



Monetary Authority of Singapore

Guidelines
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Guidelines on Environmental Risk Management (Asset Managers) – Transition Planning



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Guidelines on Environmental Risk Management (Asset Managers) - Transition Planning

1 Introduction

- 1.1 The Guidelines on Environmental Risk Management (Asset Managers) - Transition Planning (“TPG”) set out MAS’ supervisory expectations for asset managers to manage the transition and physical risks they face from climate change (‘climate-related risks’) as part of a sound transition planning process. This builds on existing expectations set out in the Guidelines on Environmental Risk Management for Asset Managers to incorporate environmental considerations into their business strategies and plans.
- 1.2 **"Transition planning"** refers to the internal risk management processes and strategic planning undertaken by an entity to prepare for climate-related risks and potential changes in business models associated with climate change. This includes building resilience to a range of future states of the world (including varying degrees of physical risk, and potential shifts in policy, technology, or consumer sentiments). A **"transition plan"** refers to a documented output of the transition planning process, and can be internal documents or be externally disclosed.
- 1.3 **The TPG are focused on risk management, but MAS recognises that as with other types of risk, business strategies can have an impact on the level of risk exposure.** The TPG set out expectations for asset managers to assess and manage climate-related risks arising from these business strategies over varying time horizons, to the extent they impact the portfolios that they manage, and for their business strategies to take into account climate-related risks.
- 1.4 **The objective of the TPG is for asset managers to implement a sound internal process that:**
 - a) Adequately addresses their climate-related risks

Asset managers need to assess and manage the risks associated with both physical and transition risks arising from climate change. These risks will ultimately impact more ‘traditional’ risk types like credit and market risks, across the portfolios that they manage. For instance, where investee companies can no longer generate sufficient cashflows to meet their operational or financing needs due to the effects of climate change, this could result in significant downward revaluation of the portfolios managed by asset managers.

Asset managers should understand the implications of climate change on their business and investment portfolios and adapt their business models, governance and risk management



practices accordingly. In this regard, asset managers should have a structured, risk-proportionate process to engage investee companies on the material climate-related risks they face and their management of such risks.

Where asset managers have chosen to set targets, they need sound internal processes to manage any material risks arising from those targets, such as by having an effective strategy to address any potential legal and/or reputational risks due to deviations from any communicated targets.

b) Facilitates climate-related risk management (including risk mitigating actions and adaptation measures) by investee companies, thereby supporting broader financial stability

Asset managers should not indiscriminately divest from investee companies with higher climate-related risks. This could increase the risk of stranded assets and contribute to a disorderly transition that would be detrimental for the system as a whole – and potentially the asset manager itself as well.

Asset managers should instead seek to engage these investee companies in a risk-proportionate manner, and provide these investee companies with an opportunity to identify and manage climate-related risks to address asset managers' concerns. The data collected from their investee companies may therefore differ depending on their risk materiality to the asset managers and/or their investment portfolios. Asset managers may also take a multi-year view in engaging investee companies on their risk profiles. The point-in-time emissions level of an investee company alone may not mean a higher level of risk to the asset manager/its investment portfolio if the investee company is in the process of implementing risk management measures.

The pace of transition will depend on local circumstances, including government policies around economic transition pathways and other domestic developments. For example, the phasing out of internal combustion engine vehicles will depend on various factors such as local infrastructure readiness and consumer preferences. Where jurisdictional-level transition/decarbonisation roadmaps (e.g. for specific sectors) and/or adaptation roadmaps (e.g. for specific geographies) are in place, asset managers should take these into account when engaging investee companies by considering the impact of these roadmaps on investee companies and encourage additional risk management actions if needed.



Application

- 1.5 The TPG build on and should be read together with MAS' existing supervisory guidance¹ to asset managers². The TPG are an elaboration of MAS' supervisory expectations around asset managers' transition planning.
- a) The TPG are applicable to asset managers which have discretionary authority over the investment portfolios they are managing.
 - b) Where asset managers delegate investment management to sub-managers or advisors, they still retain overall responsibility for the management of climate-related risks and should thus communicate their expectations (such as through contractual agreements) on climate-related risk management to the sub-managers or advisors, and put in place processes to monitor the sub-managers' or advisors' alignment with these expectations.
 - c) Asset managers that are branches or subsidiaries of global groups may take guidance from their Group's transition planning as long as the Group's transition planning approach meets the expectations set out in the TPG.
- 1.6 The TPG do not prohibit or restrict asset managers from complying with applicable laws or discharging their fiduciary duties and other legal obligations to their customers. MAS is cognisant that, as fiduciaries, asset managers must act in accordance with the terms of the investment management agreements they have with their customers. Notwithstanding that, asset managers should assess the potential materiality of climate-related risks, and their impact on customers' portfolio returns across different investment horizons. Where climate-related risks are assessed to be material, asset managers can consider engaging with customers or providing relevant tools/information to support informed decision-making regarding the impact of climate change on their investment portfolios.
- 1.7 MAS expects asset managers' implementation of the transition planning processes to mature as best practices evolve.
- a) MAS recognises that current data and methodology constraints may limit asset managers' ability to implement certain aspects of the transition planning processes in the immediate term. Nonetheless, that should not deter asset managers from making progress on transition planning, including enhancing data availability. Asset managers are expected to

¹ Examples include: i) MAS' Guidelines on Environmental Risk Management ("ENRM Guidelines") – effective since June 2022 – which set out MAS' expectations for asset managers to build resilience against the impact of environmental risk; ii) MAS' Information Paper in May 2022 sharing our observations on asset managers' progress in addressing environmental risk, including through the consideration and integration of such risks into their business strategies and risk management processes.

² As defined in the ENRM Guidelines, "asset managers" refers to all holders of a capital markets services licence for fund management and real estate investment trust management.



implement the TPG on a risk-proportionate basis, considering the nature of their investee companies' business models and the materiality of the resulting risks. Asset managers are also expected to take an iterative approach to enhance their transition planning and embed better practices into their business-as-usual processes over time.

- i. In particular, as capacity, capabilities and data availability improve, asset managers should continue their efforts to address environmental risks beyond climate-related risks³, taking into account that these risks are often inter-linked. Asset managers should, to the extent possible, consider whether additional data collection and risk management measures to address other environmental risks may be needed.
- b) MAS recognises that the scale, scope and business models of asset managers can be different and will continue to take a risk-proportionate supervisory approach. Asset managers should implement the TPG in a way that is commensurate with the size, nature and risk profile of their activities.

³ Network for Greening the Financial System (NGFS) (2022) Statement on Nature-Related Financial Risks. Nature-related risks, including those associated with biodiversity loss, could have significant macroeconomic implications, and failure to account for, mitigate and adapt to these implications is a source of risks for individual financial institutions as well as for financial stability.



2 Governance and Strategy

- 2.1. **Decisions made by the asset manager’s Board of Directors (“Board”) and senior management around business strategy should take into consideration how the current and future changes in the operating environment arising from climate change will impact the asset manager’s or its investment portfolios’ risk profiles.** The Board is responsible for ensuring that the asset manager’s framework and policies adequately address the asset manager’s business strategy and risks as it navigates such changes.
- 2.2. **The asset manager’s senior management should actively ensure that its climate-related business strategy is effectively embedded within the asset manager’s operations.** Steps taken should include (but are not limited to):
- a) Establishing a robust governance process, to facilitate the understanding of key climate-related assumptions, dependencies, and residual risks covering areas such as business strategies, risk metrics, scope, risk framework, implementation timelines and approach;
 - b) Establishing a clear tone from the top around the need to address climate-related risks, such as when making decisions around business strategy, investment selection, portfolio construction and risk management;
 - c) Establishing clear lines of communication and escalation across different parts of the asset manager to address climate-related risks that cut across functions;
 - d) Ensuring that internal strategies and plans are consistent with any publicly communicated climate-related strategies and commitments⁴; and
 - e) Establishing mechanisms to implement business strategies and align internal behaviour to address climate-related risks (such as through performance measurement, remuneration policy and incentive structures).
- 2.3. **The asset manager’s senior management should establish a mechanism(s) through which the asset manager’s existing approach (and implementation thereof) to transition planning is regularly refined.** The asset manager should view transition planning as an iterative process and regularly review its approach, including its risk framework, for continued appropriateness and effectiveness. It should also incorporate industry developments and emerging best practices into its approach in a timely manner.

⁴ For example, if the asset manager has set decarbonisation targets in support of a stated climate objective, it should take care that relevant and material activities are in scope of its targets (e.g. by considering financed emissions for potential inclusion).



3 Portfolio Management

Approach

- 3.1 In developing and managing its product offerings and investment strategies, the **asset manager should consider the potential impact of climate-related risks as appropriate** (e.g. stranded asset risk, runaway climate change). For example, an asset manager with investments in carbon-intensive sectors could be exposed to heightened transition risk if such investee companies are unable to pivot their business models in a timely manner.
- 3.2 **The asset manager should account for sectoral specificities and, where appropriate, take a differentiated approach for sectors (at an appropriate level of granularity) posing higher climate-related risks in its transition planning.** The asset manager can consider the use of global, regional and/or jurisdictional sectoral pathways, as well as jurisdictional specificities (e.g. presence of sector-level plan) to inform risk decisions and facilitate engagement with investee companies. These considerations should be underpinned by sufficient understanding of the sectoral transition pathways it references, including the underlying assumptions and scope of these pathways, to guide its approach.
- 3.3 **Likewise, the asset manager may factor in different characteristics of investee companies (e.g. different levels and sources of climate-related risks, different stages of readiness) in its transition planning.** The asset manager can consider:
- a) The circumstances of each investee company, such as its jurisdictional and operating environment and the extent of its exposure to transition and physical risks over the short-, medium-, and long-term. For instance, the asset manager could evaluate how changes in government policies, technological developments, and consumer preferences may affect the valuation of an investee company's security;
 - b) The adequacy of an investee company's actions in managing climate-related risks (including from their respective supply chains), such as whether its actions align with global, regional and/or jurisdictional sectoral pathways, its ability to translate goals/pledges into actionable steps, and the robustness of its governance and processes to implement these actions;
 - c) The risks from uncertainties around technology development and adoption, supply chain challenges and the operating environment, in particular for investee companies that generate revenue based on climate solutions⁵. The asset manager should hence recognise the potential correlations or novel risks that its investment portfolios could be exposed to, whether individually or in aggregate; and

⁵ Climate solutions here collectively refers to (i) assets that directly eliminate, remove or reduce greenhouse gases ("GHG") emissions; (ii) indirectly contribute to, but are critical for, emission reductions by facilitating the deployment of assets that directly contribute to GHG emissions reductions; and/or (iii) nature-based solutions.



- d) The effectiveness of the asset manager’s engagement and stewardship efforts, in particular its voting policy and activities, to facilitate and support the investee companies’ transition and decarbonisation (if relevant).

Forward-looking risk assessment tools

- 3.4 **The asset manager may employ a range of forward-looking tools, such as scenario analysis, in its transition planning process for risk discovery and quantification.** In the deployment of these tools, the asset manager should consider the impact of climate-related risks on its investment portfolios under a range of plausible scenarios. The results of such exercises, where material over relevant time horizons, should be incorporated into the asset manager’s planning and risk management processes so as to trigger the appropriate management actions. For example, this could include, but is not limited to, decisions around business strategy, enhancements to risk management, engagement and stewardship policies and practices, and adjustments to sectoral strategies and product offerings.
- 3.5 **The asset manager should continue to develop its capabilities in climate scenario analysis, referencing leading industry practices wherever possible⁶.** The asset manager should develop climate risk modelling frameworks for (i) different asset classes with the appropriate levels of granularity (e.g. sectoral and/or security level) to account for the heterogeneity of climate-related risks across different types of investee companies, asset classes, economic activities and investment strategies; and (ii) varying time horizons, as short- to long-term scenarios are relevant for transition planning. The asset manager should incorporate a wide range of climate (e.g. climate policies, frequency and intensity of acute physical hazards) and economic risk drivers (e.g. demand and supply-side shocks, stranded assets), and consider both direct (e.g. damage to owned physical assets, carbon tax expenses) and indirect (e.g. supply chain risk, carbon cost pass-through) transmission channels of climate-related risks on the economy and financial system. The asset manager could consider using climate scenarios developed by Network for Greening the Financial System (NGFS), Intergovernmental Panel on Climate Change (IPCC) or the International Energy Agency (IEA). The asset manager may complement these external reference scenarios with internally developed scenarios that are tailored to their investment strategies.
- 3.6 **The asset manager should endeavour to address material data gaps to allow it to adequately capture and differentiate the level of climate-related risks that its investee companies face.** When modelling the impact of climate-related risks, the asset manager should factor in relevant and reasonably reliable forward-looking information to capture the estimated level of climate-related risks that investee companies are exposed to. This could include investee companies’ transition plans where these are reasonably expected to be implemented.

⁶ Asset managers can refer to the latest scenario analysis guides and publications produced by international organisations, such as the NGFS, United Nations Environment Programme Finance Initiative (UNEP FI), and central banks and regulators.



Data and metrics

- 3.7 **The asset manager should recognise the inherent limitations of using proxy data⁷ to bridge data gaps when performing its climate-related risk assessments at the investee company and portfolio levels.** Where possible, the asset manager should document the decisions on its choice of proxy data, such as the sources, underlying assumptions, methodologies and limitations, so that future iterations and enhancements are made on an informed basis. The asset manager should articulate how the use of the proxy data chosen could have material implications on its risk assessment outcomes so that limitations from the use of such proxy data are adequately factored into the decisions taken. The use of proxy data should not detract from longer-term efforts to obtain primary data that is more decision-useful.
- 3.8 **The asset manager should utilise metrics to track its investment portfolios' risk exposures and determine if they are in line with its business strategy, the portfolios' investment strategies and associated targets, where relevant.** The choice of metrics⁸ will depend on how the asset manager approaches the management of relevant risks and its business model and/or its portfolios' investment strategies. In selecting the appropriate metrics across the short-, medium- and long-terms, the asset manager should:
- a) Clearly identify the scope and coverage of these metric(s), including the investment strategies (e.g. active versus passive management), asset class (e.g. equities versus fixed income) and products in scope (e.g. products named as sustainable versus those that are not), at an appropriate level of sectoral and geographical granularity;
 - b) Consider the asset manager's business and the risk profile of its investment portfolios at an appropriate level of granularity;
 - c) Recognise limitations arising from the choice of metric(s) and/or lack of data, and supplement with additional information as necessary;
 - d) Monitor these metric(s) with a multi-year risk perspective including having a process to understand the key drivers of changes in such metric(s) (particularly if there is a material difference between actual and planned outcomes), so as to facilitate better risk

⁷ This includes cases where the asset manager chooses to source its data from data vendors, where the reasonableness of any assumptions or proxies used by the vendor in deriving missing datapoints should be recognised, assessed and considered in decision-making, where material.

⁸ Potential metrics (and associated targets) that asset managers may voluntarily choose to utilise could include: portfolio financed emissions with associated portfolio decarbonisation targets across specific dates, sector-level policies (which could factor in jurisdictional, regional and/or global sectoral pathways) or proportion of portfolio exposed to specific physical hazards.



identification and management; and

- e) Review all relevant risk metric(s) periodically for continued relevance given the evolving nature and understanding of climate change.

3.9 **The asset manager should consider the impact of any targets set or lack thereof on the asset manager’s business strategy and the risk profiles of the investment portfolios that it manages, with residual risks identified and addressed.** For instance, it could include establishing the appropriate governance guardrails and risk management processes for risks arising from short term deviations from such targets. Where an asset manager has published decarbonisation targets across the short-, medium- and long-term for its investment portfolios, it should consider:

- a) Clearly identifying and calibrating the portfolios in scope by considering their financed emissions⁹ profiles at the appropriate granularity;
- b) Taking a multi-year perspective by supplementing¹⁰ point-in-time financed emissions data with additional information on possible future financed emissions¹¹ where relevant. This is because short-term fluctuations in financed emissions may not be inconsistent with longer-term reductions;
- c) Assessing whether the targets set could impact the portfolios managed by the asset manager in other ways, such as by changing their overall risk profiles from a geographical/industry diversification perspective; and
- d) Regularly review targets set for continued relevance considering relevant developments¹² at the global, regional and jurisdictional level.

⁹ Gross, rather than net, metrics should be used to distinguish the effects of carbon credits.

¹⁰ Point-in-time emissions data would not capture future reductions in financed emissions (e.g. a multi-year investment to install carbon abatement technology)

¹¹ Usage of such projected future emissions should recognise their inherent uncertainty of materialisation, and be premised on the willingness and capability of investee companies’ ability to follow through with their plans.

¹² Future climate policy and technological changes will result in the evolution of jurisdictional, regional and/or global decarbonisation pathways over time. This could have consequent impact on the business models and risk profiles of investee companies. An asset manager should factor in such developments when assessing the impact on the portfolios managed.



Implementation strategy (people, processes, and systems)

- 3.10 **The asset manager should equip its staff, including through capacity building and training, with adequate expertise to assess, manage and monitor climate-related risks in a rigorous, timely and efficient manner.**
- 3.11 **The asset manager should regularly review its internal governance and processes, including its risk management framework, to manage climate-related risks in a systematic manner.** Scalable and consistent processes will allow the asset manager to cascade and implement its climate-related risk strategy and plans effectively. This could include alignment of existing products, services and business activities with the asset manager’s strategy, as well as the embedding of strategic climate consideration in decision-making processes.
- 3.12 **The asset manager should develop and implement a data strategy to build, maintain and analyse relevant climate-related data to support effective decision-making.** Relevant climate-related data could include information to enable the tracking of the asset manager’s commitments, portfolios’ transition and physical risks, mitigating factors (e.g. status and adequacy of investee companies’ plans to address risks), sector analysis to identify changes in the business operating environment, as well as information on other climate-related risks impacting its portfolios. System(s) should be in place to reliably collect, aggregate and enable accessibility of relevant climate-related data across different functions of the asset manager as part of its overall data governance and IT infrastructure. The asset manager should have appropriate mechanisms in place to facilitate improvement of data-related processes over time, including the identification of new relevant datapoints, data sources and data collection processes as well as participation in and support of emerging developments of technological solutions¹³. As data availability and quality are expected to improve over time, the asset manager should build systems and processes that will be able to accommodate future enhancements (e.g. inclusion of new datapoints or additional granularity).

¹³ This may include, but are not limited to, utilising data obtained from investee companies’ disclosures when made available over time and supporting industry initiatives to harmonise data.



4 Engagement and Stewardship

- 4.1 **Active engagement and stewardship by the asset manager can facilitate the risk management measures taken by investee companies, thereby mitigating portfolios' exposure to climate-related risks.** A credible and timely response by investee companies to manage their climate-related risks across varying time horizons will improve their risk profiles. This will in turn enhance the resilience of the portfolios managed by the asset manager to climate-related risks.
- 4.2 **The asset manager should develop an engagement and stewardship plan to support its overall strategy to address climate-related risks in its portfolios.** The plan should specify clear objectives or intended outcomes and define the asset manager's approach towards engagement and stewardship.
- 4.3 **The asset manager should also equip its staff to effectively engage investee companies by ensuring that they have sufficient understanding of sectoral and jurisdictional specificities and developments.** In addition, the asset manager should develop toolkits to facilitate consistent engagement by its staff. These toolkits should set out the range of engagement and stewardship approaches that are available to the asset manager (e.g. bilateral engagement, proxy voting, filing shareholder resolutions, collaborative engagement) and provide guidance to aid its staff in selecting an appropriate approach, considering the risks posed and the willingness and ability of the investee company to manage them. Where relevant, the asset manager should update its proxy voting policy to include climate-related considerations and provide internal guidance on disclosing proxy voting activity. In addition, the asset manager should consider participating in collaborative initiatives and collective engagement platforms with industry peers to address common challenges, subject to applicable laws and regulations.
- 4.4 **The asset manager should have a structured process to engage investee companies on the climate-related risks that they face and their response to such risks.** The asset manager should encourage investee companies, particularly those identified as vulnerable to transition¹⁴ and/or physical risks, to proactively manage these risks. Where relevant, such engagements may include, but are not limited to:
- a) Referencing available information about potential future trajectories (e.g. jurisdictional, regional and/or global sectoral transition pathways, future sector technological mix) and potential physical hazards¹⁵ arising from climate change to identify risks that investee companies are materially exposed to;

¹⁴ Such as those directly engaging in carbon intensive activities or indirectly dependent on such activities through supply chain linkages.

¹⁵ Such as acute or chronic physical hazards that could directly affect investee companies' business operations due to the financial impact on their key physical assets and working capital, or indirectly through the impact on collateral value, access to and cost of insurance, etc.



- b) Addressing the risk of stranded assets (which could occur due to factors such as misalignment with transition pathways, obsolescence due to technological advancements, etc) and the longer-term viability of investee companies' business models;
- c) Considering transition and/or physical risk management measures (such as investments in adaptation measures or recovery efforts after hazard events), including their impact on cashflows and capital expenditure; and
- d) Factoring in investee companies' forward-looking risk profile and risk management actions in the asset manager's risk assessment and management.

4.5 **The asset manager should engage investee companies on a risk-proportionate basis.** This may entail adjustments in the frequency and intensity of engagement in relation to the level of risk that the investee company poses to the portfolio. For example, the asset manager can tailor its engagement approach for different investee companies based on material risk factors, such as their climate risk profiles (considering jurisdictional and sector-specific factors), size of the portfolios' investment, and the willingness and ability of the investee company to manage climate-related risks.

4.6 **The asset manager should seek to collect sufficient climate-related risk data about the potential impact of climate change on investee companies' business and risk profiles, so as to inform its investment and risk decisions and portfolio management strategies. The engagement process can be a means to collect such information.** The asset manager can take a risk-proportionate approach in collecting data from its investee companies, including by differentiating the extent and granularity of climate-related risk data collected from such investee companies based on their risk materiality to the asset manager's portfolios, business and risk profile, size and capabilities. For example, the amount of data collected from small and medium enterprises might be proportionately lesser than that from large investee companies posing material climate-related risks to the asset manager's portfolios¹⁶. The asset manager can consider developing structured templates to facilitate collection of consistent and comparable climate-related data from their investee companies. Examples of climate-related risk data could include, but are not limited to the following:

- a) Investee companies' self-assessed impact of transition and physical risks;
- b) Investee companies' climate-related commitments, initiatives and strategies;

¹⁶ The asset manager can take an iterative approach in data collection from investee companies and enhance such data collection over time as corporates' ability to provide such data improves.



- c) Mechanisms put in place by investee companies to deliver such climate-related commitments, initiatives and strategies (e.g. incentives, compensation, internal pricing, etc.);
- d) Investee companies' key asset locations;
- e) Investee companies' exposure to supply chain risks (including pass through of carbon costs) and impact on working capital cycles;
- f) Investee companies' carbon emissions data and vulnerability to changes in government policies, technological developments, and shifts in consumer and investor sentiments; and
- g) Investee companies' existing or planned measures to address transition and physical risks.

4.7 **The asset manager should not indiscriminately divest from investee companies exposed to higher climate-related risks.** Doing so would hinder companies with plans to implement risk management measures from securing the investment or financing they need, thereby increasing the risk of stranded assets and a disorderly transition.