Environmental risk management

How asset managers are embracing the MAS Guidelines

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pwc

Background

In line with the growing emphasis on environmental, social and governance (ESG) and sustainable finance in Singapore, the Monetary Authority of Singapore (MAS) issued the Guidelines on Environmental Risk Management (ENRM) for asset managers (AM) in December 2020. The Guidelines apply to all asset managers domiciled in Singapore who have discretionary authority over their funds/mandates and hold a capital markets service license for fund management, including real estate investment trust management as well as registered fund management companies. The Guidelines became effective on 8 June 2022 after a transition period of 18 months.

In May 2022, prior to the effective date of the Guidelines, the MAS published an Information Paper on ENRM for asset managers to highlight the progress made by asset managers in implementing the Guidelines. The paper was based on a thematic review that MAS performed in 2021 on thirty selected asset managers. The following publication illustrates key findings of the review detailed in the MAS Information Paper and is supplemented by PwC's market insights garnered from our own Asset and Wealth Management ENRM Readiness Survey as well as from our experience in working with asset managers. The publication hence serves as a knowledge-sharing initiative to advance understanding and uptake of the Guidelines.

Overview

The MAS Information Paper on Environmental Risk Management for Asset Managers not only highlights best practices established by asset managers to align themselves with the Guidelines, but also identifies areas where there are gaps and hence further work is required.

In May 2022, we had performed an AWM ENRM Readiness survey to gauge how asset managers are implementing the Guidelines, that is, what are the environmental risk management procedures they are able to establish effectively at an early stage, and what are some key focus areas where they need further guidance to enhance their understanding.

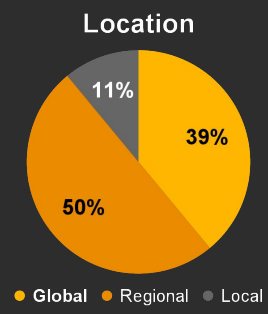
We agree with the MAS' findings that asset managers are currently displaying varying levels of progress towards the ENRM Guidelines. While most asset managers do realise the significance of managing environmental risks, a fair amount of work still remains for them to incorporate environmental risk management practices within their day-to-day business activities in a manner that is consequential.

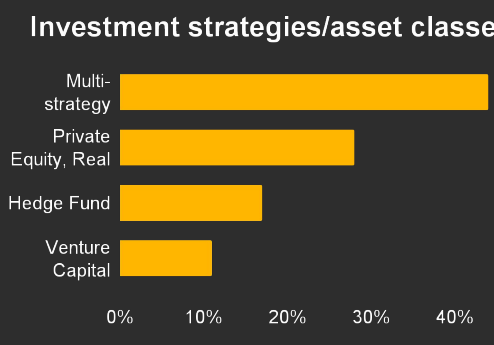
Most asset managers have established an ENRM framework or policy, as well as, a governance structure that oversees the effective implementation of such overarching frameworks or policies. Majority have adopted capacity building efforts, such as, ENRM trainings for their staff to enhance knowledge and awareness of the Guidelines. Furthermore, many have also made public commitments to sustainable investment practices by becoming signatories of international sustainability organisations such as the UN PRI, publicly disclosing their sustainability efforts on their website, and joining investor coalitions that focus on addressing environmental risks. A handful have also started to engage third-party data providers or their investee companies to obtain relevant and insightful ESG information to aid their decision-making.

Despite the various commendable efforts adopted by asset managers, there is still scope for improvement in certain key areas. The setting of targets towards the successful management and mitigation of environmental risks is yet to become a norm amongst asset managers as a certain degree of apprehensiveness still remains around the nature of such targets. While it is important for the determined targets to be both qualitative and quantitative in nature and cover different time horizons, it is equally important for them to be clear, tangible and realistic. Understanding of climate-related risk assessments, such as scenario analysis, that help evaluate a portfolio's exposure to environmental risks is also currently at a nascent stage and requires development.

Breakdown of respondents for the PwC AWM ENRM Readiness Survey:

We garnered 18 survey responses from a range of asset managers in Singapore for our survey performed in May 2022. All of the respondents are capital markets services licence holders. Below is a further breakdown of the respondents by firm size, location and investment strategies.

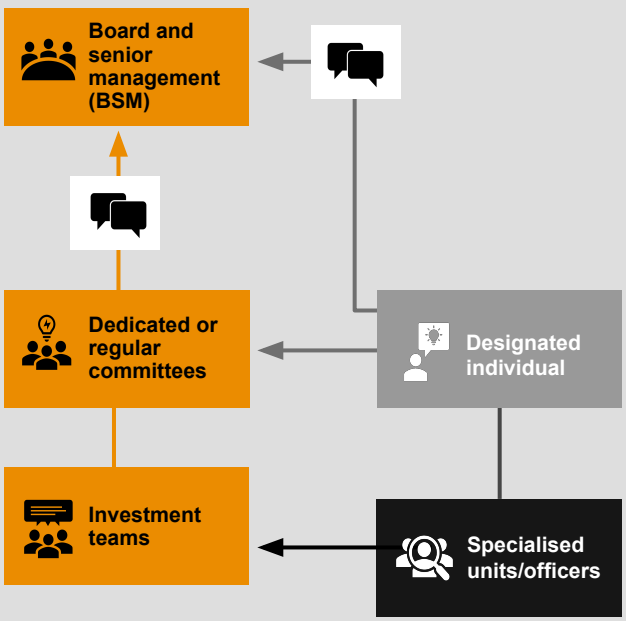




Governance and strategy

As asset managers (AMs) continue to realise the importance of mitigating environmental risks and seizing environmental opportunities, both for improved returns and enhanced value creation, one of the fundamental starting points, is to establish a **governance structure** that holds responsibility and accountability for the management of environmental risks and makes efforts to effectively communicate the company's approach and ambition throughout the organisation.

PwC Survey: **89%** of the AMs surveyed have established a formal governance structure for ENRM. Of which **81%** have a designated sustainability team or officer that advises on ESG matters.



Responsible for maintaining oversight of ENRM including reviewing and providing approval for policies and procedures.

Committees delegated by the board for day-to-day implementation of the asset manager's ENRM policy and procedures.

An individual that usually sits within the BSM and leads committees dedicated to managing the asset manager's sustainability/ENRM practice, example, **Chief Sustainability Officers** and **Head of Investments**.

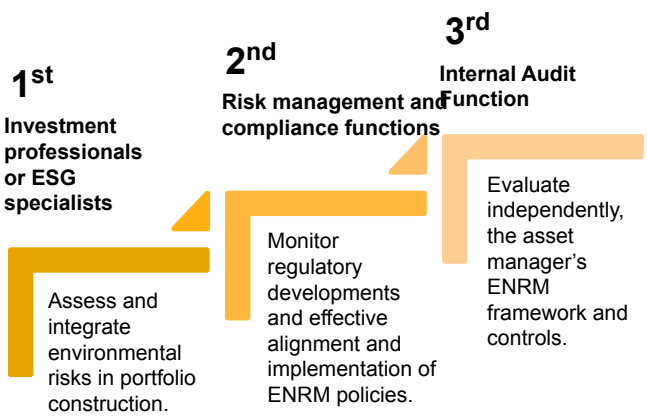
Typically set up by larger AMs to support investment teams by conducting independent environmental risk research and to assist designated individuals in the development of ENRM policies.

As part of the **reporting structure** for environmental-related matters the dedicated committees and/or designated individuals provide updates to the BSM on a periodic basis, such as, during annual board meetings or quarterly management reports. Apart from this, an **escalation procedure** is also adopted by few AMs to escalate material trigger events, such as, breach of ENRM policy or failure of an ENRM control.

Source: MAS Information Paper on Environmental Risk Management for Asset Managers

As asset managers have increasingly started to appreciate the role of the board with regards to environmental risk management, the process of **reporting to the board** has grown stronger as well. A typical **agenda** reported to the board includes key environmental considerations, such as, climate change, biodiversity loss etc; the efficacy of existing ENRM controls including any breaches and; the progress towards achieving ENRM goals and targets.

In order to further strengthen their ENRM governance structures especially in alignment with the MAS ENRM Guidelines, asset managers are also implementing a **three lines of defence model** that either draws inspiration from or is integrated within their existing risk management defence models, such as for overall enterprise risk management.



Asset managers have formalised their approach towards ENRM through frameworks or policies that are either embedded within their existing policies or disclosed as standalone frameworks. **83%** of AMs in the PwC AWM ENRM Readiness Survey, have established an **ENRM framework or related policies and procedures** either through their Enterprise Risk Management Framework, Investment Policy or ESG/ ustainability/Responsible Investing Policy.

An important element of the ENRM framework or policy is the **strategy** of the AM, which spans from measuring and identifying the environmental footprint of internal operations through to metrics such as GHG emissions, to assessing environmental risk exposures of investment portfolios and launching more green/sustainable funds at the portfolio level. When formulating such strategies and plans for their operations, as well as for the funds that they manage, asset managers have begun taking into consideration varying **time horizons** as environmental risks and. opportunities materialise over different time frames **61%** of AMs in our PwC survey indicated that they considered **short-, medium- and long-term horizons** when analysing the impact of environmental risks.

Most asset managers, in order to enhance their commitment and credibility, have also aligned themselves with one or more **international sustainability initiatives**. **78%** of the AMs in our PwC survey are aligned to at least one international sustainability framework or standard.

List of international sustainability framework or standard:

- United Nations Principles for Responsible Investment (UN PRI)
- Task Force on Climate-Related Financial Disclosures (TFCD)
- Value Reporting Foundation SASB Standards
- United Nations Sustainable Development Goals (UN SDGs)
- GRI Sustainability Reporting Standards (GRI Standards)
- Carbon Disclosure Project (CDP)
- United Nations Global Compact

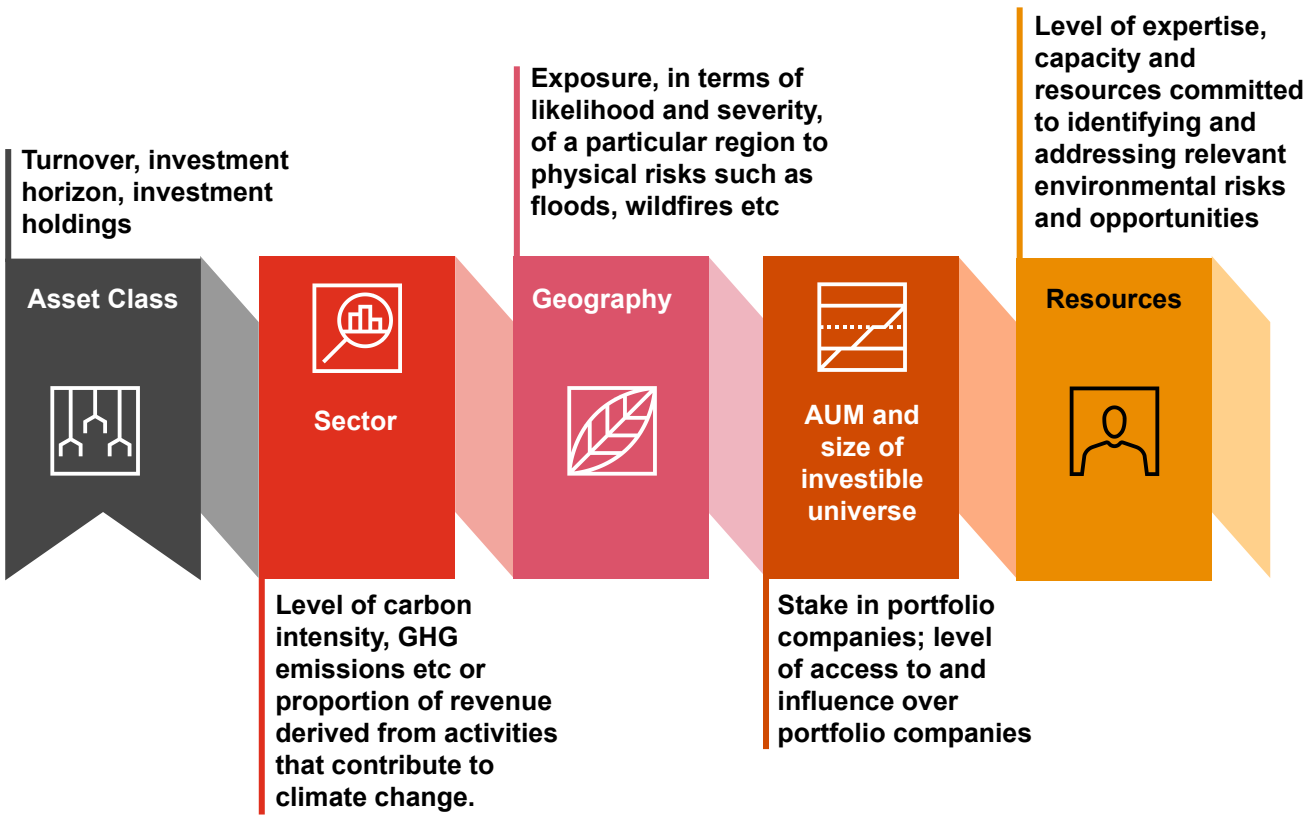
Further considerations

- Climate risk, instead of a broader environmental risk, still forms a major component of the ENRM approach for most asset managers. However, environmental risk also incorporates other crucial risks such as biodiversity loss and destruction to natural ecosystems that should be accounted for as well.
- Currently, most AMs set and report metrics and targets that are qualitative in nature. However, quantitative metrics are equally important and usually allow for better comparability against peers.
- Key performance indicators (KPIs) relating to ENRM are being integrated as part of incentive structures for senior management and relevant members of the relevant committees, as well as, investment and risk management teams, which take into consideration environmental factors in day-to-day business activities.

Research and portfolio construction

As climate change continues to have a profound effect through rising temperatures and extreme weather conditions, empirical research highlighting the adverse implications of climate change on **asset valuations and returns** continues to grow as well. Investors too have become more "socially conscious" and are looking to make investments that generate some form of positive impact and are aligned with their values. Hence, it has become imperative for asset managers to take into consideration environmental risks and opportunities in their funds/mandates and construct portfolios accordingly.

However, in order to determine the degree of integration of environmental risks and opportunities as well as the methodology that should be adopted to perform the integration, it is important to first assess the level of **materiality or relevance** of these environmental risks and opportunities, which is dependent on a multitude of different factors relating to the nature of the asset manager's investments.



In our PwC AWM ENRM Readiness Survey, **72%** of asset managers stated that they **integrate ESG in their investment processes across all their asset classes**. However, for asset managers that have not done broad-based integration, **equities** emerged as the most common asset class to incorporate ESG.

A commonly used method by asset managers to guide their ESG assessment is to identify sectors that are most exposed to environmental risk and to either exclude or limit investment in these through **exclusion policies**, which can be tailored according to the asset managers' preference. Some AMs may choose to set **materiality thresholds** and continue to invest in investee companies that belong to potentially high environmental risk sectors as long as they have implemented credible transition plans. While others practice **outright elimination** which prohibits investment in investee companies that are either engaged in or derive a significant proportion of their revenues from environmentally damaging activities.

To incorporate environmental risk considerations within their research and portfolio construction processes and be able to identify investments and/ or portfolios that are most exposed, asset managers are typically observed to:

Develop proprietary frameworks and tools	Used by advanced AMs to generate a quantitative environmental risk score for each investment
Leverage on third-party ratings	Used by AMs that have just commenced their ESG journey
In-depth risk assessment for each investee company	Used by AMs that have substantial influence and place emphasis on the investment due diligence process

67% of AMs in the PwC ENRM survey have adopted an **exclusion policy/negative screening strategy** as a means of screening out investments that pose significant environmental risks.

Amongst the AMs in the PwC ENRM survey, **Sustainability Accounting Standards Board (SASB)** was most commonly referenced for identification of material ESG issues.

Further considerations

While availability of data still remains a challenge across the asset management industry, AMs have been procuring environmental data through:

- Subscription of third-party data providers – based on area of specialisation, scope of coverage, methodology etc.
- Engagement with Investee Companies – via meetings with senior management and stakeholders or questionnaires.
- Reference to International Bodies – such as the International Energy Agency, World Banks and the United Nations.
- Browsing of public domains – internet, social media account posts, publications by civil societies and academics.

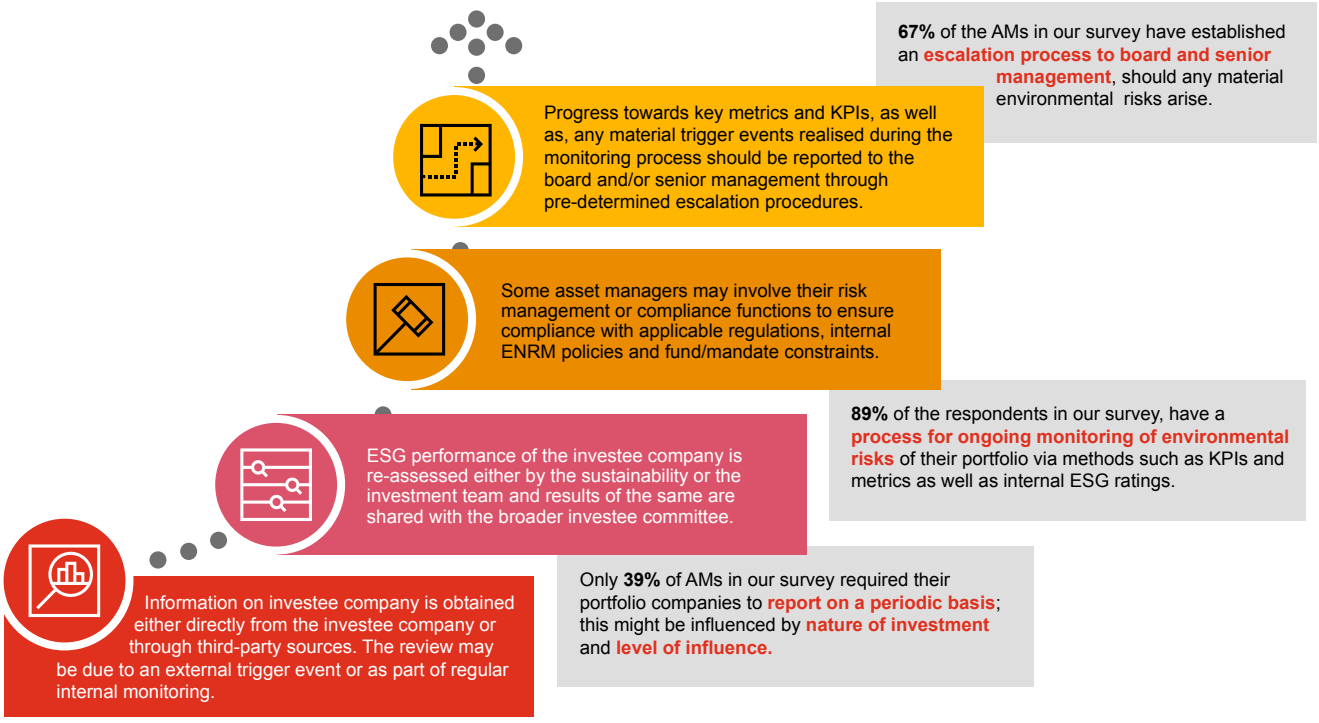
Portfolio risk management

Once an investment has been made, to allow an asset manager to make informed decisions about whether to continue with the investment, modify the composition of the portfolio or further enhance the existing mitigating measures implemented to manage environmental risks year after year, appropriate processes should be established to monitor, assess, manage and subsequently report on the actual and potential impacts of environmental risks that prevail at the investment or portfolio level on an ongoing basis.

A **quantitative** or **qualitative** approach may be adopted to monitor the environmental risks identified depending on the **nature** and **materiality** of those risks wherein an example of a quantitative approach would be to employ metrics to determine tolerance thresholds, while a qualitative approach may use a "red-amber-green" risk matrix to address risks when they materialise. However, apart from environmental risks, **material trigger events** such as relevant regulatory updates or developments such as the COVID-19 pandemic that potentially impact an investee company and hence affect the risk profile of an asset manager's portfolio may also be taken into consideration during the **ongoing monitoring of a portfolio**.

Typical information relating to investee companies that asset managers include in their re-assessments:

- **ESG score of the company** – time-series comparison and peer benchmarking
- **Climate-related metrics** – GHG emissions, temperature alignment etc
- **Operational indicators** – statistics relating energy, water consumption and intensity, waste generation
- **Controversy scores** – ESG-related issues or challenges faced by a company



Internal capacity building

In-house trainings are conducted by subject matter experts within the company, such as, ESG analysts or sustainability consultants and are tailored to the company's business context by focusing on internal policies and procedures.

External trainings are conducted via third-party providers such as industry associations, rating agencies, international investor networks, consulting house etc. These trainings tend to focus on trends, regulations and best practices relating to management of environmental risks.

External courses or certifications pertaining to the topic of ESG or specifically climate-related risks and opportunities is sponsored for relevant employees or members of the board and senior management to promote upskilling.

Employment of qualified staff, such as environmental specialists to work alongside the regular investment analysts. The specialists would typically have either prior work experience in the domain or an academic degree in relevant subjects.

Source: MAS Information Paper on Environmental Risk Management for Asset Managers

In order to ensure the Board and senior management, along with members of the relevant business functions – sustainability, investment and risk management or compliance, are adequately equipped to identify, assess and monitor environmental risks and opportunities in a manner that is commensurate with the size and nature of the business, many asset managers are focusing on **capacity building** to enable upskilling with regards to ESG. The most popular form of capacity building is observed to be **training**; a majority **(72%)** of asset managers in our PwC AWM ENRM Readiness Survey provide ESG-related trainings for their board and employees.

As the ESG landscape, including environmental risks, is constantly evolving, it is important to conduct training at least on an annual basis and regularly refresh the training content to reflect the latest developments in the field.

Further considerations

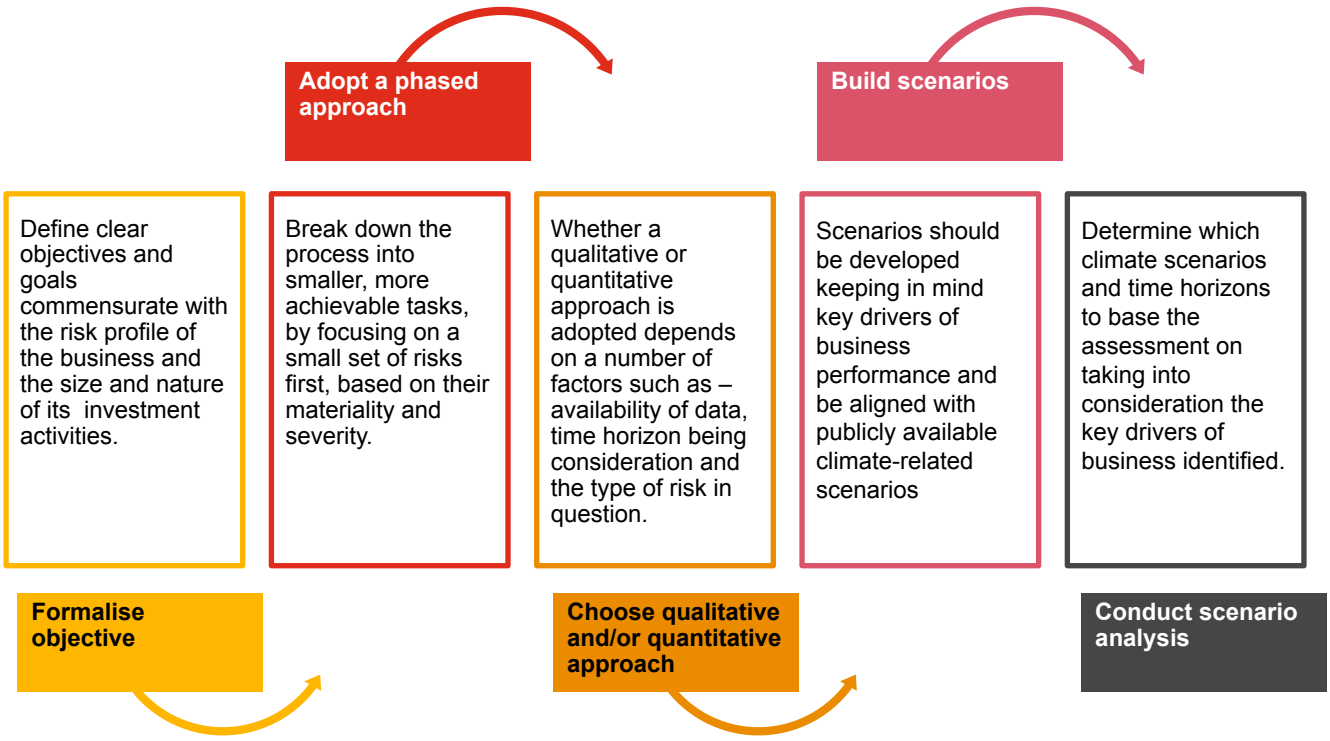
Whilst internal capacity building on environmental risk and opportunities is crucial for the organisation, **external capacity building** will generate awareness and improve practices across the industry. Examples include:

- Conducting or participating in **webinars, conferences** or **workshops** focused on environmental risks.
- Publishing **thought leaderships** about environmental risks
- Circulating **quarterly newsletters** to customers, investors or general public.

Scenario analysis

The majority of asset managers across the industry today focus on **climate-related risks** when addressing environmental risks within their portfolios. Climate-related risks form a crucial sub-set of environmental risks and are a combination of **physical** and **transition risks** which could potentially impact the resilience and performance of funds/mandates managed by asset managers. A popular climate-related assessment tool that is currently being used by asset managers globally to measure such physical and transition risks, and is also recommended by the TCFD and the MAS, is **scenario analysis**. Approximately **56%** of asset managers in our PwC AWM ENRM Readiness Survey engage in scenario analysis or stress testing in order to manage environmental risks in their portfolio.

Scenario analysis allows an asset manager to take into consideration and assess the impact of climate-related risks and opportunities on their portfolio under different **scenario pathways** and across various **time horizons**. While the practice of scenario analysis is still in a relatively nascent phase and the understanding of it along with best practices continue to develop, asset managers are increasingly realising the benefits and implications of conducting the exercise. Results from scenario analysis can be used to **identify potential hotspots** within the portfolio that are more exposed to climate-related risks and identify which sectors and investee companies should be **prioritised for engagement**. The results can be also be **used as inputs** for the research and portfolio construction and portfolio risk management stages of the investment cycle. These can eventually be **turned into financial metrics** that are useful for investment-decision making.



Source: MAS Information Paper on Environmental Risk Management for Asset Managers and PwC Analysis

It has been observed that most asset managers who have conducted scenario analysis have focused more on transition risks rather than physical risks resulting in transition risk analyses being more advanced overall compared to physical risks analyses. The main reason for this is that physical risk analysis requires a combination of asset data, e.g. geolocations, impact on revenue etc., and climate data, e.g. weather frequency, probability of extreme weather conditions etc., and is therefore more likely to be performed by asset managers with real estate properties in their portfolios as they tend to have better access to such information. While there are many tools that have been developed for scenario analysis, **Carbon Value-at-Risk (Carbon VaR)** and **Climate Value-at-Risk (Climate VaR)** are two relatively common and straightforward scenario analysis assessments performed by asset managers.

	Qualitative	Quantitative
Maturity of asset Manager	☐ Asset managers new to scenario analysis may begin the process by focusing on a qualitative approach and understanding the implications behind the results obtained	☐ Asset managers with a more advanced scenario analysis practice may begin to introduce quantitative elements into the exercise
Availability of data	☐ Useful for exploring relationships and trends when there is no or little data available	☐ Useful for assessing measurable trends using models and other analytics tools which can either be developed in-house or leveraged from third-party providers
Time – horizon and type of risk	☐ Useful for addressing risks such as reputational risks and explaining uncertainties that materialise over long – term horizons.	☐ Useful for addressing risks that tend to be associated with a financial metric and support short to medium term projections

In order to design scenario pathways, many asset managers have been referring to and aligning with the scenarios developed by publicly available sources, such as, the **International Energy Agency** (IEA), **Intergovernmental Panel on Climate Change** (IPCC), **Network for Greening the Financial System** (NGFS) and **Transition Pathway Initiative** (TPI). While designing scenarios, it is important to incorporate **forward-looking information** as analyses that rely on historical data might systematically underestimate risks.

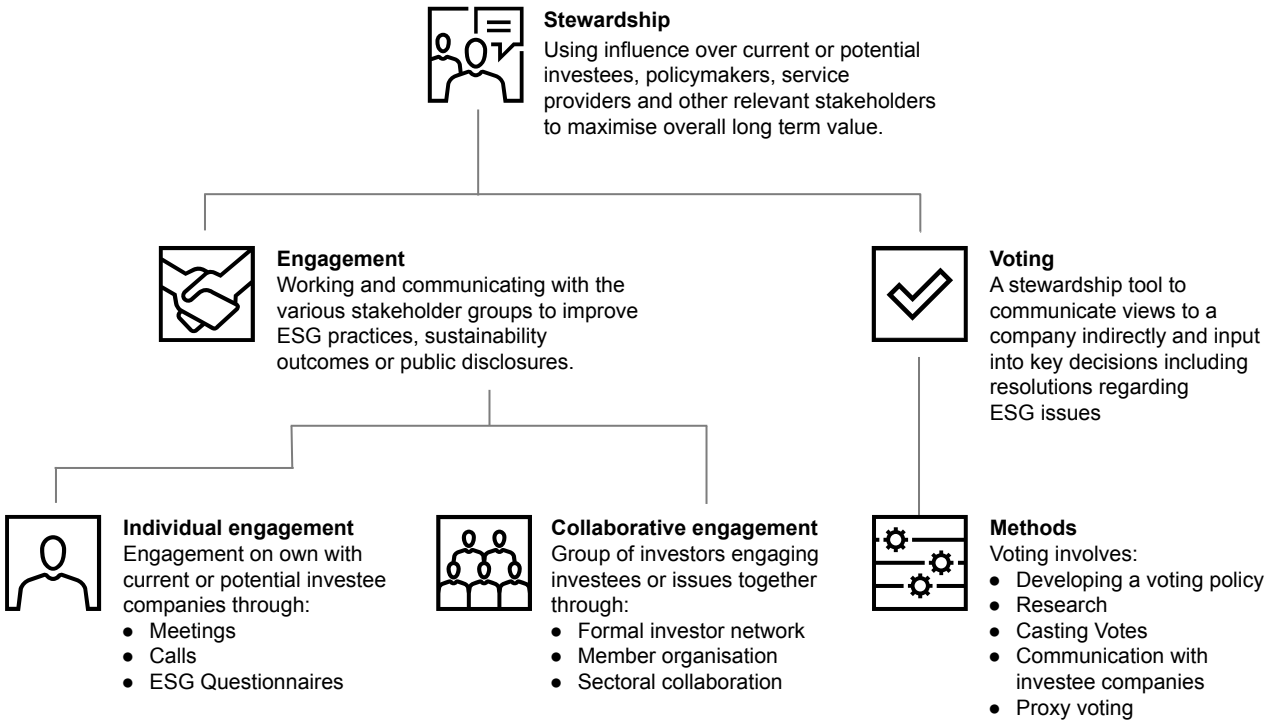
However, due to lack of availability of data and inadequate understanding of methodologies pertaining to scenario analysis, asset managers continue to face challenges in incorporating forward-looking information.

Further considerations

- Scenario analysis should be viewed as an ongoing, dynamic and iterative exercise, which implies that the insights gained at each stage of the exercise, should be fed back for further refinement, for example, any risk mitigation measures implemented may be fed back into the scenarios identified as these may reduce the severity of the risk.
- Due to the evolving nature of climate-related risks, scenario analysis should be refreshed on a periodic basis and key features of the exercise – assumptions, methodology, mitigation measures should be all documented in detail.

Stewardship

To shape the behaviour of investee companies and improve their environmental practice, asset managers must exercise **effective stewardship** post investment. Strong stewardship efforts help to **enable the transition** of investee companies towards more sustainable business practices in the long run and thus improve the risk profile of the asset manager's portfolio as well. Stewardship can also be used as a tool to **create awareness** across the industry on how to **best manage and mitigate environmental risks** and **capture opportunities**. As a result, many asset managers have started to implement and even formalise their stewardship approach through a **stewardship policy** and if applicable, a **proxy voting policy**, which may either be integrated within the stewardship policy or established as an independent policy.



Direct engagement – 72% of asset managers in our survey engaged with investee companies via board meetings, written correspondences, investor calls, etc.

Collaborative engagement – 56% of asset managers in our survey are part of large investor networks and initiatives.

Voting – 39% of asset managers exercised stewardship through proxy voting.

Engagement with investee companies is the most common form of stewardship approach adopted by asset managers. However, there are many different factors that are taken into consideration by asset managers when deciding which investee company to prioritise for engagement. While some asset managers adopt a **"bottom-up" approach** to aid their selection of investee companies for engagement, others opt for a **"top-down" approach**. If adopting a bottom-up approach, the asset manager would prioritise an investee company with poorer environmental practice as reflected by the investee company's environmental risk rating or answers to any questionnaires posed by the asset manager. However, if adopting a top-down approach, the asset manager would pre-determine certain engagement topics and prioritise an investee company if its business activities match the desired profile.

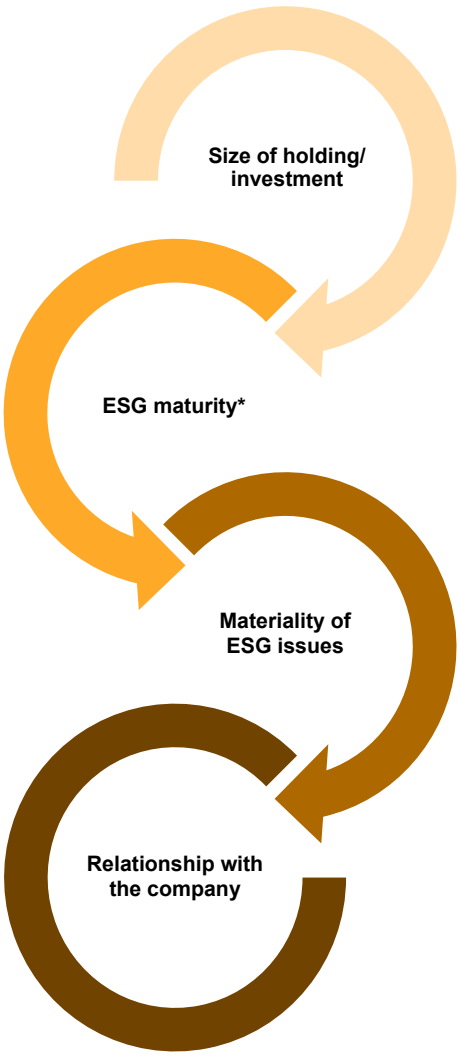
Topics selected for engagement by asset managers range from focusing on how the investee company addresses specific environmental risks, such as, climate-related risks, to how comprehensive its environmental risk management disclosures are and whether they are aligned with certain internationally-recognised standards, such as the TCFD, which the asset manager may be aligned with as well. Engagement with the investee company is typically **led by the respective fund manager or investment teams** due to their relationship with the investee company and understanding of business. However, it may be supplemented by any additional research provided by subject matter experts such as, ESG research analysts or environmental risk specialists within the teams.

Another popular form of stewardship is **collaborative engagement** as part of which asset managers join collaborative engagement platforms, such as, **UN PRI**, **Climate Action 100+**, **Asia Investor Group on Climate Change** (AIGCC), **Ceres Investor Network**, the **Farm Animal Investment Risk and Return** (FAIRR) **Initiative** etc. The decision to join a certain platform may be based on the focus of the initiative and whether this in line with the asset manager's own strategy, the level of commitment required, whether there is availability of resources and expertise internally to contribute effectively to the initiative, etc.

Further considerations

- Some form of escalation mechanism must be established to trigger corporate action if an investee company is not receptive to engagement or if the engagement is unsuccessful as the investee company failed to meet the agreed outcomes. In response, the AM might issue public statements, vote against management, exit the investment etc.
- Qualitative and quantitative metrics may be identified and progress towards the same monitored on a period basis. The asset manager may further demonstrate its commitment to engagement efforts by reporting on these metrics.

Basis of prioritisation of investee companies for engagement



*ESG Maturity refers to the ESG rating of the investee company, the response it gives for any ESG questionnaire posed to it and overall sustainability level of the company.

If the investee company's current disclosures or the response to the questionnaires posed to it does not provide adequate information than it may be worth engaging with the company to address the same.

Disclosures

Finally, to demonstrate commitment towards environmental risk management and credibility of their practice, asset managers are increasingly becoming **more transparent** and **publicly disclosing** their approach and efforts. As asset managers drive capital allocation decisions, enhanced disclosures help **promote more informed decision making** for investors who are then better able to assess the manager. However, to ensure that the information provided can indeed be used for decision making, the information must be presented in a clear and meaningful manner, such that, the disclosures are **consistent** and **comparable**. By internally formalising an approach to disclosures, including the **frequency** of the disclosures, asset managers are also able to provide **timely information** to investors and other relevant stakeholders.

Forms of External Disclosures

Source: MAS Information Paper on Environmental Risk Management for Asset Managers and PwC Analysis

Disclosures can be made either to **internal stakeholders** or **external stakeholders**. Relatively smaller asset managers typically do not publicly disclose their environmental risk management policy or frameworks. Instead they either embed the same in their periodic investor reports or make it available to them upon request. More advanced asset managers however publish their disclosures in various forms. **72%** of asset managers, in the PwC AWM ENRM Readiness survey, highlighted that they disclose their environmental risk management approach to internal stakeholders while **61%** stated that they disclose the same externally via their website, annual UN PRI transparency report or their TCFD report. The **board** of the asset manager tends to maintain effective oversight and provide final approval for the disclosures made.

Due to the release of MAS' Environmental Risk Management Guidelines for Asset Managers, asset managers locally have begun to establish an **environmental risk management policy or framework** that details their governance structure, environmental risk assessment methodology, exclusions, measures to monitor environmental risks, engagement and proxy voting initiatives, etc.

Asset managers are also referencing **various internationally-recognised sustainability reporting frameworks, principles or standards** for their disclosures with **TCFD** becoming increasingly popular. Locally, the MAS ENRM Guidelines allude to the TCFD recommendations while globally, the International Sustainability Standards Board (ISSB), has recently issued two exposure drafts, both of which also build on the TCFD recommendations. The ISSB disclosure standards, when formalised, will form a comprehensive global baseline of sustainability disclosures designed to help investors make informed decisions regarding enterprise value. They will also have the potential to form the basis for the development of audit and assurance frameworks.

Commonly observed disclosure practice by asset managers in line with the TCFD framework

Governance	Strategy	Risk management	Metrics and targets
▪ Disclosures relating to governance tend to be more advanced than the other 3 areas and usually entail: ▪ Descriptions or diagrammatic representations of structures and reporting lines responsible for ENRM ▪ Roles and Responsibilities ▪ Frequency and agenda of meetings ▪ ENRM trainings provided to BSM ▪ Linkages to remuneration ▪ Mechanisms for monitoring KPIs	▪ The disclosure differs based on how the AM addresses environmental risks and opportunities but usually covers: ▪ Potential and actual impacts of environmental risks and opportunities identified across different time horizons ▪ Description of strategical actions taken to mitigate environmental risks such as conducting climate-related risk assessments or setting transition targets	▪ While there is scope for improvement of disclosures relating to this area, many asset managers are detailing their policies and processes instituted to identify, assess, manage and integrate limate-related risks and opportunities within their investment decisions. ▪ Some asset managers may also disclose the definitions of risk terminology used including references to existing risk classification frameworks	▪ This remains a key area for improvement as asset managers continue to build their understanding of relevant methodologies, and gaps in data are filled. ▪ Asset managers may have separate metrics for the company – Scope 1, 2 and 3 GHG emissions, and for their investment portfolios – weighted average carbon intensity, to distinguish between environmental risk arising from their own operations and those of the investee companies.

Asset managers have also increasingly started to measure and report on their Scope 1 and 2 GHG emissions and utilise internationally accepted GHG accounting systems, such as the GHG protocol or the Partnership for Carbon Accounting Financials (PCAF) to do so. However, measurement of scope 3 emissions currently remains a challenge due to the unavailability of data. While it is encouraging to see the commitment towards climate-related risks, the impact of an AM's investment activities on areas that go beyond climate-risk, such as biodiversity are still less explored and hence there is a lack of adequate disclosures in this area. However, with greater awareness and the establishment of initiatives such as the Task Force on Nature-Related Finance Disclosures (TNFD), there is hope for improvement in addressing and reporting on environmental risks more broadly in the future.

Further considerations

Assurance can enhance the credibility of disclosures and should be performed.

- **Internal assurance** – Internal audit functions could review an AM's environmental risk disclosures. However, as capabilities around the same are developed, BSM may maintain independent oversight of the controls.
- **External assurance** – could include verification of quantitative environmental data, such as GHG emissions that is reported in the AM's public disclosures or audits of the methodologies used to compute the GHG emissions.

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