is not meeting its net zero targets, request net zero performance as an LPAC agenda item.

If LP does not have an LPAC seat, it can at this moment:

- Engage with other LPs to discuss and seek to collectively push for net zero commitments at the GP level and/or when attending a GP's annual investor day, raise net zero as a concern and share any expectations that the GP will commit future funds.
- If the GP is not meeting its net zero targets, hold a meeting with ESG lead and relevant senior leader(s) at the GP to raise concerns and seek assurances that the situation will be rectified.

When investment is made through secondary markets, LPs can:

- Engage with senior leaders of the GP, including Investor Relations, to communicate firm-level net zero commitments, and how net zero considerations will impact investment decisions going forward. They can also request that the GP make their own net zero commitment.

If LP has an LPAC seat, it can at this moment:

- Request that climate-related performance is integrated into LPAC reporting for the fund.
- If the GP is not meeting its net zero targets, request net zero performance as an LPAC agenda item.

If LP does not have an LPAC seat, then it can at this moment:

- Engage with other LPs to discuss and seek to collectively push for net zero commitments at the GP level and/or when attending a GP's annual investor day, raise net zero as a concern and share expectations that the GP will commit future funds.
- If the GP is not meeting its net zero targets, hold a meeting with ESG lead and relevant senior leader(s) at the GP to raise concerns and seek assurances that the situation will be rectified.

Private credit

The target setting and implementation guidance for Private Credit is currently in development. We will welcome feedback on this via public consultation in April. Essential framework components of this methodology will be used as high level guidance for NZIF and incorporated in May.

Policy advocacy

Introduction

This section addresses barriers to, and capturing opportunities for, net zero alignment created by the wider policy and regulatory environment, enabling key sectors and the wider economy to transition.

It is important that this section is implemented alongside NZIF's sections on 'Stakeholder & Market Engagement' and 'Asset Level Assessment & Targets', as part of a comprehensive net zero strategy to facilitate the realisation of net zero objectives by activating synergies and solving implementation barriers, creating the conditions required to achieve net zero objectives.

Essential action points

NZIF recommends the following actions for investors using the framework and considers them essential:

- Align direct and indirect policy advocacy efforts towards what is relevant for achieving global net zero emissions by 2050 or sooner.
- Participate in policy advocacy (directly or collectively) to international, national and sub-national policymakers for the economic policies and regulations required to achieve net zero objectives[35].
- Disclose participation in collective policy advocacy activities of investor networks, trade associations, and other bodies that undertake such activities.
- Create procedures for robust internal oversight of policy advocacy efforts, including monitoring, review, and transparency through disclosure.
- Ensure policy advocacy efforts are conducted in accordance with fair share principles and the Global Standard on Responsible Climate Lobbying.

Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult but would ultimately prove beneficial:

- Disclose within a transition plan the interdependencies between net zero targets and the wider policy environment.
- Disclose within a transition plan the approach taken to the Global Investor Statement to Governments on the Climate Crisis.
- Engage with investment managers or clients on the need for net zero aligned policy advocacy to achieve net zero objectives.
- Engage with portfolio companies on their lobbying practices and industry associations, promoting the need for alignment with the Paris Agreement[36].

Below is a non-exhaustive list of examples of important policy topics that investors may wish to consider when encouraging enhanced policy action to facilitate their net zero efforts:

- Mandatory disclosure of standardised corporate transition plans, above certain thresholds, to improve asset alignment assessment, along the basis of double materiality.
- Improved and standardised national disclosures required for assessing the net zero alignment of national governments.

- Collaboration and coordination between national and subnational governments to facilitate achievement of net zero related goals.
- Aligning government subsidies, taxes, and other incentives so that they facilitate and do not inhibit achievement of net zero goals.
- Improving availability of granular sector, regional, and national net zero pathways, which incorporate fair share principles.
- Improving disclosure of information relevant to assessing alignment and investment in climate solutions.
- Improving shareholder rights to affect corporate strategy and management.
- Central banks and financial supervisors to incorporate transition plans as part of their prudential oversight of financial institutions.
- Global agreement to phase out unabated fossil fuels at a trajectory which aligns with limiting global average temperature rise to 1.5°C.
- Work towards enhancing interoperability and coherency of regulatory frameworks to support investors with global portfolios.
- National level alignment with key standards as a baseline (e.g. TCFD and ISSB).
- Advocating for transition finance to be embedded within regulatory architecture.
- Advocate for taxonomies which facilitate climate solutions investment in accordance with fair share principles and the latest climate science, adopt clear and usable criteria, account for transition/enabling activities, and are interoperable with existing taxonomies.
- Suitable vehicles for low-carbon investment in emerging and frontier markets.
- Adequate support for protecting communities adversely impacted by transition activities.

Stakeholder and market engagement

Introduction

This section is dedicated to facilitating the availability of data, mandates, and investment advice necessary to achieve net zero objectives. It is important that this section is implemented alongside NZIF's sections on 'Policy Advocacy' and 'Asset Level Assessment & Targets', as part of a comprehensive net zero strategy to facilitate the realisation of net zero objectives by activating synergies and solving implementation barriers, creating the conditions required to achieve net zero objectives.

Essential action points

NZIF recommends the following actions for investors using the framework and considers them essential:

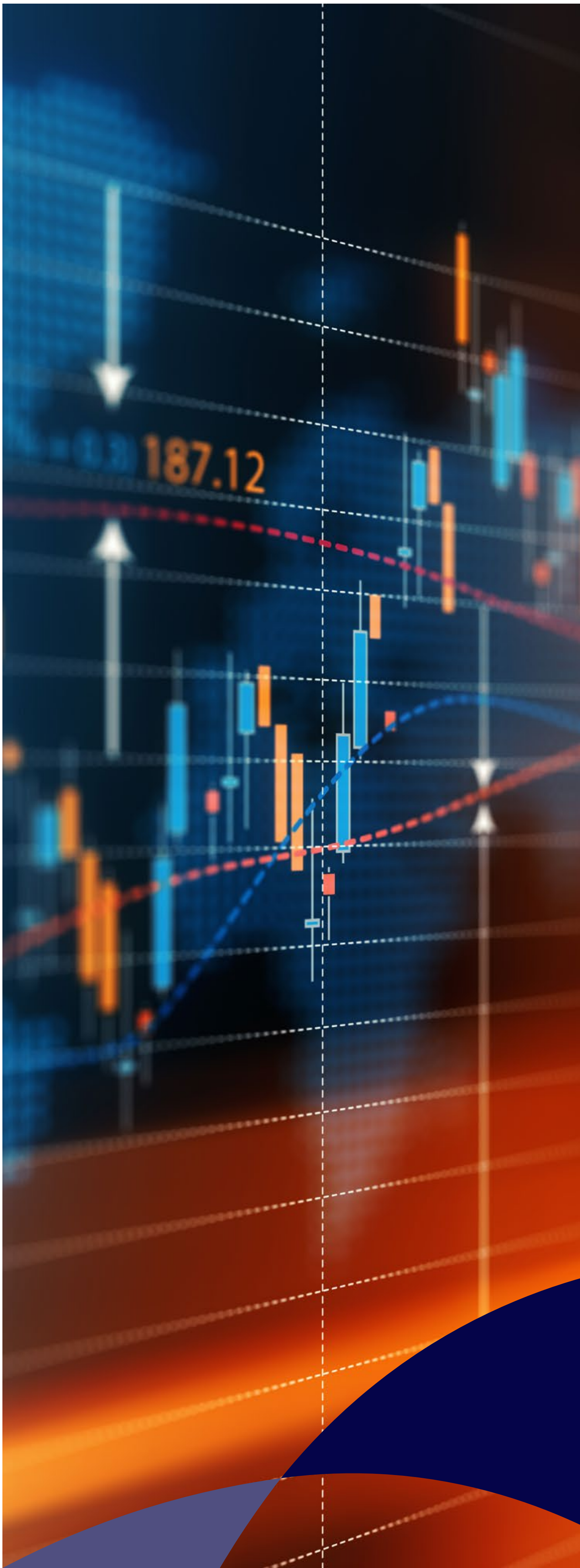
- Participate in advocacy to market service providers (directly or collectively through industry networks) for the tools, data, and advice required to achieve net zero goals.
- Undertake stewardship with market actors to ensure that their assessments, data and products are based on alignment criteria, robust methodologies, and are consistent with net zero goals.
- Undertake stewardship with industry peers (and beyond, as relevant) to share expertise, experience, and address common challenges in support of the achievement of net zero objectives.
- Engage external fund managers on the need to manage funds in alignment with net zero that is consistent with NZIF's alignment criteria.

Advanced action points

NZIF recommends the following advanced actions. These may initially be difficult but would ultimately prove beneficial:

- Participate in regulator-industry initiatives to develop voluntary and mandatory standards of transition plans and other disclosures, such as Paris-aligned accounts[37].
- Participate in investor industry network associations to advance knowledge around benchmarking portfolios with the Paris Agreement goals.
- Engage with existing and potential asset managers to encourage managers to provide strategies and products to achieve asset owners net zero investment goals.
- Engage with existing and potential clients to encourage uptake of net zero investment strategies and products, provide research and analysis to support climate risk assessment and net zero investing.
- Promote disclosure of corporate transition plans across industries such as in accordance with IIGCC's transition plan sector neutral guide and net zero standards covering high impact sectors[38].

- Engage private data vendors to ensure that assessments are consistent with the alignment criteria within the latest detailed guidance on indicators from the Climate Action 100+ Net Zero Company Benchmark[39].
- Engage private data vendors to ensure that data on scope 3 emissions details which categories are used within assessments and their accuracy disclosed.
- Undertake participation in activities of the investor networks to facilitate knowledge creation relating to net zero investment.
- Communicate expectations relating to alignment criteria across asset classes (e.g. pre-issuance of bonds).
- Engage with index providers to provide benchmarks better aligned with net zero[40].
- Engage with providers of bond indices that may inadvertently force investors to purchase new bonds irrespective of climate impacts.
- Encourage through signalling, early-stage investing, or other methods for compatible firms to make it to the IPO stage.
- Encourage credit rating agencies, sell-side analysts, and fund managers to incorporate climate-related risk factors into financial analysis.



Appendix

Certificate of deposits

This guidance is specific to certificate deposit holdings which may appear across portfolios and funds, yet are overlooked for the climate impact. Its premise is that:

- All possible portfolio emissions should be covered by net zero goals, objectives, strategies, and targets.
- Management of cash will result in emissions due to and relative to the carbon-intensity of associated bank lending.
- Emissions could be relatively large as NZIF considers banking as a high impact sector.

Managing cash associated emissions is purposefully an 'appendix' and not a 'main report' item. Due to several factors:

- Carbon footprinting methodologies are nascent.
- Within a fund, cash is primarily used for liquidity purposes, and is typically only a small component of total holdings.
- The normally limited size of cash as a proportion of total holdings should not distract attention from where more impact can be achieved.
- Service providers are selected on many practical factors and risk management restrictions apply on the adopted service provider.
- Choice of service provider may be imposed on a fund/investor.

Scope

It is recognised that 'cash' has many interpretations. This methodology applies specifically for certificate of deposits. Other cash equivalents should be managed using other asset class methodologies:

- Banker's acceptance: See methodology for Corporate Fixed Income.
- Commercial paper: See methodology for Corporate Fixed Income.
- Repurchase agreement: See methodology for Sovereign Bonds/ Corporate Fixed Income.

During assessment and target setting, investors should specify the assets in scope and a contextually relevant net zero pathway be used.

Investors can prioritise engagement using either a financed emissions-based approach or a materiality approach. The financed emissions approach approximates footprinting by multiplying cash deposits by the associated carbon intensity of bank lending. Data can be sourced from corporate reporting supported and validated with other reputable sources. The materiality-based approach uses relative institutional exposure to providers of certificates of deposits to determine prioritisation of engagement.

Approaches to align certificate of deposits

The approaches below can be used to align certificate of deposits. However, they are presented agnostically (regarding their efficacy) as this will depend on the context an individual investor operates within.

Asset selection

- Incorporate alignment criteria into considerations when compiling counterparty list.
- Tilt allocations towards higher performing service providers based on the alignment criteria.
- Select 'green' products - when possible and practically feasible to do so - ensuring proper oversight and strong guardrails exist.

It is recognised that relative to other portfolio asset classes, practical limitations may restrict allocation decisions regarding certificate deposits (e.g. liquidity and risk management considerations).

Asset engagement

- Set an engagement strategy with clear milestones and an escalation process with a feedback loop to counterparty list selection and decision-making.
- Undertake prioritised engagement with service providers to improve performance against alignment criteria.
- Engage relevant senior representatives of service providers, to make clear any net zero goals, and implications for future selection decisions.
- Engage service providers on counterparty list on the need to publicly disclose:
  - Scope 3 emissions, particularly lending exposure to high impact sectors.
  - % total lending in line with relevant taxonomies (or a similar climate solutions framework).
  - Financed and facilitated emissions as well as any net zero targets and transition plan.
- Advocate that banks join established initiatives (e.g. Net Zero Banking Alliance, Principles for Responsible Banking and its 'Climate Change Commitment').
- Advocate on the importance of developing thematic lending policies e.g. 'energy' and 'deforestation'.

Stewardship

- Engage corporate holdings within portfolios on the inclusion of cash investments in their own scope 3 calculations and the need these emissions to be addressed within transition plans.
- Engage data providers on the inclusion of cash investments in their corporate level GHG estimation methodologies.

How NZIF content is created

The origin of NZIF's development was in 2020-2021, when 110 IIGCC members, representing over USD 33 trillion AUM, co-developed the original framework via working groups to review/revise content as appropriate. Constant throughout this process are the five guiding principles for developing content (see below).

Working groups are constituted by asset managers and owners. The PAII Steering Group consists of the leaders of its four investor networks and is advised by a group of investor representatives who are leading practitioners.

NZIF is a 'living document' and will integrate evolving best practice in future NZIF updates.

Guiding principles for developing the Framework

- **Impact:** Primary objective is to maximise efforts to achieve emissions reductions in the real economy, through the unilateral and independent decisions of individual members to drive the process.
- **Rigour:** Alignment based on sound evidence and data, and consistent with best available climate science.
- **Practicality:** Feasible for investors to implement, build on existing work, and be compatible with existing processes.
- **Accessibility:** Definitions, methodologies and strategies should be clear and easily applied.
- **Accountability:** Should allow clients and stakeholders to assess portfolio/fund alignment.

Offsetting

As a general principle, investors should not use purchased offsets at the portfolio level to achieve emissions reduction targets. They should also adopt a precautionary approach when assessing assets' alignment with net zero and the use of offsets. Recognising the finite availability of offsets from land use in particular, and the need to rapidly decarbonise all activities within sectors to the extent possible, investors should not allow the use of external offsets as a significant long-term strategy for achievement of decarbonisation goals by assets in their portfolios, except where there is no technologically or financially viable solution. PAII will undertake further analysis to assess the appropriate use of offsetting in specific sectors. Credits purchased by participants within regulated carbon markets that are designed to meet the net zero emissions goal can be used.

Decarbonisation and avoided emissions should generally be treated separately. Similarly, investors should not offset emissions in one part of their portfolio through accounting for avoided emissions in another part. Given the necessity of effectively reaching zero emissions from investments over time, trading these two against each other is not consistent with creating incentives for investors and underlying assets to maximise their efforts to decarbonise their portfolios to the full extent possible.

Further support

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Endnotes

1 For more information on how investors can use scenario analysis to understand how climate changes drives financial impact across their portfolios, see IIGCC resource: *Navigating climate scenario analysis - a guide for institutional investors.*

2 For more information supporting asset owner trustees and boards to deliberate on, and incorporate, climate-related risks and opportunities into board level processes, see IIGCC resource: Addressing climate risks and opportunities in the investment process.

3 For more implementation guidance on developing an energy investment policy, see IIGCC resource (member only): A five-step process to an energy investment policy: A building block for a robust transition plan.

4 For more information on the urgent need for investor action on biodiversity, see IIGCC resource: The biodiversity imperative for investors – a horizon scan of key initiatives.

5 In effect they are like a response variable, whereas actions undertaken to reduce portfolio emissions are like explanatory variables.

6 For more information on how to set a Portfolio Decarbonisation Reference Objective, see IIGCC resource: Net Zero Investment Framework Supplementary Target Setting Guidance.

7 For a guidebook to accelerate the net zero transition through corporate and portfolio allocation, see IIGCC resource: *Climate Investment Roadmap.*

8 This will be more important for investors directly managing assets (e.g. real estate).

9 Communicating via multiple metrics / methodologies as needed.

10 For more information on investor perspectives on both the importance and the complexity of the value chain emissions of their investee companies in the context of achieving net zero portfolio emissions, see IIGCC resource: *Investor approaches to scope 3: Its importance, challenges and implications for decarbonising portfolios.*

11 For more information on how to conduct attribution analysis, see IIGCC resource: Net Zero Investment Framework Supplementary Target Setting Guidance.

12 For more information on how to re-baseline, see IIGCC resource: Net Zero Investment Framework Supplementary Target Setting Guidance.

13 For more information on developing a cumulative emissions approach, see IIGCC resource (member only): Cumulative Benchmark Divergence (CBD) metric: Implementation guidance.

14 For more information, see UNFCCC categorisations.

15 For more information on the need to address methane emissions from fossil fuel operations, see IIGCC consultation paper (member only): *Addressing methane emissions from fossil fuel operations.*

16 For more information on setting asset alignment targets across each asset class, see IIGCC resource: *Net Zero Investment Framework Supplementary Target Setting Guidance.*

17 For more information about how investors can engage Asian and emerging market companies in understanding how the Climate Action 100+ Net Zero Company Benchmark relates to them, see initiative resource: *Climate Action 100+ Investor Guide for Engaging in Asia An updated guide for 2022.*

18 For more information on the corporate, investor and value chain interventions that could accelerate the transition in the trucks sector, see IIGCC resource: *Accelerating the transition in the trucks sector and its value chain.* For more information on how investors can engage with companies across the automotive sector, see IIGCC resource: *Alignment of major auto manufacturers with the goals of the Paris Agreement.*

19 For more information on how to have constructive engagement with banks to aid ongoing implementation of climate commitments; as well as a set of measurable indicators, sub-indicators, and scoring guidance for assessing the alignment of banks against the goals of the Paris Agreement, see IIGCC resource: *Net Zero Standard for Banks.*

20 For more information on investor expectations that can help further inform the investors' engagement strategy and priorities for relevant companies in the chemicals sector, see IIGCC resource: *Investor expectations of chemical companies' transition to net zero.*

21 For more information on how investors can use a disaggregated approach to mining commodities to understanding transition risks and opportunities during investment and engagement, see IIGCC insight: *New guidance helps investors assess mining companies' net zero transition.*

22 For more information on how investors can assess the alignment of oil and gas companies' transition plans with a 1.5 °C climate scenario and develop corporate engagement priorities and escalation strategies, see IIGCC resource: *Net Zero Standard for Oil & Gas.*

23 For more information on potential investor expectations of companies in the construction materials sector in managing climate risks and accelerating action to decarbonise in line with the goals of the Paris Agreement, see IIGCC resource: *Investor expectations of construction materials sector.*

24 For more information on how investors can engage with steel purchasers to encourage them to pursue low emissions steel procurement, and benchmark targets against a 1.5°C pathway, see IIGCC resource: *Steel Purchaser Framework*.

25 For a detailed analysis of data sets and products in the market from 16 participating data vendors, see IIGCC resource (member only): *Net Zero Data Catalogue*.

26 For more information on the Climate Action 100+ Net Zero Company Benchmark 2.0, see resource.

27 For more information on including derivatives and hedge fund holdings within net zero efforts, including how to report on real economy impact of their holdings to better support net zero investment strategies, see IIGCC resource: *Derivatives and Hedge Funds Guidance*.

28 For more information on how investors can enhance their stewardship practices and deliver the rapid acceleration in decarbonisation required to halve emissions by 2030, see IIGCC resource: *Net Zero Stewardship Toolkit*.

29 For more information on how investors can develop their own net zero voting policies and practices, see IIGCC resource: *Net Zero Voting Guidance*.

30 For more information on how to support a more consistent approach to the relationship between asset owners and asset managers in terms of exercising climate-related stewardship responsibilities and reporting on climate engagement, see IIGCC resource: *Asset Owner Stewardship Questionnaire*.

31 For more information on the challenges and opportunities presented by different bond types, as well as a six-step toolkit and examples of corporate bondholder stewardship in action, see IIGCC resource: *Net Zero Bondholder Stewardship Guidance*.

32 For more information on how investors can consider whole life carbon emissions in net zero portfolios and decarbonisation strategies, see IIGCC resource: *Addressing whole life carbon in real estate portfolios: A step-by-step guide*.

33 For more information on the steps that investors can expect listed real estate companies to take to manage climate risks and accelerate action to decarbonise in line with the goals of the Paris Agreement, see IIGCC resource: *Investor expectations for listed real estate companies*.

34 For more information on how investors can consider whole life carbon emissions in net zero portfolios and decarbonisation strategies, see IIGCC resource: *Addressing whole life carbon in real estate portfolios: A step-by-step guide*.

35 For a set of investor expectations of corporate sustainability disclosures to support investors' sustainability information needs, regardless of the jurisdiction in which they operate, see IIGCC resource: *Expectations of Policymakers on Corporate Sustainability Disclosures*.

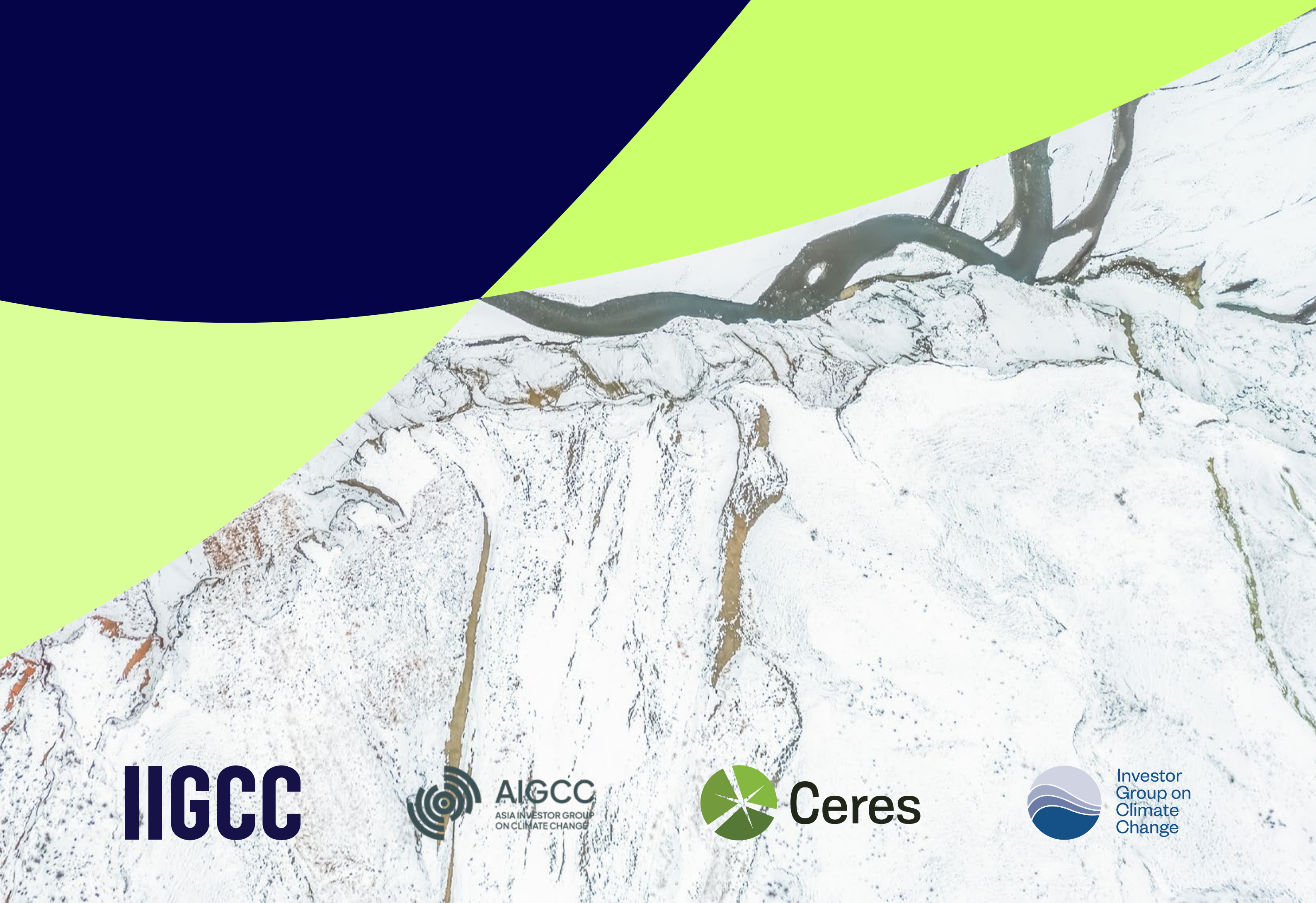
36 For more information on potential investor expectations on corporate lobbying on climate change, see IIGCC resource: *Investor expectations on corporate lobbying*.

37 For more information on potential investor expectations for companies to prepare 'Paris-aligned' company accounts and associated expectations for auditors, see IIGCC resource: *Investor expectations for Paris-aligned accounts*.

38 For more information on the key components of a credible transition plan, relevant to companies of different sizes and applicable across a range of sectors and geographies, that are consistent with the requirements of investors implementing the NZIF, see IIGCC resource: *Investor expectations of corporate transition plans: From A to Zero*.

39 For more information on how investors can engage with private data vendors, to help increase the overall quality and usability of net zero data used in alignment assessments and target setting, see IIGCC resource: *Six asks of data vendors improving net zero data provision*.

40 For more information on how can index providers better align benchmarks with net zero, see IIGCC resource: *Enhancing the quality of net zero benchmarks*.



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