RESPONSE TO

FEEDBACK RECEIVED

December 2020

Proposed Guidelines on Environmental Risk Management (Insurers)

MAS Monetary Authority of Singapore

Contents

1 Preface

1.1 On 25 June 2020, the Monetary Authority of Singapore ("MAS") issued a set of three consultation papers to seek feedback on the proposed Guidelines on Environmental Risk Management ("Guidelines"). The Guidelines seek to enhance financial institutions' ("FIs") resilience to and management of environmental risk. They set out sound practices in relation to FIs' governance, risk management and disclosure of environmental risk. The Guidelines were co-created with financial institutions and industry associations from the banking, insurance and asset management sectors.

1.2 The Guidelines are tailored to each sector based on its business activities and risk management practices. This paper sets out MAS' responses to feedback received on the Guidelines for insurers.

1.3 The consultation period closed on 7 August 2020, and MAS would like to thank all respondents for their contributions. The list of respondents and their submissions are respectively provided under Annex A and Annex B.

1.4 MAS has carefully considered the feedback received and has incorporated them in finalising the Guidelines as appropriate. Comments that are of wider interest, together with MAS' responses, are set out below.

2 Scope

2.1 MAS proposed to apply the Guidelines to all insurers, including insurers carrying on business in Singapore under a foreign insurer scheme established under Part IIA of the Insurance Act (Cap. 142). In addition, it was proposed for the Guidelines to apply to an insurer's underwriting and investment activities, and other activities that expose it to material environmental risk.

Scope of risks covered

2.2 Some respondents suggested that the Guidelines should initially only apply to climate risk, as measurement and management methodologies for other environmental risks are still nascent. Some other respondents suggested extending the Guidelines to social and governance risks.

2.3 In addition, some respondents requested for guidance on the definition of material environmental risk and examples of activities posing such risk.

MAS' Response

2.4 The Guidelines focus on environmental risk, as the linkage between environmental risk and impact on the financial system is more established at this juncture than social risk, while governance issues can be addressed by existing governance requirements. In addition, climate risk and other environmental risks are closely interrelated, given that climate change could lead to environmental degradation and vice versa. MAS recognises that methodologies for assessing, monitoring and reporting environmental risk factors beyond climate change are less developed at present, and expects insurers' risk management approaches to mature as methodologies and international frameworks evolve.

2.5 In assessing the applicability of the Guidelines to other activities that expose it to material environmental risk, an insurer should conduct its own materiality assessment, taking into account the impact on business strategy and overall risk profile. As with other forms of risks, insurers are best placed to assess the materiality of their risk exposures, taking into consideration the nature and scale of their activities. Insurers could also take guidance from ongoing industry and international efforts, including the Network for Greening the Financial System ("NGFS"), to share good environmental risk management practices.

Insurance entities in scope

2.6 Some respondents queried on relevance of the Guidelines to life and health (re)insurers, given that they may not undertake investment activities or underwrite risks relating to environmental factors.

2.7 Other respondents queried on relevance of the Guidelines to overseas subsidiaries, branches and offshore business.

MAS' Response

2.8 MAS would like to clarify that there is flexibility for insurers to calibrate their risk management approach according to materiality of risk posed by each customer/transaction/business line/overseas entity, and apply the Guidelines where relevant. It is worth noting that environmental risk can impact life and health (re)insurers through higher morbidity and mortality risks. In addition, (re)insurers with investments that are exposed to environmental and related reputational risks, and those exposed to transition risk arising from climate change, should manage them in accordance with the Guidelines. We have amended the Guidelines to clarify the impact of environmental risk on such(re)insurers.

2.9 Some respondents also suggested to include intermediaries such as insurance brokers within the applicable scope of the Guidelines given that insurance brokers are the primary advisors to industrial customers in matters of insurance and risk management.

MAS' Response

2.10 MAS would like to clarify that the Guidelines do not apply to intermediaries such as insurance brokers given that they do not bear the direct financial and reputational impact of environmental risk and are unable to implement the Guidelines for their business. However, MAS would like to emphasise that we expect all intermediaries to act in the best interest of their customers, including apprising customers of the requirements imposed by insurers and the risks involved. In sourcing for the appropriate policies for their customers, intermediaries should also take into account the environmental risk management process of the insurers and customers. While the Guidelines are applicable to the insurers, MAS expects both the intermediaries and insurers to work closely together to effectively manage the environmental risk arising from their business transaction.

Applicability to small FIs

2.11 Some respondents expressed concerns over significant compliance costs and challenges, especially for smaller insurers, in monitoring the environmental risk of their customers, given their limited resources and capacity. Some respondents commented that other sectors do not have similar expectations imposed upon them and suggested for this to be done at a later stage when there is more maturity in environmental risk management practices.

MAS' Response

2.12 Insurers should apply the Guidelines in a manner that is commensurate with the size and nature of their activities, as well as their risk profile. The implementation of environmental risk management practices is intended to be an iterative process, as methodologies continue to evolve and mature. Insurers could also look to ongoing industry efforts to develop and share good environmental risk management practices.

2.13 For insurers with limited resources and capacity, MAS does not expect such firms to ramp up their environmental risk management capabilities immediately. Instead, smaller firms can take measured steps to uplift their environmental risk management capabilities. For example, as a start, smaller insurers which require more guidance can turn to available resources online such as guidance published by the NGFS, and attend environmental risk management training courses to gain relevant environmental risk management knowledge and proficiency.

Group application of the Guidelines

2.14 A few respondents sought clarification on whether the Guidelines would apply on a solo or consolidated basis.

MAS' Response

2.15 The Guidelines apply on a group basis for locally-incorporated insurers. For a locally-incorporated insurer that is headquartered in Singapore, this refers to the group including the holding company in Singapore, as well as the insurer's subsidiaries and branches in Singapore and overseas, where applicable. For a locally-incorporated subsidiary of a foreign insurer, this refers to the subsidiary's operations in Singapore and its downstream subsidiaries and branches in Singapore and overseas, where applicable. We have amended the Guidelines to reflect this clarification.

3 Governance and Strategy

3.1 The Guidelines set out MAS' expectations on the Board and senior management to incorporate environmental considerations into the insurer's risk appetite, strategies and business plans, and to oversee the insurer's environmental risk management. The proposed responsibilities of the Board include approving an environmental risk management framework and policies, setting clear roles and responsibilities of the Board and senior management, and ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework. The proposed responsibilities of senior management include developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.

3.2 MAS also proposed that where environmental risk is deemed material to an insurer, the insurer should designate a senior management member or a committee to oversee environmental risk.

Board and senior management oversight

3.3 Some respondents sought guidance on the appropriate governing body to perform the proposed responsibilities of the Board in non-locally incorporated branches.

MAS' Response

3.4 MAS would like the clarify that for an insurer incorporated in Singapore, the Board responsibilities set out in the Guidelines could be performed by the Board or a

Board-level committee. For an insurer incorporated outside Singapore, the Board responsibilities could be performed by the Board, a Board level committee, or a management committee or body responsible for the oversight of the institution in Singapore. In the context of foreign insurers, Board oversight of environmental risk management could be performed by a combination of local and global committees, with clear duties set out between these committees.

3.5 Some respondents suggested that the proposed responsibilities of the Board and senior management set out in the Guidelines could be carried out at the head office of foreign branches and subsidiaries.

MAS' Response

3.6 Foreign insurers may also take guidance from their group's policies and frameworks. Nonetheless, this does not absolve the local Board (for foreign insurers incorporated in Singapore) and senior management from their responsibility for effective oversight of the Singapore operations, and they remain accountable for the responsibilities set out in the Guidelines.

Leveraging group policies and frameworks

3.7 Some respondents queried whether insurers could comply with the Guidelines using group policies and frameworks.

MAS' Response

3.8 Insurers may apply and adapt policies and procedures that have been instituted at the group-level to their Singapore operations, for the purpose of complying with the Guidelines in Singapore.

Designated senior management member or committee

3.9 Most respondents were generally supportive of the proposal for insurers to designate a senior management member or committee to oversee environmental risk, where such risk is material. Some respondents sought guidance on which individual or committee to designate to oversee environmental risk, including whether the individual or committee should be based in Singapore, and if oversight could be at the global level.

MAS' Response

3.10 MAS does not intend to prescribe the specific senior management member or committee that insurers should designate to oversee environmental risk. Insurers have the flexibility to determine which senior management member or committee to designate, including whether the individual or committee is based in or outside Singapore, and exercises global or local oversight. Insurers should exercise sound judgment in doing so.

3.11 MAS views the expectation to designate a senior management member or committee to oversee environmental risk as being complementary to the MAS Guidelines on Individual Accountability and Conduct (the "IAC Guidelines")[1]. The expectation in the Guidelines on Environmental Risk Management focuses specifically on environmental risk, and insurers may designate a senior management member or committee to oversee environmental risk. The senior management member or committee needs to have clear responsibilities and reporting line(s), with respect to environmental risk management.

Three lines of Defence

3.12 Some respondents suggested that the role of the three lines of defence be made explicit in the Guidelines.

<u>MAS' Response</u>

3.13 As the first line of defence, business line staff should assess environmental risk before accepting new businesses, and in the ongoing management of business relationships, particularly for sectors with higher environmental risk. Both the risk management and compliance functions play important roles as the second line of defence. The risk management function should monitor the business line's implementation of the insurer's environmental risk management policies, including challenging practices and decisions, where appropriate, while the compliance function should ensure adherence to applicable rules and regulations. The internal audit function, as the third line of defence, should consider as part of its independent review, the robustness of the insurer's risk management framework in managing environmental risk. We have amended the Guidelines to reflect these considerations.

4 Risk Management

4.1 The Guidelines set out expectations for the insurer to undertake an environmental risk assessment of each customer as part of its underwriting process, particularly for sectors

[1] The IAC Guidelines were issued on 10 September 2020, with a focus on the measures that financial institutions should put in place to promote the individual accountability of senior managers, strengthen oversight over material risk personnel, and reinforce standards of proper conduct among all employees.

with higher environmental risk. In addition, insurers should develop capabilities in scenario analysis and stress testing to assess the impact of environmental risk on its risk profile and business strategies, and explore its resilience to financial losses.

Identification of higher-risk sectors

4.2 Some respondents requested MAS to provide additional guidance on higher-risk sectors which include providing examples of such sectors and relevant criteria to identify them. Several respondents also suggested for MAS to develop sector policies in consultation with the industry.

MAS' Response

4.3 MAS' approach is not to prescribe higher-risk sectors at this stage. Instead, we expect insurers to determine higher-risk sectors and take the appropriate steps to assess, mitigate and disclose these exposures. The Guidelines set out qualitative criteria to help insurers identify higher-risk sectors, including the level of greenhouse gas emissions, vulnerability to extreme weather events, and linkages to unsustainable energy practices, deforestation and pollution. In addition, insurers may reference external literature to support their approach to risk identification, such as the Association of Banks in Singapore ("ABS") Guidelines on Responsible Financing, which include a list of industries with elevated environmental, social and governance risks.

4.4 Some respondents requested more discretion to decide which customers to subject to risk assessment, with an initial focus on larger customers in higher-risk sectors.

MAS' Response

4.5 MAS would like to highlight that insurers should implement the Guidelines in a way that is commensurate with the size and nature of their activities, as well as their risk profile. In this regard, the insurer should assess each customer's environmental risk as part of its underwriting assessment, particularly for sectors with higher environmental risk. The insurer may calibrate the scope and extent of this assessment based on factors including the sector, customer's operations, and nature and size of the transaction. The calibration approach should be documented appropriately. We have made amendments to reflect this clarification in the Guidelines. It is expected that an insurer's capacity to perform such assessments will mature over time, taking into consideration the availability of information from both internal and third-party sources.

Challenges in data availability

4.6 Several respondents requested guidance from MAS on managing challenges relating to data availability (including on greenhouse gas emissions, energy and water usage) and suggested for MAS to provide reference data sources.

MAS' Response

4.7 As environmental risk measurement and reporting methodologies are nascent, and disclosure frameworks continue to evolve, it will take time to converge on some form of minimum standards on disclosures across corporates. MAS recognises that data challenges pose a key impediment to insurers' environmental risk analysis, and data constraints would in part arise from the limited data reported by customers and a lack of comparability of the data. MAS is engaged in ongoing initiatives on the international and domestic fronts to alleviate these challenges. Internationally, MAS is working with other regulators through the NGFS to identify key data needs for environmental risk analysis, and the means to bridge these data gaps. We also participate in the International Organisation of Securities Commissions ("IOSCO") Sustainable Finance Task Force, which looks at improving sustainability-related disclosures by issuers and asset managers, and the International Platform on Sustainable Finance ("IPSF"), which enhances international coordination on disclosures. Domestically, Singapore Exchange ("SGX") mandates annual sustainability reporting for listed issuers, whereby all SGX-listed issuers are required to report on five primary components on a comply-or-explain basis. SGX will soon include the Task Force on Climate-related Financial Disclosures ("TCFD") recommendations within its existing guidance to assist listed issuers with their climate-related financial disclosures.

Building an enabling environment

4.8 Several respondents suggested developing a best practice handbook to guide insurers on their environmental risk management, including a reference list of sustainability standards. Several respondents queried if MAS would arrange industry-wide capacity building programmes, and clarified if MAS would perform accreditation on firms to provide certification and training on green finance.

MAS' Response

4.9 Building knowledge and capabilities in green and sustainable finance is a key thrust in MAS' Green Finance Action Plan. MAS will be organising a townhall for insurers to raise their awareness on MAS' expectations in relation to environmental risk management issues and our Guidelines. We are also working with the industry to develop practical implementation guidance on environmental risk management.

4.10 MAS is anchoring Centres of Excellence, think tanks and research networks in Singapore, to develop Asia-focused green finance research and training, and build a deep pool of expertise. The first such centre, the Singapore Green Finance Centre, was launched in October 2020, and is a partnership between Singapore Management University and Imperial College Business School, to conduct Asia-focused green finance research and training. MAS is also working with the Institute of Banking and Finance, the national accreditation and certification agency for financial industry competency, on accreditation of green finance training programmes.

4.11 MAS acknowledges that taxonomy is a common language on green finance, and clarity and consistency in such definitions will help support financial institutions to channel more green financing flows with confidence. MAS is working with the financial sector to assess the potential of a taxonomy for Singapore-based financial institutions, which could cover both green and transition activities, and could also be applied to these financial institutions' regional and global operations. MAS is also involved in discussions on taxonomy at regional and international platforms. This includes the IPSF, which MAS is a member of, where work on a "common ground taxonomy" is ongoing, to highlight commonalities among existing taxonomies.

Challenges in customer engagement

4.12 Some respondents cited challenges in engaging each customer posing higher environmental risk to improve its environmental risk profile and support the transition towards sustainable business outcomes. They highlighted that its effectiveness would depend on the influence that the insurer has over the customer, the customer's willingness to prevent or mitigate the environmental impact, and the materiality of the environmental risk. Several respondents also requested further guidance on what insurers can do to improve the customer's risk profile, and support its transition towards sustainable business practices.

MAS' Response

4.13 MAS expects insurers to engage customers posing higher environmental risk as part of their ongoing relationship management process, which will help inform the actions to effectively mitigate the insurers' risk exposure. While efforts should be made by insurers to actively encourage customers to improve their environmental risk profile and transition to sustainable business practices, MAS recognises the challenges faced by insurers in influencing customers' behaviour and the dependencies on customers themselves to achieve a sustainable business outcome. The Guidelines set out that the insurer may calibrate the extent of customer engagement based on factors including the materiality of the risk, the customer relationship and its willingness and ability to improve its environmental risk profile, and the availability of alternative options to effectively mitigate the insurer's exposures to environmental risk. The Guidelines also include a range of mitigating options that insurers may consider for customers that do not adequately manage their environmental risk, including reflecting the cost of the additional risk in the insurance premiums, applying limits on the underwriting exposure, and re-assessing the customer relationship.

4.14 MAS has provided more guidance in the Guidelines on how insurers can work with customers and encourage them to improve their risk profiles, including through establishing specific and meaningful environmental performance targets, such as carbon emissions reduction and improvement in energy efficiency. Insurers can also design ways to incentivise customers to attain these targets in a progressive manner.

Additional guidance on tools and scenarios for risk analysis

4.15 Some respondents requested more guidance on tools and metrics to adopt, so as to bring about greater standardisation and a level playing field. On stress testing and scenario analysis, several respondents suggested for MAS to provide standard scenarios and assumptions that insurers can reference. Some also sought clarification on MAS' expectation regarding the frequency of scenario analysis.

<u>MAS' Response</u>

4.16 MAS recognises that measurement methodologies are continuing to evolve, and these are more established for climate risk at this stage, compared to other types of environmental risk. Insurers may take a progressive approach towards environmental risk analysis, starting in areas with more well-established methodologies, and progressing to other environmental risk types as generally accepted methodologies and practices emerge. Risks of greater materiality and severity should also be prioritised and monitored more closely.

4.17 While MAS is not endorsing or prescribing specific tools and metrics at this stage, we have been working with other regulators on the international front, including the NGFS, to review and profile tools and methodologies used by FIs in environmental risk analysis[2]. This catalogue of case studies would provide a useful reference for insurers, as they continue to build capabilities in this space. MAS has included additional examples of tools and metrics to assess environmental risk in the Guidelines, drawing from international work and analysis done by other regulators, including on biodiversity risks[3]. Such examples are meant to be illustrative, and are neither prescriptive nor exhaustive at this stage.

4.18 On scenario analysis and stress testing, MAS similarly recognises that work in this space remains nascent, particularly for physical risk. There remain challenges in assessing the effects of climate change over longer time horizons, alongside the uncertainty in the global response to climate mitigation and adaptation. MAS will provide guidance to insurers on relevant scenarios and risk factors, including through our industry-wide stress tests in future, and also accord flexibility for insurers to determine the scenarios and risk factors that are more relevant for them in their individual assessments. The NGFS has also developed guidance on climate scenarios, which may serve as a useful reference for insurers. Insurers may also consider referring to scenarios aligned with scientific climate change pathways, including from the Intergovernmental Panel on Climate Change (“IPCC”) and the International Energy Agency.

4.19 Insurers may determine the frequency of scenario analysis appropriate for them, but this should be sufficiently regular to inform the insurers’ assessment of their risk profile and business strategies. Insurers may also define the time horizons that are appropriate to assess their short-term and long-term risks, in accordance with their business model and risk profile.

4.20 To support insurers’ efforts in stress testing, MAS will within the next two years incorporate climate-related scenarios in our annual industry-wide stress tests for the financial industry, providing some standard assumptions that insurers can reference. MAS’ work on climate stress testing and climate-related modelling will involve an iterative process in consultation with the industry, which will be refined as we collectively gain experience in this area. The climate-related scenarios will serve as an exploratory exercise to help attune insurers to climate risk, and consider how best to incorporate such risk in their own stress testing approach. Insurers can build up their capabilities in a gradual

[2] Network for Greening the Financial System, *Overview of Environmental Risk Analysis by Financial Institutions*, 2020,

[3] De Nederlandsche Bank, *Indebted to nature: Exploring biodiversity risks for the Dutch financial sector*, 2020.

manner, by starting with identifying relevant metrics, improving data collection, and exploring pilot analyses in particular sectors, such as those with higher environmental risk. MAS will continue to work with the industry to build capacity in stress testing, including exploring how new and existing datasets can be used to better capture the impact of climate risk.

5 Underwriting

5.1 The Guidelines proposed for insurers to incorporate environmental risk considerations into their underwriting process, taking into account the insurers' overall risk management framework and risk appetite. The insurer should also consider various options including re-assessing the relationship with the customer if the customer does not manage environmental risk adequately. Where customers are assessed to have a higher environmental risk profile, the Guidelines set out the escalation and monitoring processes that the insurer should undertake, such as in-depth due diligence and developing tools and metrics to monitor its underwriting exposures to environmental risk.

Assessment and Monitoring of risk

5.2 Some respondents requested more guidance on how environmental risk could be assessed in relation to underwriting and monitoring, and what MAS' expectation for insurers to assess compliance with the Guidelines is.

MAS' Response

5.3 MAS would like to clarify that we expect insurers to perform their own risk assessment, and determine whether they should approve claims for customers with higher environmental risk based on their own risk appetite.

5.4 Some respondents proposed for the escalation and monitoring in relation to underwriting process be done at the transaction level as opposed to the customer level, given that a customer may have many different insurance policies.

MAS' Response

5.5 MAS would like to clarify that we will not prescribe how insurers escalate or monitor such risks, but we do expect that this be done in a manner commensurate with the size and nature of the risks posed. Insurers could also look to ongoing industry efforts, including the NGFS, to develop and share good environmental risk management practices.

6 Investment

6.1 The Guidelines proposed measures that the insurer should undertake to ensure that it can monitor the inherent environmental risk in its investment portfolios, as well as consider the impact of environmental risk on its investment portfolio under various stress scenarios and time factors.

Relevance for outsourced asset managers

6.2 Some respondents commented that the proposed Guidelines should also be applicable for those who outsource their asset management activities as well as those who manage their portfolios internally.

<u>MAS' Response</u>

6.3 MAS would like to clarify that for insurers who outsource their asset management activities to external asset managers who are based in Singapore, such parties would also be subject to the MAS Environmental Risk Management Guidelines for Asset Managers. For insurers who outsource their asset management activities to external asset managers overseas, we expect the insurer to communicate the expectations set out in the Asset Management Guidelines to the overseas asset managers to encourage and promote sustainable environmental risk management behaviour and practices.

Others

6.4 Some respondents queried if MAS would be providing a list of industries and their corresponding environmental risk.

<u>MAS' Response</u>

6.5 MAS does not take a prescriptive approach in providing a list of industries and the corresponding environmental risk. Insurers may refer to publications such as the UNEP-PSI Underwriting Environmental, Social and Governance Risks in Non-Life Business, or the ABS Guidelines on Responsible Financing which include a list of industries with elevated environmental, social and governance risk.

7 Disclosure

7.1 MAS proposed that that insurers disclose, at least annually, their approach to managing environmental risk and the potential impact of material environmental risk on the insurer. MAS also proposed that insurers take reference from international reporting frameworks, including the TCFD recommendations, to guide their environmental risk disclosure.

Form of disclosure

7.2 Some respondents requested more guidance on metrics for disclosure, or for MAS to develop a disclosure template for insurers. In addition, some respondents sought clarifications on the applicability of disclosure requirements on foreign insurers and whether MAS would accept reports prepared and issued by a foreign insurer's head office. Some respondents also queried if insurers could disclose information via non-financial reports (e.g. sustainability reports), and whether insurers are to disclose publicly or report the data to MAS directly.

MAS' Response

7.3 MAS has not prescribed metrics to be disclosed as the maturity of environmental risk management practices varies amongst insurers, and practices are still evolving with multiple disclosure frameworks now available. We have reflected in the Guidelines that the insurer's disclosures should be in accordance with well-regarded international reporting frameworks, such as the TCFD recommendations.

7.4 MAS would like to clarify that the expectations set out in our Guidelines are applicable to all insurers with operations in Singapore. Disclosures could be prepared and issued by a foreign insurer's head office as long as they meet the expectations in the Guidelines. MAS considered that foreign insurers may already have processes in place to consolidate reporting with their head offices, and requiring foreign insurers with small Singapore operations to issue a separate local disclosure may be too onerous.

7.5 MAS would also like to clarify that we accept disclosure via insurers' annual reports, sustainability reports, and/or website. Insurers should evaluate the various means of disclosure and adopt an approach that best enables them to provide clear and meaningful information to stakeholders, based on the size and nature of their activities as well as their risk profiles. For avoidance of doubt, these disclosures are to be issued publicly.

Frequency of disclosure

7.6 Some respondents queried whether (i) frequency would be increased based on investor demand and (ii) timing of disclosures could be aligned with sustainability reporting requirements that insurer already have in place, in order to reduce duplication of work.

MAS' Response

7.7 In determining the frequency of disclosure, MAS took into consideration recommendations by international reporting frameworks such as the TCFD recommendations, which advocates an annual disclosure at the minimum. Insurers may align the timing of their disclosures with their existing sustainability reporting requirements so long as the frequency is at least annual. Insurers may disclose on a more frequent basis at their own discretion.

8 Implementation Approach

8.1 MAS proposed a transition period of 12 months after the Guidelines are issued, for insurers to assess and implement the Guidelines as appropriate.

Extended transition period

8.2 Majority of the respondents requested a longer transition period of 18 to 24 months.

MAS' Response

8.3 MAS will extend the transition period from 12 months to 18 months. We recognise that insurers may face initial challenges in implementing the Guidelines, and insurers' approaches to managing and disclosing environmental risk are expected to mature as the methodologies for assessing, monitoring and reporting such risk evolve. Notwithstanding, insurers should strive to implement the Guidelines as soon as possible, and demonstrate evidence of implementation progress over the transition period. MAS will start engaging key insurers on their implementation progress from Q2 2021.

8.4 By the end of the transition period, insurers are expected to apply the Guidelines to both existing and new businesses. Insurers should strive to make their first disclosure as soon as practicable after the Guidelines have been issued and within the transition period. The first disclosures should be made in the insurer's next annual report/sustainability report following the end of the 18-month transition period and on its website immediately after the 18-month transition period.

Incorporation into supervisory and regulatory frameworks

8.5 Some respondents sought clarification on MAS' plans to incorporate environmental risk in its supervisory and capital frameworks, as well as the supervisory actions that can be expected if insurers fail to comply.

MAS’ Response

8.6 As part of our supervisory approach, MAS will consider how insurers have incorporated environmental risk into their risk management and business activities. How well an institution observes the Guidelines and assesses, monitors, mitigates and discloses its risk exposures will factor into MAS’ overall risk assessment of the insurer.

8.7 We recognise that more data (e.g. on risk differentials between green and other assets) is needed to inform the incorporation of environmental risk in capital requirements. We will continue to monitor international developments and research in this area.

MONETARY AUTHORITY OF SINGAPORE

8 December 2020

Annex A

LIST OF RESPONDENTS TO THE CONSULTATION PAPER ON PROPOSED GUIDELINES ON ENVIRONMENTAL RISK MANAGEMENT (INSURERS)

1. Allianz Insurance Singapore Pte. Ltd.
2. AXA Insurance Pte Ltd
3. CFA Society Singapore
4. Ernst & Young
5. FWD Singapore Pte Ltd
6. Moody's Analytics & Moody's ESG Solutions and its affiliates, Four Twenty Seven and Vigeo Eiris
7. NTUC Income Insurance Co-operative Limited
8. Raffles Health Insurance Pte Ltd
9. Singapore Environment Council
10. Singapore Reinsurers' Association – Technical Sub-Committee
11. Steamship P&I Management (Singapore) Pte. Ltd.
12. Swiss Re Asia Pte Ltd and Swiss Re International SE, Singapore Branch
13. Tokio Marine Life Insurance Singapore Ltd
14. Transamerica Life (Bermuda Ltd.) (Singapore Branch)
15. WWF Singapore
16. XL Insurance Company SE – Singapore Branch
17. Deloitte & Touche, which requested for confidentiality of submission
18. Manulife Singapore Pte Ltd, which requested for confidentiality of submission
19. Respondent A
20. Respondent B
21. Respondent C
22. Respondent D
23. Respondent E
24. Respondent F

25. Respondent G, which requested for confidentiality of identity and submission
26. Respondent H, which requested for confidentiality of identity and submission
27. Respondent I, which requested for confidentiality of identity and submission
28. Respondent J, which requested for confidentiality of identity and submission
29. Respondent K, which requested for confidentiality of identity and submission
30. Respondent L, which requested for confidentiality of identity and submission
31. Respondent M, which requested for confidentiality of identity and submission
32. Respondent N, which requested for confidentiality of identity and submission
33. Respondent O, which requested for confidentiality of identity and submission
34. Respondent P, which requested for confidentiality of identity and submission
35. Respondent Q, which requested for confidentiality of identity and submission
36. Respondent R, which requested for confidentiality of identity and submission
37. Respondent S, which requested for confidentiality of identity and submission
38. Respondent T, which requested for confidentiality of identity and submission
39. Respondent U, which requested for confidentiality of identity and submission
40. Respondent V, which requested for confidentiality of identity and submission
41. Respondent W, which requested for confidentiality of identity and submission
42. Respondent X, which requested for confidentiality of identity and submission
43. Respondent Y, which requested for confidentiality of identity and submission
44. Respondent Z, which requested for confidentiality of identity and submission
45. Respondent AA, which requested for confidentiality of identity and submission
46. Respondent AB, which requested for confidentiality of identity and submission

Annex B

SUBMISSION FROM RESPONDENTS TO THE CONSULTATION PAPER ON PROPOSED GUIDELINES ON ENVIRONMENTAL RISK MANAGEMENT (INSURERS)

S/N	Respondent	Responses from respondent
1	Allianz Insurance Singapore Pte. Ltd.	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** No objections, in principle. This approach, where application is made to business functions such as Investments and Underwriting, seems reasonable in encouraging Environmental Protection from 'bottom-up'. However, we urge the MAS to consider how such a Singapore-based regulation may impact the competitive positioning of financial institutions in the regional and global contexts, and if this framework can be established pragmatically and circumvent regulatory arbitrage. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No objections to the intent of this guidance. However, we encourage the MAS to clearly define its ambitions on Environmental Risk Management such that clearer responsibilities and resources can be assigned. Allianz internal standards and guidelines do embed environmental considerations in Underwriting, Investments, Reputational Risk and Operational Risk. We should note that the Environmental Risk framework is a very broad yet nascent topic, under which even more established subjects like Carbon Trading are subsumed. With this in mind, it would be helpful if the MAS can provide clearer prescriptions on the

		framework's parameters (risk identification, measurement) – the industry could start out with something simple before gaining more traction and heft as this topic matures. This will go some way in helping financial institutions in managing and allocating the requisite resources for this topic. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** Same comment as Question 2. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** Same comment as Question 2. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** The proposal in the Consultation Paper implicitly requires financial institutions/insurers to impose ESG-type requirements on its potential customers and counterparties. However, we feel that this can be better and more efficiently achieved through direct regulation instead. This can be achieved through concert with other Singapore regulatory bodies (e.g. NEA, Ministry of Environment), and potentially with other jurisdictions too, so that we have a unified objective whilst circumventing regulatory arbitrage.

		Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance. We reiterate the suggestion for a clearer definition of the MAS' ambitions in regard to Environmental Risk. As mentioned previously, this is a very broad and nascent topic with a heavy scientific basis, and on which financial institutions will not have deep knowledge. Particularly in regard to modelling environmental changes over the longer horizon, we will be dependent on the scientific and governmental agencies to clearly advise on environmental risk scenarios. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** We concur that, as it is with good governance practices, insurers should establish an escalation mechanism in regard to Environmental Risks. However, given that this is a fairly new field, wherein clearer prescriptions would be appreciated on how Environmental Risks should be assessed. The converse is that financial institutions may develop incongruent views and practices; and consequently, that the MAS will find it challenging monitoring this topic with multiple corporate methodologies. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Fundamentally, there will be specific industries that are inherently riskier than others with respect to Environmental Risk – and will therefore be more directly exposed to such regulatory developments.

		In view of this, and while Allianz and many other corporations endeavor towards responsible business practices, the most effective approach in tackling Environmental Risk is through a concert of regulatory bodies (and possibly jurisdictions) motivating for desired changes. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** Reporting on an annual frequency seems reasonable, and we agree with the proposal for an insurer's disclosure to be consolidated at the Group or Head Office level. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** Allianz currently manages Environmental Risk by way of ESG in our business practices. However globally, Environmental Risk remains a fairly new topic with room for further development. Financial institutions are therefore looking towards the regulators and scientific community for advice on how this can be equitably and efficiently tackled. As a baseline, good governance on Environmental Risk should be practiced e.g. senior management attention, defined escalation channels, risk appetite. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.**

		We suggest that MAS provide clearer prescriptions on the technical and qualitative requirements of Environmental Risk Management. Environmental Risk can be a very broad topic that potentially demands time and substantial resources in developing, depending on the prescribed scope. If the scope is complex, then we suggest the transition period to be supplemented by additional time buffers for insurers who may, for extenuating reasons, be unable to meet the initial timeline.
2	AXA Insurance Pte Ltd	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** AXA has no comments on the scope of activities however across business lines implementation and quantitative monitoring of its ERM policy may differ due to different challenges/complexities (e.g. Investment in General account more advanced as compared to Investment Linked Product). The Authorities may also wish to clarify if the intention is for the Guidelines to apply only to the underwriting of corporate insurance solutions or if it also includes underwriting of individual insurance solutions (both individual life and P&C eg motor, travel). For investment activities, the Authorities may wish to clarify to what extent the guidelines apply to the investments/funds under the Investment-linked portfolio. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.**

		The Authorities may wish to clarify if the expectation is to have expertise based locally or whether a combination local inputs with strong support from Regional/Head office would suffice. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** No comment. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** Related to Question 1, the Authorities may wish to clarify if "each customer" is defined to capture only corporate customers or individual customers as well. Even within corporate customers, there may also not be any direct linkage/relevant between the insurance needs and the customer's environmental risk profile that warrants an environmental risk assessment. For example, a manufacturer buying a motor insurance for its company car. Also, an environmental risk assessment may not be feasible for smaller companies like SMEs where information such as metrics on sustainability practices, etc may not be readily available. Would the Authorities accept a model based on exceptions instead of risk assessment of each customer? For eg, the insurer identifies: - A list of certain industries/sectors/activities as clear prohibitions, and - A list of certain industries/sectors/activities for which escalation will be required The Authority may wish to clarify its expectations on the insurer to "engage customers that pose higher risk and support their transition towards sustainable business practices" as these activities extend beyond the typical activities of a licensed insurer. An insurer is also unlikely to be the best equipped to offer such guidance and support. Just like if a customer's credit profile does not meet an insurer's

		requirement, the insurer would not engage in credit counselling/restructuring to help the customer improve its credit profile. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** Assessment of environmental risk in investments has gained traction and made good progress internationally among the investment community, with initiatives such as assignment of ratings. With such progress, stress testing and scenario analyses are possible next steps in risk management. However, the same can't be said for the consideration of environmental risk in the insurance underwriting. While physical risk is somewhat related to natural catastrophe risk (which is a key feature of risk management for the P&C business), the assessment of transition risk arising from the process of adjustment to an environmentally sustainable economy is still in its infancy stage. The lack of a common methodology for measuring and quantifying such risk, as well as difficulty in obtaining reliable data for the local market and small-mid size customer would make stress testing and scenario challenging and render the results highly judgement and unreliable. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** Same comments as question 5. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.**

		The Authority may wish to clarify its expectations on the insurer to "work on environmental issues with companies who are particularly exposed to such environmental risk". This statement appears under the section of Investment. It is unclear which "companies" (eg bond issuers? equity issuers?) are referred to and what is the role expected of the insurer. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We seek clarity from the Authority that a consolidated group report at Group level (without specific text/numbers attributed to Singapore operations) is acceptable. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** The Authority may wish to provide guidance on: - Whether, and how, environmental risk management would be considered in the Authority's CRAFT assessment rating of insurers - Whether there is any intention/plan to factor environmental risk into capital frameworks (eg lower capital charges for green investments and vice versa, or an environmental risk charge like operational risk charge) - Whether there is any intention/plan to factor environmental risk in procurement activities (eg selection of vendors, selection of services). **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** Example - Imposition of sector exclusions and underwriting restrictions on certain sectors/industries/activities. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.**

		It may be more practical to consider a phased implementation approach in line with the state of maturity for the various activities globally, starting with - Investments, and a longer implementation timeline for underwriting; and - Risk identification and assessment, and a longer timeline for more advance risk management practices like stress testing and scenario analysis.
3	CFA Society Singapore	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** MAS can consider how the Guidelines apply to capital market services licence holders (CMS), reinsurers and Investment-Linked Products (ILP) in the following scenarios: 1) Insurers often outsource their investment activities to CMS, of which some are related group entities 2) Insurers do underwrite and reinsure high environmental risks to reinsurers. Reinsurers may accept risks from other reinsurers outside MAS' supervisory purview 3) Role of Appointed or Certified Actuary - whether environmental risks competency is an approval criterion Given the similar investment-focus between ILP and investment products such as unit trusts, we seek clarity from MAS on how the Guidelines ensure a level playing field across these investment products and financial institutions. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** If environmental risk is deemed another component under the Enterprise Risk Management (ERM) framework, the Board should oversee environmental risk management. However, the Board may not have the knowledge and expertise to effectively implement the above.

		We propose a pragmatic step-by-step phased route as an alternative to achieving the above: • Delegate the responsibility for development and implementation of the environmental risk management framework and policies to preferably senior in-house ESG expert(s). This could either be individuals or a committee (which may include a Board representative) such as an ESG or environmental oversight committee with adequate representation from various key stakeholder groups such as investment teams, client relationship managers as well as ESG experts • Apart from defining the policies and processes, this group should regularly track environmental risk metrics for each of the firm's strategies on a periodic basis such as semi-annually, and update the Board on key risks in various strategies and how they are being managed. In this manner the Board would have oversight on environmental risk issues • On a concurrent basis, the Board should undergo training to acquire the knowledge, expertise and skills required to ultimately be in a position to perform the proposed oversight responsibilities In implementing the above suggested route, we should take into account the following: • Most insurers already have Board Committees for risk management which renders the above suggestion of a committee not-arduous to adopt. And as part of an insurance company director's duty to exercise care, skill and diligence, she or he has to be prepared to address these risks, especially if they are members of Board Committees responsible for risk management • Managers of different asset classes may experience different challenges in implementing an environmental risk framework. For example, availability of data needed for private equity to implement the risk framework may be scarce and difficult to obtain

		• In general, insurers with huge AUMs are in better position to implement the framework due to more resources at their disposal. Small insurers or outsourced fund houses with small AUM will struggle to do the same, and may experience significant increase in costs, especially if they have to rely on vendor data and expertise, putting them at a disadvantage compared to bigger insurers. Hence, there should be a differentiation in timeline for different insurers and outsourced fund houses • Nevertheless, there are numerous no-charge online training material for many insurers and outsourced fund houses to benefit from. Alternatively, the authorities or regulators may want to make available or catalyse the development of courses and training for the benefit of financial professionals **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** The Group Chief Risk Officer should or can be responsible for environmental risk as part of ERM, or a committee should the Group Chief Risk Officer has yet to acquire the relevant expertise or knowledge. **For the senior management team, this should come under the purview of the risk management team and its head.** **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** The Board, via its Risk Committee, should be the committee overseeing environmental risk. The Head of the risk management team, or the relevant member of this team such as Group Chief Risk Officer, should be an invited participant to every meeting. Executives in and/or the Head of the risk management team should be

		responsible for proposing, executing, and implementing approved policies. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** No comment. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** No comment. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** If environmental risk is subsumed under ERM, we seek clarity on how does MAS differentiate its supervisory approach between environmental risk and other insurance risks underwritten by insurers. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Fiduciary responsibilities and risks are core. MAS can be holistic in how it supervises environmental risks in underlying investment portfolios managed by all financial institutions, including insurers and CMS.

		Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer. There needs to be differentiation in terms of scope of disclosure and time frame for compliance for different asset classes. The availability of data necessitates this differentiation – publicly listed company data are in general more readily available compared to data required by private equity. When data is scarce or meaningful disclosure not possible, insurers may opt to not-comply but they have to explain the reasons for non-disclosure. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** MAS might want to consider a broader based ESG implementation approach instead of just focusing on E. Once insurers incorporate ESG factors into portfolio management, refinement on environmental factors can follow. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** From the experience of CFA Society Singapore Members who are already in the ESG space, the 12 months implementation timeframe would be sufficient for fund managers who have already laid the foundation on ESG risk evaluation and integration into their investment processes. The same cannot be said for other companies who have not started or are at the very early stages of the ESG / environment or climate risk journey. It will be challenging to comply with the proposed guidelines in 12 months. Availability of data, size of AUM and many other factors

		may also affect the ability of different insurers or their outsourced fund houses of different asset classes to comply. Secondly, with the availability of third-party data providers, evaluating and disclosing climate risks is plausible within 12 months but systematic integration into investment analysis and portfolio construction will take much longer. Mainstream analysts are not familiar with such factors and will require practical training to be proficient. In addition, the variety of assumptions made during scenario analysis makes integration even more complex as it is not clear when and how these risks could play out. Lastly, the suggested phased step-by-step approach as per response #2 will definitely require more than 12 months to implement.
4	Ernst & Young	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** No comment. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** No comment. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.**

		No comment. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** No comment. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** No comment. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** No comment. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** No comment. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We would like to recommend a common framework/standard on disclosure of environmental risk as it will contribute to more accurate and higher quality information and data for the stakeholders This

		standardization will result in more comparable, relevant and reliable disclosures. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** EY believes environmental/climate risk is a priority now. Greater transparency/disclosure in this area would address investor's growing interest on this topic. Having assurance over such disclosures would also improve market confidence. External Assurance To create added impetus for and trust on the disclosures of approach to managing environmental risk, MAS could consider the requirement for external assurance over the disclosures. Internal Assurance Additionally, or alternatively, the internal audit function can play a role in ensuring that the framework, policies and procedures established by the insurer to manage environmental risk are appropriate and that the internal control environment in relation to managing environmental risk is designed and operating effectively. Overall The focus on environmental risk is a first step in the right direction, as we seek ways to ensure sustainability of the environment in our daily business and activities. Alongside environmental risk, we should also consider sustainability risk from a wider perspective, including social objectives, in the provision of financial services. MAS should consider guidance on managing social risks as we embark on new initiatives. A good balance would have to be struck as certain practices arising from new initiatives have negative externalities. We should also take into account the competition and realities that financial institutions in Singapore face vis-à-vis their regional and global peers. A calibrated and phased-in approach balancing short and longer-term benefits should be considered.

		Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines. No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** No comment.
5	FWD Singapore Pte Ltd	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** The guidelines seem to be more applicable for insurance companies who have corporate policyholders since it has mentioned "expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices". Please clarify if the understanding is correct. In addition, are all sections relevant to all types of FIs or Insurers? For example, Environmental Risk Management may not be straight forward to be included in the underwriting or pricing of individual term life product. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their**

		effectiveness, and allocating adequate resources to manage environmental risk. No comment. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** Should the responsibility to oversee the environmental risk rests with the first line or second line of defence? **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** Will MAS provides more specific guidance on how assessment of individual customer is expected to be carried out for life insurance companies, such as mandatory processes etc. It is harder to analyse whether an individual customer will pose higher environmental risk. In addition, perhaps MAS can consider providing guidance on which are the sectors that pose higher environmental risk. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** No comment. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.**

		Will MAS provide more guidance or requirement on how environmental risk could be assessed in relation to the underwriting and monitoring frameworks? **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Will insurers be provided with a list of the industries and their corresponding environmental risk so that the insurance companies will be able to monitor the inherent environmental risk in its investment portfolio. Is there any intention to reflect environmental risk as part of prescribed risk charge in RBC2 framework? Are insurance companies expected to consider environmental risk as part of its risk appetite? **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We propose a disclosure on environmental risk in the annual financial statements. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.**

		We propose a transition period of 18 to 24 months as many insurance companies are not familiar with the Environment Risk Management.
6	Moody's Analytics & Moody's ESG Solutions and its affiliates, Four Twenty Seven and Vigeo Eiris	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** The MAS Guidelines cover a comprehensive range of entities and business activities. In addition to the list of key entities in scope, and within the scope of application context, we acknowledge the fundamental logic to apply the principles of materiality, context and proportionality, in a commensurate and proportionate manner with respect to the scale, scope, size and business models of a broad range of financial institutions. Frameworks and defined timelines for managing and measuring operational complexity and resilience require alignment with this fundamental logic. Factors such as scale and size can determine the ability and speed of business transformation and transition, especially where sustainability and innovation are concerned. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** ESG-related risks that were once considered as "emerging" and / or "intangible" are now more widely recognized as being significant. These include Climate Risks, Cyber Risks, Social Risks etc. The evolving risk management landscape prompts many board of directors to take a more active role in understanding and addressing ESG-related issues and to demonstrate how boards are evaluating risk exposures to various issues, including ESG. We believe it is important for boards to implement processes to provide oversight of management's measurement and mitigation efforts with respect to managing these risks.

		We believe boards should provide oversight of ESG risks while senior management should be responsible for the management of ESG risks in relation to the implementation of a risk management framework. This would help make certain that ESG risks are integrated into an entity's strategic thinking and decision making processes at the highest level of the organization. From a risk perspective, we believe ESG risks should be fully integrated within the existing internal control and risk management framework. The board (and, when appropriate, a designated committee) should be responsible for establishing the governance and culture for risk management including both ESG and non-ESG related risks. This approach was highlighted by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in their paper "Demystifying Sustainability Risk - Integrating the triple bottom line into an enterprise risk management program" (May 2013), "Managing sustainability risk is not the responsibility of one function, nor should it be a stand-alone proposition. […]. Sustainability must permeate organizational thinking from the boardroom and executive suite to the shop floor. It needs to be integrated into division, business unit and operations planning and activities to be truly effective." The assessment goes beyond the classic analysis of board composition, election cycles and independence in order to understand how ESG factors are integrated in board committees, audit functions, remuneration plans and more. We believe ESG risks may in turn affect credit, counterparty, operational, and market risks. Therefore, incorporating ESG risks into a financial institutions' Risk Appetite Framework is well-aligned with the aim of proactive risk and resilience management. institutions. The allocation of dedicated resources and the type of committees tasked with overseeing ESG risks needs to be appropriate in the context of the size and complexity of an organization. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk**

		management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk. We believe boards should provide oversight of ESG risks while senior management should be responsible for the management of ESG risks in relation to the implementation of a risk management framework. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** We believe environmental risk management and oversight should be incorporated into an organization's overall risk management framework to provide for a strengthened, effective and integrated risk management process. Organizations should consider existing governance frameworks for the management of financial risks when integrating their ESG risk frameworks since environmental risks are being quantified and managed in alignment to the relevant financial and operational risks and opportunities. The common practice is for organizations to create sustainability and climate change taskforces or committees which are led by an existing executive such as the chief financial officer, chief risk officer or the chief investment officer (also as referenced as part of the Climate Financial Risk Forum Guide 2020, issued by the FCA, UK, https://www.bankofengland.co.uk/news/2020/june/the-cfrf-publishes-guide-to-help-financial-industry-address-climate-related-financial-risks) who will assume the overall responsibility for environmental risk management and its implementation. Essentially the taskforce and or designated committee is tasked with the implementation of a climate change risk management framework within the organization and, following its implementation, will monitor and enforce the integrated risk management operating model. In addition, the taskforce and or designated committee should

		have a clear mandate, defined roles and responsibilities and should include representatives and roles assigned from across the three lines of defense. The executive in charge, should be tasked with raising the awareness of the environmental risk agenda among the board committees and leadership teams within the organization, and should make recommendations to drive the strategy and mindset of the organization in this space. This means targets for environmental risk management (identification, quantification and reporting), defined targets and metrics in line with the organizations' risk appetite, and recommendations for new lines of business or products. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** The engagement opportunities identified by MAS are comprehensive and meaningful. It is commonly perceived as good practice to foster engagement with firms, clients and investee companies to improve an environmental risk profile. PRI signatories, are required to take such a proactive role in conducting their business. The engagement phase is paramount in the risk identification and measurement phases. An operating framework set up to manage the associated risks while originating financial resources (e.g. lending/investments) instead of distributing such risk meets the ultimate goal of reducing environmental risks. A drawback of enhancing expectations towards more relationship-based business models for financial institutions may be the higher costs of such an organizational model which in turn disadvantages smaller firms (size bias). Organizations of all sizes have a role to play in order to meet the 1.5-2 degrees Paris Agreement goals.

		As per Moody's affiliate, Vigeo Eiris ESG assessments for banks, approaches to corporate customer engagement may include: • Drawing from the findings of risk identification to strengthen management systems to better track information and flag risks, including those associated with the clients, geographies, products or sectors, before adverse impacts occur. • Building up sectoral expertise that includes understanding what preventive measures can be put in place and working with clients on implementing those. • Defining exclusionary criteria that prohibit the provision of a financial service to companies under specific circumstances or for specific clients. • Defining conditions for the provision of financial services to companies based on their adherence to well-established and recognized standards (UN Convention on Biological diversity, CITES, OECD guidelines on MNE…) and/or good practices. • Providing training that is fit-for purpose for the bank's relevant staff and management. • Assigning relevant senior responsibility to oversee implementation of preventive measures. • Seeking to influence a client to develop stronger environmental risk management systems. • Joining geographic or issue-specific initiatives that seek to prevent and mitigate adverse impacts in the areas identified (e.g. country, commodity, or sector roundtables or multi-stakeholder initiatives), which may also include engagement with governments. Specifically, for corporate lending activities: • Assigning responsibility for ensuring that bank activities that cause or contribute to adverse impacts cease. • Encouraging clients to create a roadmap for how the client can cease the activities that are causing or contributing to adverse impacts, involving impacted or potentially impacted rightsholders and other stakeholders as relevant. Banks can recommend the client to hire an external environmental and social consultant to support mitigation activities.

		• Engaging with prospective and existing clients through face-to-face meetings with its representatives from operations, senior management, and/or board level to discuss on how their clients are approaching the key environmental matters relevant to their business and to request time-bound action to address or mitigate an impact. • Collaborating with other banks involved in the transaction or other stakeholders to exert leverage on environmental matters, subject to legal obligations. • Connecting clients with needed resources to address impacts and manage risks. • Providing prospective clients with incentives to meet certain environmental related targets (e.g. coupling the interest rate of the loan with the company's sustainability performance). • In certain high-risk cases, requiring third party review of compliance with environmental policies and/or requirements for high-risk clients on behalf of the banks can be conducted For underwriting securities activities: • Where a deep level of due diligence is required e.g. for an environmental impact assessment, to encourage the client to report on the related risks in investor information disclosures (prospectus). • Advising clients to include environmental issues in disclosure documents (e.g. the prospectus or brochure in a securities underwriting transaction) and requesting the client to explain how it is planning to address the key issues that are likely to affect its future performance. • Challenging a client's perception of material risk issues (with related risks often being not financially material, or not relevant to investors). • In the case of securities underwriting, if a company in a carbon-intensive industry does not consider environmental and climate change to be a risk because there is no foreseeable short-term impact on the company, then the bank can play a role in explaining to the client the significant environmental and social risks that climate change poses and its potential material impact for the client, for example due to changing investor sentiment and increasing regulation.

		For insurers, we can break down as underwriting and investments as follows: Underwriting: • Active dialogue with insured companies with high environmental impacts (i.e. Systematic engagement with companies having high environmental impacts (i.e. palm oil; climate change, biodiversity): support companies' management of material risks related to climate change and establish the transition away from coal) • As risk experts, engaging with consultative dialogue and sharing of expertise can add value to improve overall risk awareness and mitigation. Investments (proprietary assets/asset management activities): • Active ownership – ESG engagement • Active ownership – voting • Exclusions policies • Membership in engagement initiatives at a sector level **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** For banks' lending activities, MAS may consider the following: • For sensitive sectors that may harm biodiversity (palm oil, land use and agroforestry, food production, wood production, water management, marine fisheries and aquaculture…) banks can be encouraged to develop sector specific policies and systematically conduct an environmental risk assessments and environmental due diligence. • With regards to high emitting sectors (energy production with fossil fuel industries, transport…), banks can have processes that systematically consider climate risks in their financing prior to engaging in lending activities. • Environmental risk assessments can be reported against IFC's E&S Performance Standards 1, 3 on Resource Efficiency and Pollution

		Prevention, and 6 on Biodiversity conservation and Sustainable Management of Living Natural Resources on Environmental and Social Sustainability and/or the Equator Principles. Main steps can be considered as follow: o Risk identification and establishment of sector exclusion policies: Identifying and assessing the most significant areas of environmental and climate risks across client portfolios based on information provided by clients via independent research. Examples: unconventional fossil fuel (tar sands oil, Artic oil exploration and extraction, ultra-deep-water oil & gas, etc.) o Categorization: based on the IFC standards and based on the magnitude of potential environmental and social risks and impacts related to climate change, and biodiversity. o ESIA: The client is expected to include assessments of potential adverse and climate change risks as part of the ESIA or Other Assessment, with these included in the Assessment Documentation. The Climate Change Risk Assessment should be aligned with Climate Physical Risk and Climate Transition Risk categories of the TCFD. For securities underwritings: • Exclusionary screening/positive screening (best-in-class approach)/divestment from ecological sensitive and high carbon intensive sectors • Climate risk assessment: carbon asset risk stress testing, climate scenario analysis, measures to forecast potential future outcomes under a range of different assumptions, inclusion of additional metrics such as green/brown metrics, carbon pricing. • Promotion of 'green' products through capital market mechanisms, such as green, sustainability and transition bonds referring to ICMA & CBI principles, development of ESG thematic indices and funds • Assisting corporate clients in analyzing carbon exposure and developing emissions reduction strategies following Science-Based-Targets and Net-Zero Carbon initiatives recommendations. • To develop an appropriate approach for the disclosure of the CO2 emissions of assets/loans/investments portfolio under supervisory guidance.

		For insurers, processes and policies related to the integration of environmental risks should be applied to the insurance underwriting as well as to the investment and asset management activities. It is good practice to determine clear risk and oversight management responsibilities (i.e. via the ESG teams), with specific skills and regular training on emerging risks. Insurance underwriting: • Potential environmental risks identified (environmental risk identification) • Transaction subject to a detailed assessment (environmental risk assessment). Depending on the outcomes (in the framework of the environmental risk management): 3 different options: 1) proceed with transaction 2) proceed with conditions (dialogue with the client) 3) decline the transaction Investments: • ESG ratings and scoring (threshold to be set) • If issuers below the threshold are included in the portfolio: engagement process (see above) • Impact Investment funds • Apart from the identification of high environmental risks – already commented - insurers have different tools at their disposal, such as: • Educating customers on climate-friendly behaviors; • Utilizing terms and conditions to foster climate-friendly behaviors from customers (rewarding risk-minimizing behavior to excluding environmental liabilities; pay-as-you-drive (PAYD) insurance products, i.e. with discounts for policyholders who drive less than the average driver); discounts for fuel-efficient or low-emission vehicles); • Financing climate-protection improvements (insurers, especially those associated with banking operations, are able to engage in financing customer-side projects that either improve resilience to the impacts of climate change or contribute to reducing emissions); • Offering a climate risk management service and developing specific products promoting climate-friendly technologies and practices

		Vigeo Eiris will be pleased to share further details on above as part of its assessments upon interest. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** Similar data and methodological considerations apply as highlighted for banks above, in terms of climate risk identification, quantification and reporting (=Question 6 for banks). In addition, insurers may consider the following: • Systematic screening and assessment of ESG risks • Engaging clients and brokers in risk dialogues • Insuring low-carbon technologies • Incentivizing preventive measures to increase customers' resilience and compensate for climate-related damages; • Developing innovative climate risk insurance to vulnerable regions • Phasing out all climate intensive sectors from P&C insurance portfolios / no longer providing insurance for sectors with high environmental impacts (i.e. construction and/or operation of single coal-fired power plants and coal mines); • Engaging with policymakers to drive sustainable finance and achieve the Paris Agreement's goals. • The insurance industry statement on sustainable marine insurance (https://eu.oceana.org/sites/default/files/oceana-psi_marine_insurance_statement_with_signaries_and_supporting_institutions_28.5.2019.pdf) • The Ocean Risk and Resilience Action Alliance (https://www.oceanrisksummit.com/ManagingAndReducingOceanRisk) **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor**

		and mitigate the environmental risk inherent in the investment portfolio. Insurers may consider the following as per the investment portfolio: • ESG ratings and scoring (threshold to be set). If issuers fall below the threshold are included in the portfolio there should be an engagement process. (Further materials on methodology by Vigeo Eiris can be shared upon interest) • Monitoring of the CO2 emissions associated with its investment portfolio (i.e. portfolio carbon footprint/carbon intensity) • Initiatives to reduce CO2 emissions associated with its investment portfolio (i.e. phasing out from investments in fossil fuels, limits to invest in sectors with high environmental impacts) • Carbon risk assessment framework (carbon asset risk stress testing, climate scenario analysis, measures to forecast potential future outcomes under a range of different assumptions, inclusion of additional metrics such as green/brown metrics, carbon costs, etc.) **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** Some level of partial disclosure or phasing in of the disclosures as part of the transition period may be considered to allow the firms time to comply and add the required level of complexity. In addition, banks and asset managers may consider the recommendations outlined in the report, “Advancing TCFD Guidance on Physical Climate Risks and Opportunities” that outlines guidance for disclosure on physical climate risk. Given the level of assessment and metrics that are considered for a firm level disclosure, as well as the scenarios and the horizons that are being considered, a widely accepted disclosure frequency for banks, insurers and asset managers is following an annual cycle, typically as part of an annual report which is used by shareholders and other stakeholders for resource allocation decision-making.

		For asset managers product level disclosures which by nature are more dynamic and short term may require a more frequent level of disclosure. There is also an increasing trend among supervisory authorities to assess financial stability in response to ESG risks and climate change on a periodic basis through the climate stress test exercises and/or incorporating climate scenario analysis in existing risk frameworks, such as the Bank of England 2021 biennial exploratory scenario on the financial risks from climate change, published in December 2019. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** In terms of content: Disclosures under the TCFD framework are considered as important in terms of value added and cross regional appeal. Within our TCFD reporting alignment research we have already identified the cross regional reach these recommendations are having (as well as the limited number of issuers from across the financial sector that are currently reporting in line with the TCFD requirements). MAS recommending the TCFD framework could further develop the current global status and bring different regions under the same framework thus facilitating approaches and data comparability. In terms of form: the TCFD recommends placing ESG disclosures in the annual financial reports. We understand the view that one integrated financial/ESG report at group level can provide complete view on Banks' (or any other companies) exposure to environmental risks. However, we do not consider integrated reporting formats to be absolutely necessary. Ultimately, the most important element is that the information is disclosed publicly. In terms of frequency: we agree with the MAS proposal of annual reporting, at the same time with the financial disclosure. As mentioned, these can be complemented by relevant stress testing and other risk management practices.

		Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines. Below is a non-exhaustive, select number of examples collated from publicly available sources. Examples for Insurers: Allianz (Insurance) Allianz global ESG screening process (relevant for both insurance & investment) consists of 13 sensitive business areas (including Agriculture, Animal testing, hydro-Electric power, oil and gas...) and each area has a respective guideline that highlights the key ESG issues. Business not captured by the ESG guidelines are captured by the reputational risk screening. Allianz reported that it systematically integrates ESG through its ESG referral and assessment process and guidelines for sensitive business areas across all property and casualty underwriting (P&C). Every transaction is screened locally to identify potential ESG concerns. If a risk is identified, the case is referred to the appropriate group-level ESG function to assess the ESG risk in more detail. AGCS ESG Business Services acts as a center of competence for ESG and central contact point for Allianz Group's Property & Casualty (P&C) underwriters globally. As part of the ESG Referral Process, the AGCS ESG Business Services team ensures all potentially ESG critical business transactions are screened and assessed in-detail to allow informed decision making. If ESG risks cannot be mitigated or reputational impacts are likely to affect Allianz Group, a transaction is escalated for a Group-level ESG assessment to determine, if and if so, under which conditions, the local underwriting can proceed. In terms of resources, the company reports that training is a key part of implementing a successful ESG approach and in 2016, Allianz built a new ESG training module into the underwriting training academy. In the beginning of 2017, a related ESG training module was added as

		a compulsory element to the "Underwriting Academy" for AGCS Underwriters, a similar module for all other Underwriters in the Allianz Group is currently prepared. Munich RE (Insurance) From the PSI, Munich Re developed a framework for integrating ESG aspects into the core business. Comprehensive risk analyses play a key part in the assessment of a client's risk profile. For Munich Re's reinsurance business, the core activities include the risk assessments undertaken prior to entering into business and during annual renewals, the objective of which is to re-evaluate and revise reinsurance contracts. They include any particular environmental, social and political factors the individual contracts may involve. Biodiversity plays a role particularly in connection with Munich Re's liability insurance. Munich Re is working on new covers for biodiversity risks, which will, for example, trigger prevention measures. The Global Underwriting and Risk Committee (GURC) is responsible for the establishment and ongoing implementation of an appropriate risk management process in the business field of reinsurance to ensure that risks are quantified and entered into consciously. Reinsurance operations focus on customised products. Each contract is designed to match the risks of the individual client and, as a result, Munich Re establishes very close ties with clients, also understanding the environmental challenges they might face. The ERGO Insurance Group offers a wide range of insurance products and services that take account of environmental aspects. Some examples: (i) The company offers products to ensuring businesses' survival in the event of environmental damage: European environmental law increasingly holds polluters responsible for causing damage to flora, fauna, bodies of water and soil. In the event of a loss, immense clean-

		up costs can threaten the very existence of businesses. With comprehensive expert advice and appropriate preventative measures, ERGO’s environmental impairment insurance helps avoid losses. (ii) Munich Re has been offering a detailed risk assessment service for industrial projects (Project Risk Rating) since the start of 2014, specialising in the areas of infrastructure and renewable energies, and which also takes into account environmental aspects. AXA (Insurance) AXA allocates extensive means to reduce indirect impacts on climate change: - Developing models and other methods of integrating climate change-related risks in the assessment of customers’ risks. Climate Change is one of the three funding areas of the AXA Research Fund, a EUR 100m initiative whose results are designed to be made public and benefit the research community as a whole. Climate Change risks are primarily managed within the AXA's Group Risk Management. This structure aims notably at identifying, measuring and managing financial, insurance and operational risks. Climate Change-related risks exposure analysis mainly focuses on extreme weather events. Risks are estimated in terms of costs potentially borne by insured customers (which are directly linked to potential claims). - Developing specific products promoting climate-friendly technologies and practices. The retail and commercial product lines propose new products, such as insurance policies/ products encouraging low CO2 emission vehicles, home insurance policies encouraging energy efficiency, renewable energy installations, and environmental claims strategies (e.g. repair rather than replace auto spare parts). Prevention devices to help raise customer and general public awareness are also being developed.

		- Utilizing terms and conditions to foster climate-friendly behaviours from customers Reduced premiums for low emissions vehicles are offered by several group entities. In addition, AXA France’s partnership « 1,2,3 Environnement » with the Assemblée des Chambres Françaises de Commerce et d'Industrie (AFCI) enables SMEs to gradually proceed towards environmental certification (ISO 14001 or EMAS), in order to make complex certificates more accessible to smaller enterprises in France. AXA France offers to companies certified on level 1 of the “1,2,3 Environnement” programme to benefit from a 30% premium rebate on the G.R.E.E.N insurance contract (“Garantie des Risques Environnement de l'Entreprise“). - Educating customers on climate-friendly behaviors Prevention devices (e.g. smartphone applications) have been developed to help raise customer and general public awareness. AXA Assistance has, for example, launched a “community platform” application called “Plug and move” for electric vehicles, which offers itinerary services, geo-localization and information on recharging stations for electric vehicles. - Financing climate-protection improvements AXA UK “Green Homeowner” policy: Through this program, upon a customer’s claim, AXA seeks to replace property and possessions in a sustainable way - either using environmental rebuilding standards or improved energy efficiency of electrical replacement items. All buildings and contents claim to varying degrees are covered. Electrical upgrade applies for electrical appliances within the scope of EC energy rating standards (such as dishwashers, tumble driers, refrigerators, freezers). Green rebuilding applies to large damage claims where most the property is damaged by an insured event. - Offering climate risk management services.

		The insurance company has created dedicated operational units offering prevention services to clients (AXA Matrix, AXA Assistance), as well as to the general public (AXA Prévention in France). AXA also reports that all subsidiaries are engaged in providing risk education, including a focus on climate risk, to the local communities in which they operate. AG2R La Mondiale (Investments) The company measures and discloses the CO2 emissions associated with its investment portfolio and has adopted initiatives to reduce them. In addition, the company has implemented a broader carbon risk assessment framework. AG2R La Mondiale invests in a company's debt or capital or financial products which take into account sustainable development related stakes. One of its objectives is to contribute to the financing of energetic transition, by investing in green bonds for instance, that finance the building of wind farms, or in investing in "private equity" to finance non-listed companies leading environmentally friendly projects. The Company pays attention to the carbon footprint of its assets under management, and it measures it internally. This assessment comprises companies' securities, bonds, as well as sovereign debts. As a result, in 2017 the Group's investment policy was completed by the exclusion of investments in companies that derive more than 30% of their income from the coal sector or that pursue an aggressive policy in this area, for example by increasing their production capacity, as part of the fight against global warming. In one year, the policy reduced the portfolio's exposure by 44%. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** Moody's agrees with the observation made by MAS that the methodologies for assessing, monitoring and reporting

		environmental risk will evolve and that these Guidelines will be updated as appropriate to reflect the evolving nature and maturity of risk management practices.
7	NTUC Income Insurance Co-operative Limited	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** From an investment point of view, the scope should include not just Income, but also extend to the external fund managers that Income appoints in managing our investments, given our outsourced, multi-manager investment approach. Having said that, since standards and interpretations differ country by country, and different fund managers approach monitoring environmental risk differently due to the strategy they manage, therefore some flexibility would be appreciated when such guidelines are implemented. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** Income's environmental, social and governance (ESG) framework will review the MAS guidelines when it is implemented to assess the feasibility of adopting an environmental risk management framework in its ESG strategy. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.**

		No comment. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** No comment. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** No comment. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** No comment. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Income believes different standards and approach in terms of monitoring environmental risk should apply for public and private markets investments. In terms of assessing the impact of environmental risk on our investment portfolio under various stress scenarios and time factors, additional measures such as the following would help in the monitoring and mitigation of environmental risk: • Tools and data set that MAS broadly consider for a robust testing • Requirements on 3rd party provider to help measure and report carbon footprint in our assessment of environmental risk, if any. Otherwise, would internal models work? If the latter, what are the

		broad key considerations MAS have when determining if the internal models are robust enough? **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** Annual disclosure of the approach to managing environmental risk would be reasonable, where the Investment and Risk Management teams can jointly monitor material exposures and review stress scenarios, where applicable, on an annual basis. Since Income adopts a multi-manager investment approach, we understand that the external fund managers we appoint would be comfortable in taking reference from the Financial Stability Board's task Force on Climate-related Financial Disclosures to guide their environmental risk disclosure. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** A proposed transition period of 12 months for the implementation of a monitoring and disclosure framework for Income's investment portfolio that is allocated to public markets seems to be a reasonable approach. The implementation with regard to private equity and real estate, given that there are less public information and furthermore a comprehensive industry approach has not been widely-discussed and accepted, it could entail a longer transition period than 12 months.

		Income may also require more than 12 months depending on when the guidelines are issued, and the if climate risk analysis on Income's business may require longer investigating/fieldwork. Additionally, Income may also need time to formulate a strategy that will be relevant to the business should the analysis show that there are opportunities/needs for us to address.
8	Raffles Health Insurance Pte Ltd	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** RHI business activities are to provide health insurance. We do not undertake investment activity, and do not underwrite any risk relating to environmental factors. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** RHI is part of Raffles Medical Group (RMG) which is listed on the Singapore Exchange. In line with the SGX Sustainability Reporting Guide, the Board of RMG acknowledges that its members are collectively responsible for the long-term strategic direction of the Group and states that is has specifically considered sustainability issues as part of its strategic formulation RHI makes a contribution to the resource allocated at the group level. Our concern over the proposal, will be on whether RHI may eventually be required to have a stand alone framework instead of being part of the overall group framework. Being stand alone would be a duplication of effort and overhead which is sub-optimal. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their**

		effectiveness, and allocating adequate resources to manage environmental risk. A member of RHI senior management is appointed onto the Sustainability Committee for RMG. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** A member of RHI senior management is appointed onto the Sustainability Committee for RMG. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** If we are expected to make such assessment despite not underwriting environmental risk, we would question the necessity as we would not be equipped with the expertise to make such assessment. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** RHI would like more guidance on when it will be required to make assessment on environmental risk matters and when it does not need to do this. Furthermore, how do we determine the materiality of the risk exposure? Would the proposals directly or indirectly influence a Health Insurer, to avoid accepting business from a customer who does not manage their environmental risk adequately? **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers'**

		underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted. Not applicable to RHI. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Not applicable to RHI. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** Annual disclosure at a consolidated level is our current practice. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** No comment.
9	Singapore Environment Council	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** Singapore is vulnerable to the physical and transition risks of climate change and global supply chain disruptions. Located at the equator,

		Singapore warming twice as fast the rest of the world, on average. With much of the island lying only 15m above the mean sea level, and about 30% less than 5m above the mean sea level – Singapore is vulnerable to the threat of sea level rise by as much as 1m by end of the century. Re/insurers who hold mortgage-backed securities in the region will also face significant liability exposure in coastal areas which needs to be effectively managed through enterprise risk management. With these vulnerabilities in mind, SEC would call for future industry stress tests to go beyond physical perils to include transition risk exposures. SEC notes that MAS had in July 2017 issued guidance requiring insurers to incorporate emerging risks such as environmental risks (including climate change) in their Own Risk Self-Assessment (ORSA). In 2018, MAS had also conducted industry wide stress-testing exercise for larger general insurers (make up 80% of market share), by incorporating a climate variability scenario to assess the impact of extensive floods (e.g. arising from extreme rainfall) on insurers' property and casualty exposures as well as on solvency levels. Insurers were also required to provide qualitative assessments on the possible impact of such a scenario on their business lines. The rising cost of climate-related claims could exacerbate the asset-liability mismatch faced by re/insurers. Already, climate-related insolvency has occurred for at least California-based Merced Property & Casualty Co following massive wildfires in 2018. SEC thus appeals for re/insurers to assess their capital management and capacity to cope with business stresses and disruption in order to seize opportunities arising from the global insurance protection gap. General insurers are inclined to consider risks in underwriting and pricing processes and risk transfer strategies based on a relatively short time horizon of 3 to 5 years. Even with a long history and experience of modelling natural catastrophe risks, the insurance industry is faced with significant challenges when attempting to quantify or estimate the size of climate risks. The right-pricing of premium is important in nudging customers and investee companies to adopt more environmentally-beneficial practices such as investing in circular solution such as recycled packaging, energy-efficient plant

		equipment and investing in renewable energies to lower environment impact. While implementation of the Guidelines may commensurate with the risk profile, the size and nature of re/insurers' activities, SEC proposes re/insurers adopt a more pro-active approach to environmental risk integration and stands in support of MAS position to subject the Guidelines to regular reviews and revision in order to capture the evolving nature and maturity of risk management practices. In view of this, the unit of environmental risk analysis could broaden beyond sector granularity to include the company and asset level which will can be aggregated to levels of industry and segments. The re/insurer industry plays a critical role in building socio-economic resilience and enabling green growth that will advance environmental objectives. Apart from developing financial resilience to extreme events and other physical risks by providing risk information and risk pricing expertise, it is also offering innovative risk transfer solutions that will support the transition to a low-carbon future through its underwriting business and investment portfolio. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** Commitment and accountability begins at the top. Boards should be responsible for strategic oversight and integration of material environmental risks within enterprise risk management systems and in ensuring that organisational risk appetite does not conflict with the UNFCCC's goal of limiting warming to 1.5 C. In this regard, Boards should champion the integration of environmental risks with enterprise risk management systems, review and approve material environmental issues identified and ensure that a process of gaps analysis and action planning is set in place and adhered to. Boards bear the fiduciary duty to care for stakeholders, to review and alert where unexpected concentrations of environmental risks may occur and build up.

		However, as the first progress report of NGFS notes, “climate- or environmental-related criteria are not yet sufficiently accounted for in internal credit assessments or in […] credit agencies’ models which many Central Banks rely on for their operations” (NGFS 2018, p. 9). In response to this gap, SEC would call upon Boards to adopt a governance structure that considers environmental risk as one that cuts across the organisation, rather than stand-alone. To demonstrate commitment, Boards should establish risk appetite limits and the basis for them in their public communications. SEC urges re/insurers to clearly define risk appetite based on types of risks and total exposure that they are willing to bear (e.g. % earnings or equity). The risk-return trade-off should be transparent. Bound by their fiduciary duties to remain solvent, be able to pay out and to enhance asset values of their policy-holders, re/insurers are generally constrained in their investing risk appetite. The impact of environmental risks on the liabilities side of an insurer’s balance sheet is highly dependent on the products offered by the insurer concerned. Re/insurers should consider the impact of environmental risks on investments, adequacy of coverage to policy-holders, reputation and market competitiveness. Boards should caution against overly optimistic assumptions and/or mild scenarios. Especially given these challenges facing re/insurers - the non-linearity of environmental risks, difficulties in estimating frequencies and severities of environmental events, and the limitation of historical data to cater for future predictions. To carry out their responsibilities competently, Board should be appointed while taking into account their experience and/or expertise in managing environmental risk. Boards should ensure at least one member of the Board is equipped with expertise in environmental risk management. Banks and finance companies should also implement a training plan to guide board members in developing strategies for environmental risk management. Ideally, these responsibilities would be written into the committee’s charter. As part of Board meetings, a record of the agenda and discussions on

		environmental risk topics and management responses should be kept for review. The emphasis on board-level oversight is also encouraged by sustainability reporting frameworks such as the Global Reporting Initiative (GRI) Standards and also features as a primary component under the Singapore Exchange Sustainability Reporting Guide. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** It is important that Board oversight is cascaded via delegated authority to senior management whose role is to develop comprehensive review and effective internal escalation process. Senior management may consider allocating resources and organising roles & responsibilities along 3 lines of defence: • First line – Engage customers to carry out initial environmental risk assessment as part of underwriting during on-boarding clients or periodic review of existing clients o Measure carbon intensities and understand their business plans for environmental risk management o Assess uncertainties and developments around timing and channels of environmental risk along supply chain • Second line - Set-up and manage central risk frameworks that integrate business and factory floor operations o Support first line activity to understand, assess and consider uncertainties and developments around timing and channels of environmental risk o Develop tools for identifying and assessing environmental risks o Develop scenarios, review parameters & assumptions and undertake stress-testing o Deliver environmental risk training

		• Third line - Review design, implementation and controls of environmental risk management processes based on second and third line activities above To back up the three lines of defence, SEC's Singapore Green Labelling Scheme (SGLS) and its enhanced scheme incorporates the monitoring & control measures to facilitate escalation and enable engagement with errant organisations on remedial actions and improvement plans, according to severity of the breach. Please refer to Q7 for more information. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** Insurers should not to treat environmental risk reporting to boards merely as a compliance exercise. Instead, environmental risk reporting to the board should be used to inform decision-making. A good practice is to require a named senior manager to be responsible for the management of climate risks as this is likely to increase the accountability and ownership of an insurer's actions in response to climate risks. A good practice is to require a named senior manager to be responsible for the management of environmental risks as overseeing material environmental risks will help to promote accountability and ownership on a day-to-day execution basis. The designated member should be vested with the authority and command of knowledge to monitor, red-flag and propose interventions that will engage multiple actors and add rigor to risk identification, risk assessment, risk control & monitoring and risk mitigation processes. Forming a committee is another possible approach to decision-making. For the committee to be effective, they must be empowered by senior management and equipped with cross-functional expertise. Due the lack of data and uncertainties around environmental risk analysis, a cross-function composition is important to balance environmental risk analysis with considerations of other asset management functions such as finance, technology, policy,

		operations, and human resources etc. - critical functions that impact the operational capacities and competitiveness of any organisation. To support this core committee structure, re/insurers may also induct environmental 'ambassadors' to span every level of the organisation. While promoting greater consensus and diversity of views, caution should be exercised on the available time for committee members to make decisions. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** As major institutional investors, re/insurers have significant influence over companies and can encourage them to switch to less carbon-intensive operations and improve transparency through improved disclosures, with reference to widely accepted frameworks (e.g. TCFD, GRI Standards, CDP). Re/insurers should embrace active ownership (e.g. proxy voting and engagement) as vital to responsible investment. After all, responsible investors who outsource voting responsibilities do not automatically accept voting recommendations and instead make informed decisions based on a triangulation of internal and external sources of information and expert-judgement. Communication is also part of an effective proxy voting process that would shape corporate behaviour. Where possible, re/insurers should raise concerns with investee companies before voting against or abstain to initiate dialogue, receive additional information. Failing which, re/insurers should publicly explain the rationale for their votes against management or abstentions and explain their view with interested companies directly either voluntarily or following a company's request. Engagement is a 2-way dialogue where re/insurers provide feedback on investee companies' financial and non-financial performance while investee companies clarify information and their environmental

		risk management strategy. Such engagement is material as the information gathered, in turn, informs proxy voting decisions, and helps to integrate environmental factors in valuations. In addition to top-down strategic approaches, prioritisation of engagement environmental issues could adopt these bottom-up considerations: • Long-term environmental trends that are financially-material • Environmental factors that are finally most-material in terms of geography/industry sector/company in the portfolio manager's universe. Engagement methods should also integrate top-down functions such as group risk, sustainability, investment teams with bottom-up investment-decision makers such as portfolio managers, financial analysts and stewardship personnel. Channels of engagement with investee companies could include regular company meetings, or other tailored platforms. Engagement best-practices that may considered include: • Encouraging more extension or better quality environmental impact disclosure. • Influencing and improving broader corporate practice on ESG issues. • Supporting mainstreaming of ESG integration and impact investment. • Advocating regulatory frameworks that are supportive to scaling responsible investment with integrity. • Championing ESG topics identified as material to re/insurer Re/insurers could also adopt more direct actions by conducting due diligence of their appointed portfolio asset managers and curb global warming by tilting their investment portfolio away from sectors and/or businesses that are seen as heavily polluting.

		As re/insurers' hold dual-roles as investor and insurance services provider, their policies on 'Conflicts of Interests and External Engagements' must be given due consideration. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** If a re/insurer's climate risk exposure is deemed too high relative to its risk appetite, supervisors will have to balance potential adverse implications on customers in terms of financial exclusion and reduced insurance coverage. This means weighing a trade-off on whether such an outcome is in line with the supervisor's financial inclusion objectives. Supervisors by themselves may find it difficult to identify useful climate scenarios, as such expertise is not typically found within their organisations. There is a need to draw on the expertise of other specialists in this domain, for example, climate scientists and meteorology specialists, in coming up with plausible and useful climate scenarios. Other aspects of risk management policies and processes that would benefit from supervisory guidance include: • Clarify goals of environmental risk management. Presently, re/insurers assessing environmental risks using scenario analysis or stress-testing, are likely to cover physical risks only. Beyond that, these Guidelines should encourage re/insurers focus on environmental issues that bear transition risks and pose a value-at-risk or potential opportunities for long-term financial performance and impact on the real economy. The environmental risk management system should be applied to determine the potential impact on earnings volatility, capital position or business model viability. • Depth of risk assessment: Insurers tend to undertake risk assessments between 1-3 years while the full impacts of climate change are expected to unfold over longer time periods. With more

		data gathered, re/insurers may extend the depth of risk assessment to include sensitivity analysis and adaptive capacity analysis, on top of exposure analysis for both the corporate customers and portfolio assets. • Conduct further analysis on final risk bearer. This is key to addressing environmental risks. Further work is needed to assess in greater detail the potential effects of the following factors: (1) the increase in insurance premium, or even market withdrawal by re/insurers, due to higher frequency of disasters; the (2) overall impact on financial stability of recurrent natural catastrophes on insurers' balance sheets; the (3) potential misalignment between, on the one hand, economic growth and activity concentration and, on the other hand, the scope of insurance coverage. Further analysis on insurance protection gap, notably in the long-run, would be useful to improve risk identification. • 'Tragedy of the Horizon': As the impact of transition risks is felt over a longer term period, institutions may under-estimate their importance when assessed over a typical strategic business cycle of 3 to 5 years. Consequently, SEC proposes the transition risk of environmental factors be assessed for its impact over a longer term horizon of say, 10 to 30 years. This serves to foster long-term thinking and transparency. • Incentives: SEC proposes implementation of green credit be appropriately reflected in the overall KPI evaluation of senior management. • Supervisory statement and roadmap: SEC proposes re/insurers develop on a multi-year road map to communicate their strategic vision and approach to tilt customer lending and their portfolio assets to meet strategic risk and organisational objectives. Supervisors can express their expectations with a supervisory statement, setting out how insurers should manage these risks and promote green insurance from the perspectives of governance and risk management. The Statement can also call for industry action and provide support to front-line supervisors in starting conversations with insurers on environmental risks.

		Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted. - Escalation and Monitoring Frameworks - Continuous monitoring is important for re/insurers detect changes in the risk profile, risk management activities, operating environment and financial position so that timely actions can be taken to prevent any breaches by customers and investee companies. A clear route of escalation is key for material environmental risks to effectively travel from local levels to decision-makers from top management decision. During the due diligence process, it is easy to be overwhelmed with potential escalations of environmental risks, particularly in the initial phase. It is hence important to set internal thresholds by focusing on your material risks and issues, or by setting an alternative threshold (e.g. risks over a certain premium or sum insured). If an escalation due to a detected environmental risk might not be mitigated, it should provide the decision-maker with the business case for proceeding with the transaction as well as the environmental risks associated with the transaction to inform a balanced view. SEC's enhanced Singapore Green Labelling Scheme (SGLS+) adopts the following monitoring and control measures to enable escalation and engagement with errant organisations on remedial actions to be undertaken, depending on severity of the breach. • Serving a written notice. In our User Agreement, a serious breach will lead to an automatic disqualification from the labelling scheme, with written notice given for the use of our Green Label on the company's product(s) to be immediately terminated. • Suspending use of the Green Label. Depending on the severity of the breach, SEC may suspend the use of our Green Label by the

		company for a given period of time to be determined by the Council. If it is a relatively minor breach, SEC may give the company the chance to improve their environmental performance to the standards required. • Imposing temporary restrictions. Instead of exercising SEC's right under this User Agreement to suspend or terminate the approval to use the Green Label, the Council may also chose to impose temporary restrictions on the user's right to represent its product(s) as approved by SEC to qualify for use of the Green Label. SEC can choose to further subject the user to investigations, inspections, evaluations or audits that may be more than what would normally apply. • Non-compliance. These restrictions may also be imposed on the user should there be reasonable grounds to believe or suspect that any term of this Agreement has not been complied with. In which case, SEC reserves the right to take legal action against such acts of non-compliance. It is also critical that the escalation should be prompt as business transactions often have a turnaround time of 1 to 2 days, or even shorter. Underwriters (if not assessing the risk themselves) will need very quick feedback. For effective monitoring and review, re/insurers must maintain detailed documentation, including but not limited to these: • Issues & recommendations raised by the Board or independent review function; • Thresholds for planned actions to be taken by the re/insurer, the scenarios and bases for selection of other capital thresholds; • Planned actions for each threshold; • Description of key risks and methods and assumptions used in risk assessments and stress testing, including all relevant bases for and limitations of the choice of methods and assumptions; • Qualitative and quantitative data, sources of data and treatment of data; • Results and associated reasonable-ness checks; • Internal and external reports and reviews; and • Changes made and analysis of impact of changes. - Singapore Green Labelling Scheme (SGLS) -

		Instead of starting from scratch, SEC would propose for re/insurers to adopt, where applicable, credible certifications as tools for portfolio screening and industry analysis. Due to their availability, market acceptance and subject to rigorous standards, credible environmental certifications offer cost-effective and expedient means for re/insurers to assess the green-ness of a transaction while taking into account geography and sector information. The Singapore Green Labelling Scheme (SGLS) is a prime example of how credible certifications create an enabling regulatory environment and signal quality for industry change. Launched in 1999 by the Singapore Environment Council, the SGLS is a 3rd party verified Type 1 Eco label that evaluates the impact of a product on a life cycle basis. Beyond the composition of a product, SGLS evaluates environmental criteria across life cycle stages of material extraction, manufacturing, transportation, packaging, use and end-of-life. SGLS thus promotes supply chain transparency and facilitates the incorporation of environmental & social risks. By considering the impact on both the techno-sphere and biosphere, SGLS also promotes circular product considerations. Environmental aspects evaluated under SGLS include: • Fit for purpose – product that meets performance requirements • Environmental & health factors – ISO 9001, 14001, 45001, 50001 • Prohibited substances – carcinogens, mutagens, reproductive toxins, heavy metals, dioxins, flaming additives, AOX etc. • Energy & Water consumption – resource use and intensity • Emissions to air – VOCs, Formaldehyde, particulate matter • Emission to water – suspended solids, heavy metals • Recycled & sustainably-sourced materials – incorporate recycled content to packaging and final product, biodegradability • Safe storage of raw materials – effective policies & procedures to prevent contaminants to water, air and soil • Waste management – effective policies & procedures that cover manufacturing operations • Take-back at end-of-life – take-back for reuse, recycling, energy recovery

		- Enhanced Singapore Green Labelling Scheme (SGLS+) - In 2017, SEC enhanced the pulp & paper category of SGLS (SGLS+) to incorporate environmental & social risk and fire management considerations into the certification, going above and beyond RSPO requirements. SGLS+ uses a comprehensive risk management profiling to complement its more extensive qualification criteria which are based on internationally recognised practice. In 2019, SEC was awarded ISO/IEC 17065:2012 accreditation for its SGLS+ processes which are based on impartial, independent, sound and reliable risk management profiling, making SEC the first NGO certifying body in the world to receive this accolade. The environmental strength of SGLS+ lies in the range of material environmental and social risk factors evaluated which are translated into a risk score and assessed to be of risk levels – low (1), medium-low (1.5), medium (2), medium-high (2.5) and high (3). Companies need to demonstrate they comply with each of the 25 audit criteria under the SGLS+ certification. Under requirements of this enhanced scheme, companies are required to improve their peatland management and commit to the early detection and suppression of fires when they occur. They must also comply with the existing requirements of zero-burning on their plantations. In addition to desktop audits of 3rd party accredited test lab reports, site surveillance are carried out at the source (e.g. plantations, mills) to ensure that upstream supply chain practices and conditions are compliant with minimum standards. In other words, the entire supply chain of an SGLS+ applicant will be assessed and audited on site. This includes forests and plantations, pulp and paper mills and converting plants. The audit process is enabled by data transparency and documented evidence of products having met with environmental and social performance thresholds, which ultimately facilitates wider supply chain transparency and can become inputs for environmental risk models. The rigor and enabling role of SGLS+ to mobilise green financing for the region can be observed through the scope of the Responsible

		Financing Guidelines published by the Association on Banks in Singapore (ABS), which identifies pulp & paper as part of the high-risk environmental sector of agriculture. In summary, key features of SGLS+ criteria include: • Full disclosure of supply chain - the entire supply chain of a manufacturer will now be assessed and audited. This includes forests and plantations, pulp and paper mills, converting plants as well as distributors and retail companies. • Fibre source - all fibre is required to be sourced from legal sources and the use of wood and fibre from protected or high conservation value areas is banned. The use of recycled fibre is required to be maximised. • Zero-Burning Policy - the company, owner or concessionaire in charge of the plantation is required to have a zero-burning policy. • Fire Management - companies are now required to undertake a comprehensive range of fire prevention and preparation activities so they can quickly detect and supress fires before they get out of control. This includes the identification and mapping of fire risks, a fire prevention budget, engaging the community to promote alternatives to fire as a land preparation tool, daily hotspot monitoring, and putting in place firefighting training and equipment. • Peatland Management - proper peatland management is crucial to the prevention of haze. Peatland is a naturally water-saturated landscape and an efficient carbon sink. Uncontrolled draining of peat to plant pulpwood timber makes it susceptible to fire and releases the stored carbon. Companies are now required to protect the biodiversity of peatlands through proper assessment and water management. • Annual Audits - SEC will undertake annual surveillance audits of companies awarded the enhanced SGLS certification to ensure the criteria is continually met. More than 4,000 products from 43 countries have been certified since inception of SGLS/+. Being a member of the Global Ecolabelling Network (GEN), SEC is networked with other Type 1 Ecolabelling organisations around the world. The European Commission, which administers the EU Eco Label is also a member of GEN. In addition,

		SEC has also been awarded the GENICES certification which is peer review framework that promotes mutual and recognition of eco label criteria with other GEN members, thereby fostering information exchange and harmonisation with other Eco Labels at the global level. SEC Eco Certifications Beyond the sourcing, production and distribution of products, environmental risks are also inherent in business management and operations activities. It is hence important to green business activities and people across industries that could have an adverse impact on the environment as they contribute to economic growth. Launched in 2002, SEC has expanded its Eco Certification scheme beyond corporate offices to also cover retail, F&B outlets and MICE activities. These certifications offer a holistic framework that evaluates the impact of operating premises across both hardware and heart-ware features to drive sustainable practices while managing waste and improving on resource efficiency levels. Management oversight in spearheading green strategy and initiatives is also incorporated as key criterion. The environmental factors evaluated across these schemes include: • Eco Office Plus – Energy efficiency, Water efficiency, Waste Management, Interior Environment, Management Systems, Staff Awareness & Engagement • Eco F&B – Resource management, Sustainable procurement, Waste management and Environmental stewardship • Eco Events – Provides a comprehensive carbon calculation programme to enable event organisers to understand the carbon footprint of their event, quantify impact and facilitate comparison, and undertake mitigation measures via carbon offset initiatives like tree planting With the eco certification schemes' focus on the activities and its impact arising from green procurement choices, resource consumption, waste generation, emissions and wider environmental pollution, the schemes facilitate closer monitoring, higher levels of

		engagement and the implementation of improvement measures that eventually enables impact reporting for greater transparency. - Scenario Analyses and Stress Testing - Environmental risk models should be robust and responsive. Over the time, as the ability to monitor environmental risks becomes more sophisticated, re/insurers may adopt quantitative metrics to assess and manage customer and portfolio risks. As more data is gathered, this enable comparisons across sector and geography. Re/insurers may establish bounding metrics to check that their risk appetite does not conflict with the objective of achieving a 1.5 C future. These metrics can be deployed to assess portfolios' environmental risk exposure, identify risk hotspots and offer a snapshot of a portfolio's brown-green assets share: • Weighted average carbon intensity (exposure to carbon-intensive companies) • Portfolio emissions footprint normalised by revenue (portfolio efficiency per unit output) • Portfolio emissions footprint normalised by investment sum • Total portfolio emissions footprint • Portfolio exposure to stranded assets • Portfolio exposure to fossil fuel investments • Environmental value-at-risk (VaR): metric which weights present value of climate costs & profits against market value, as opposed to book value VaR • Impact of balance sheet: change % in revenue/loss of a portfolio facing a late or abrupt transition Other Tools include: • Heat maps and detailed reports of specific situations where necessary, to highlight high risk exposures by sectors. Heat maps are able to visualise the probability and potential impact of certain risks occurring. • In corporate banking, this kind of measurement and reporting might support a environmentally-adjusted credit scorecard (covering cash flows, capital, liquidity diversification, and management experience) for corporate customers.

		• Re/insurers may then choose to assign specific risk limits. Indeed, some re/insurers have already moved to integrate these types of approaches into their repricing models. • Scenario analysis, which is already commonly used to inform lending decision making, can be applied to environmental problems to assist financial institutions to understand how the concentrations of risk arising from these factors could affect investment portfolios over the near to mid-term. o In absence of empirical data, re/insurers may rely on expert judgement. o Scenario implied probability of default (PD), loss given default (LGD), exposure at default (EAD) will enable re/insurers to project expected losses (EL). Examples include the Paris Agreement Capital Transition Assessment (PACTA), 2 Degrees of Separation (2DS) and IEA Sustainable Development Scenarios (IEA B2DS). • Risk mitigation plan - calculate the cost/benefit ratio of each measure. The loss aversion potential (the benefit) is assessed by modelling the effect each specific measure has in reducing the loss. The cost is calculated by assessing the capital and operating expenses necessary to implement the measure. In addition to sector-specific tools outlined in the TCFD Technical Supplement (e.g. IPCC RCP, UNFAO MOSAICC), other data modelling tools include and are not limited to: • Vivid Economics Climate Risk Toolkit – model both physical and transition risks; paid • Climate Value-at-Risk (VaR) by Carbon Delta – models physical and transition risks; paid • ClimateWise Risk Framework by CISL – models physical and transition risks; paid • Ortec Finance ClimateMAPS - models physical and transition risks; paid • JBA Risk Management – used by BoE to model physical risks; paid The complexity of the climate crisis means no single metric is suitable for determining the risk or impact of any investment decision. Subsequently, it is more appropriate for asset owners/investors to deploy a hybrid of metrics that can be customised across different

		asset classes, depending on the nature of the asset, and the asset owner/investors' objective. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** MAS may like to glean the following insights arising from scenario analyses or stress-testing exercises: • identify the level and concentration of risk exposure of insurers; • increase awareness of climate risk exposure to prompt action e.g. divestment from coal investments; • provide basis for discussion with industry and individual insurers on potential risk mitigation actions against climate risks; • serve as an input into the supervisory risk rating process of an insurer; and • evaluate climate risks on aggregate basis at national level. Develop risk mitigation plans. For insurers to go beyond risk identification, risk assessment and risk monitoring to share their plans for risk mitigation measures. These may include recognition of diversification benefits (for example due to variability geographical exposures), opportunity to re-capitalise, reviewing strategic business plans, changes to investment strategy and ability to reprice, allowing for customer affordability. Build robust and responsive risk models. SEC proposes insurers' develop capacities that would allow their risk models, which tended to underestimate exposure to climate risks, to allow for non-linearity given the dependencies between multiple events. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** SEC through the Singapore Green Labelling Scheme (SGLS/+) enables disclosure of environmental impact on a life cycle basis and promotes supply chain transparency. Beyond the proposed annual frequency of reporting referencing globally recognised frameworks such as TCFD,

		SEC notes that in certain jurisdictions, larger institutional investors are required to undertake stress tests and scenario analyses as frequently as semi-annually, at quarterly intervals or when their risk model and/or portfolio changes significantly. This may consequently impact disclosure expectations of re/insurers. A key outcome of quality disclosures is that it allows these quantitative outputs to be gathered for scenarios analysis and stress testing: • claims and investment losses; • profitability; • capital requirement; • capital resources; • average annual loss change; • aggregate or occurrence exceedence; • market value of investments; and • value-at-risk (VaR) or tail value-at risk (TVaR) **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** • Classification / Taxonomy. Supplementing the negative screening strategy of ABS Guidelines for Responsible Financing, MAS could work with industry to develop clear classifications for assets and financial products that capture all acceptable definitions of 'green' and establish well-defined standards and methodologies by which insurance companies, institutional investors and asset managers can assess the relative merits of a green investment or project. • Develop sector-specific risk guidance. Expanding on the ABS Guidelines for Responsible Financing, MAS may like to elaborate sector-specific risk guidance. This has currently been done for palm oil and pulp & paper sectors. Sector-specific risk guidance will enable re/insurers to address material environmental risks that could have a material impact on business decisions. From there, re/insurers can apply tools to assess the financial impact of future projections and communicate environmental disclosures to decision makers within the business, in accordance with reporting frameworks such as TCFD.

		• Emphasis on capacity-building for actuarial practice. Professional bodies could contribute by helping to build actuarial capacity globally. Organisationally, insurers may need to enhance interdepartmental cooperation, for example, by enhancing collaboration between actuarial and finance teams to translate climate scenarios from natural catastrophe models into finance models. Re/insurers may also support their portfolio asset managers in training options as part of value chain engagement. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** • Mandatory disclosures for green growth. As early as 2015 - France, under the Energy Transition for Green Growth Law, became the first country to enact legislation requiring asset owners and asset managers to disclose how they manage climate-related risks and incorporate environmental, social and governance parameters into their investment policy. In 2019, UK Prudential Regulatory Authority (PRA) – imposing reporting obligations on insurers in respect of climate risks by end of 2021. https://www.minterellison.com/articles/pra-sets-climate-risk-plan-implementation-deadline-2021 • Forward-looking scenario analysis. In 2018, the California Department of Insurance released the results of a forward-looking scenario analysis of insurer investment portfolios, arguably the most comprehensive analysis of future transition risks facing the insurance sector. The aggregate data provides information on the transition risks related to investments in oil, gas, thermal coal, and utilities which are held by insurers operating in California with over US$100m in annual premiums. https://www.insurancejournal.com/research/app/uploads/2018/08/IAIS_and_SIF_Issues_Paper_on_Climate_Change_Risks_to_the_Insurance_Sector_-1.pdf • InsurTech. To manage risks using technologies, Ping An Property & Casualty conducts climate risk assessment focusing on extreme

		weather events such as typhoon, heavy rain, flood and so on by adopting a variety of advanced technologies, including satellite remote sensing, drone, Internet of Things, LBS positioning. Ping An also developed DRS, a system for physical risk identification, analysis and management. Applying its disaster warning and control system, Ping An Property & Casualty has arranged flood risk investigations for over 5,000 underwritten enterprises and provided risk surveillance and onsite management services for over 400 focused construction projects in 2018. http://www.pingan.cn/app_upload/file/official/2018ESGReport_EN.pdf • 3P collaboration. In 2018, NN Group committed to helping Dutch municipalities make their public-use real estate (e.g. schools and town halls) more carbon-efficient. Together with BNG Bank (a Dutch bank for the public sector) and Bewust Investeren BV, NN Group developed a special financing proposition to make community real estate more sustainable. https://aodproject.net/wp-content/uploads/2019/09/AODP-Insuring-a-Low-Carbon-Future-Full-Report.pdf • Sector-specific risk examples: o Crop insurance. Santam provides crop insurance to farmers to help hedge against climate, environmental and other risks. To help farmers understand these risks, Santam's meteorologist forecasts the climate variability so as to identify extreme climate-related weather events that may impact crops. The meteorologist forecasts weather seasonally and provides training and advice to farmers on how to adapt their farming methods given the anticipated climate conditions. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** As part of a phased approach, SEC would appeal for re/insurers to embark on implementation of the Guidelines as early as possible during the proposed 12-month transition period. Re/insurers that are unable to meet the transition period, should be allowed to appeal for

		an extension before the transition period closes, backing up their requests with reasons. This would offer MAS some flexibility amidst the unevenness in readiness - ensuring all banks and finance companies are able to right-track themselves for full adoption of these Guidelines, while being subject to MAS' evaluation where falling short.
10	Singapore Reinsurers' Association - Technical Sub-Committee	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** We note that the proposed Environmental Risk Management Guidelines are intended to apply to insurers' underwriting and investment activities. However, the scope (in terms of geography and product range) and business model for reinsurers can be quite different, which may render some of the recommendations (as more specifically addressed in the subsequent sections) difficult to apply. Furthermore, reinsurers typically operate internationally in markets where their customers (i.e. ceding insurers) are subject to varying regulatory, political, economic conditions, and may not be bound by similar environmental risk guidelines. Hence, the proposed Guidelines should not apply to Overseas branches and Offshore business. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** We agree that the Board should be responsible for overseeing environmental risk management. However, as the majority of Singapore-based reinsurers are localised subsidiaries or branches of overseas insurance/reinsurance companies, we believe that Board oversight and responsibility should be performed at the Group level, especially given the systemic and global impact of environmental risks, the multitude of sources of environmental risks, and the global nature of reinsurance business.

		Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk. Whilst we agree with the proposed responsibilities of senior management in overseeing environmental risk management, we believe that designating a senior management with such responsibility should not be prescriptive but left to the discretion of individual companies depending on the materiality of such risks and company structure, expertise. Firms should be allowed the flexibility to tailor how they identify, assess, manage and disclose environmental risk based on the materiality of the risks to their business over different time horizons. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** In any case, environmental risk and more specifically climate risk is not an entirely new risk category, but is an influencing factor on other risk categories, such as credit risk, market risk, liquidity risk, etc. Hence, all elements of risk governance – board and senior management responsibilities, processes, frameworks etc. – would also apply to the aspect of environmental risk, just as it applies to other risks. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** Whilst we understand the recommendation for insurers to undertake an environmental risk assessment of each customer as part of its transaction assessment process, this may not be so straightforward for reinsurers, whose customer is the ceding insurer, which depending on their jurisdictional domicile, may not be bound to

		similar environmental risk guidelines and hence may not be responsive to such proposed environmental risk assessment. This is particularly difficult in the case of Treaty reinsurance, which does not lend itself to a quantitative assessment of environmental risks owing to the distance to the original insured customers' portfolio and the blend of risks covered by the Treaty. Reinsurers do not typically engage directly with original insureds, and it would not be practicable to set an expectation around this. Hence, a qualitative portfolio approach to assessing overall exposure to environmental risks would be preferred, rather than individual risk/company engagement. As such, the proposed customer environmental risk assessment should not be prescriptive given the wide diversity in product types, business models, client relationships, etc. for reinsurers. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** Instead, focus should be on requiring firms to have governance, risk management frameworks in place to assess, monitor and mitigate financial implications of environmental risks, as is already required under MAS Notice 126. In that regard, the proposed Environmental Risk Management Guidelines should be consistent and harmonised with the provisions of other Notices, Guidelines on Risk Management such as MAS Notice 126. We would encourage the regulator to engage at the global level, with other regulators as well as the industry, to develop building blocks and define consistent scenarios and best practice guidance. This could give firms a framework within which to consider the impact that climate change may have on them and would thereby both facilitate adequate analysis within firms and ensure a minimum level of compliance across the industry.

		Regarding the expectation on stress scenarios, it would make more sense if such assessments were applied on a group wide basis rather than on individual firms. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** Given the diversity of reinsurance product types, business models, etc, the proposed escalation and monitoring frameworks should not be prescriptive but firm-specific. Escalation and monitoring in the underwriting process should be done at the transaction level rather than customer level, given that a customer may have numerous contracts with the reinsurer. Reinsurers typically do not have full visibility on individual risks on the cedents' portfolios. Hence, monitoring and escalation process should allow variances depending on such reinsurance model and rely on the cedents' best practices. Likewise, any follow-up mechanisms should also allow for flexibility depending on individual circumstances. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** No comment. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We support the proposal for disclosures to be aligned to TCFD recommendations and consolidated at Group/Head Office level. However, we suggest that disclosures should be voluntary as TCFD recommendations are still evolving and not yet decision-useful.

		Climate related financial disclosures should be aligned across regulatory jurisdictions so as to reduce operational burden and enhance comparability. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** Reinsurers should be allowed to leverage on Group/ Head Office in relation to risk governance, underwriting, investment, disclosures, as well as scenario analysis/stress testing requirements. Companies that choose qualitative scenario analysis in place of quantitative ones for environmental risks should be allowed to do so. A quantitative approach is sometimes impractical or feasible given that climate change involves substantial uncertainties – for example, on how tropical cyclones in ocean basins will change depending on emission scenarios, periods, and types of climate models used. More importantly, quantitative scenario analysis has limitations, as data are missing on implications of global GHG emissions/concentrations pathways for individual economic sectors and services in individual countries, etc. Also, future market projections are largely missing, e.g. for insurance markets, and markets could and will respond very quickly to fundamental changes in climate policy, regulation and technology. So, it might be much more adequate to have qualitative scenarios on future market development, given the absence of future market projections with quantitative substance. Similarly, stress testing should not be prescribed for all companies. For physical risk, stress testing is less appropriate to assess the effects of climate change as compared to the impact of a financial crisis. In a financial crisis, the market structure remains fundamentally the same. But climate stress testing is only applicable for longer periods, for e.g., 2050. But this would cause a mismatch because today's balance sheet (used as the basis of projection) will never match hazard levels in future decades. Fundamental features will have changed, social, economic structures will have changed and new technologies as yet unknown with different impacts on the environment will have changed. It is hence impossible to infer substantial insights on the

		performance and resilience of today's business model under projected climate stresses. Scenarios should not be prescribed, rather reinsurers should be allowed the discretion to refer to resources such as IPCC, IEA, etc to provide context and basis for company, industry and sector scenarios. A collaborative industry-wide approach to define consistent scenarios and best practice guidance would be more useful. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** The proposed 12-month implementation period for insurers to assess and implement the Guidelines seems reasonable, although we believe in a phased implementation approach, first involving a qualitative assessment to determine if there is any material environmental risk before considering the quantitative assessments, scenario analysis, stress testing etc.
11	Steamship Mutual Underwriting Association	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** The Singapore branch of Steamship Mutual Underwriting Association ("SMUA", the "Club") is authorised and regulated by both UK financial service regulators. The PRA is taking similar steps to ensure that insurance firms are taking appropriate and proportionate steps to manage the impact of environmental/climate risks on their insured exposures, with the associated impact on capital and operations. To that extent, Steamship expects to remain compliant with the requirements proposed by the Monetary Authority of Singapore (MAS) in this consultation.

		Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework. From the UK PRA's perspective, the Board is ultimately accountable and will oversee the development of a climate risk framework, ensuring that it is implemented robustly via regular updates and management information. The Board is responsible for setting a climate -related financial risk appetite and obtaining assurance (for example, from the Internal Audit function) that climate-related risks identified are effectively managed and controlled. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** Individual contributors are engaged in gathering data around the financial and reputational risks arising from Steamship's underwriting activities as the basis of scenario testing which will be conducted as part of our next Own Risk & Solvency Assessment (due November 2020). **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** The above answers note the creation of a working group and the engagement of Steamship's Board. Whilst we regard climate-related insured risks, whether physical, transitional, financial or operational as having potential future material impact on the Club, that is not presently the case. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to**

		improve its risk profile and support its transition towards sustainable business practices. Steamship is one of thirteen members of the International Group (IG) of P&I clubs. Regarding sustainability, there is a common IG Board Agenda note on this topic which will go before our own Board in October. If accepted, that will result in agreement that the International Group: (a) will continue its work in detailing what it currently does that can sensibly be cross-referenced both to the Environmental, Social and Governance (ESG) and the UN 17 Sustainable Development Goals (SDGs); and (b) will consider what further steps the IG Clubs can collectively take to enhance sustainability within the parameters of ESG and the UN 17 SDGs. Depending on the outcome of those considerations, Clubs would then engage further with their Boards and Members. We continually engage with our customers to understand the climate risks to which they are exposed including through their claims record which will be an indicator of the level of risk. For a Member who has an adverse environmental risk claims experience there may be two consequences: (a) Financial. through increased premium/risk retention by the Member, (b) Operational. through loss prevention input from the Club to reduce risk. In line with the expectations of the UK regulator, we expect to gather further climate-related data during client on-boarding and at annual reviews to improve our understanding of the impact of climate change to their exposures over the coming years. Activities are underway to identify those segments of the Club's portfolio with potentially higher climate-related risk in order to determine whether a potential diminution of premium in those segments is likely. Generally, however, the sector in which our Members operate is heavily regulated by international conventions which are robustly applied by the authorities in a majority of jurisdictions and it is neither

		necessary nor appropriate for Steamship to assume the role of a proxy regulator of the environmental risks potentially posed by individual customers. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** Given that Steamship is also authorised and regulated by the PRA in the UK, and already operates a number of ESG-type policies, we do not believe that we would benefit from further supervisory guidance at this juncture. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** In our view the design of metrics will depend on the conclusions reached by scenario stress tests which will be performed this year and very likely for some years to come, the scope of which will become increasingly refined. In the immediate term those tests are likely to focus on: (1) the physical impacts of increasingly severe weather on P&I claims. In this instance the impact can be extrapolated from existing data using statistical methods; and (2) the impact of tightening emissions standards on vessels potentially resulting in reduced premiums and increased claims. We are also looking at the potential longer-term impact of the response to climate change, e.g. the possible reduced demand for oil and coal and the possibility that this will reduce the numbers of tankers and bulk carriers, and the risks associated with new fuels in response to the need to reduce CO_2 emissions.

		Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio. The Club has already discussed the impact on investments through an Environmental, Social and Governance (ESG) fixed income strategy presented to the Trust Board by asset managers in February 2020. Broadly, investors appear to be taking one of two approaches: - Inclusion / exclusion of sectors / companies / geographies / other, based on various ESG factors - positioning / tilting towards certain preferences relative to benchmark indices, or other metrics The Board continues to consider its investment policy based on this information. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We understand that the PRA is currently considering the likely future form of any such disclosures which we think will be annual in nature. We further understand that the PRA's conclusions are likely to be heavily influenced by the work of the Financial Security Board's Taskforce on Climate-related Financial Disclosures in this area. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** Like many other insurers in the marine liability segment we operate a Loss Prevention Strategy which works to improve ship safety in order to limit losses, claims and hence, in many instances, the attendant environmental damage. Steamship is a leading collaborator in the production of an extensive collection of loss prevention videos, which

		in part relate to potential environmentally harmful accidents as well as the incidence of crew and passenger related injuries. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** Our experience to date suggests that regardless of any period of transition to new regulations, there is likely to be a much longer lead time in our understanding and mitigation of environmental risks, given the limited data currently available, particularly in respect of climate transition risk and, for example, the impact of changing maritime emissions regulators on marine insurers. Climate change and in many cases other environmental risks are a global concern. We would encourage MAS to carefully consider how it coordinates its regulatory initiatives in this area with other regulators. Ideally this would ensure that there is some consistency in MAS' future expectations and those of other globally influential regulators including the PRA, also bearing in mind the fact that in certain cases, MAS is regulating branch operations (like Steamship's) which if not carefully managed is likely to result in the duplication and hence distortion of reported data.
12	Swiss Re Asia Pte Ltd and Swiss Re International SE, Singapore Branch	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** We welcome the proposed guidelines' inclusion of both underwriting and investment in the scope. We believe MAS can also take a more holistic view on sustainability – which goes beyond environmental considerations to include social and governance aspects. In Swiss Re, we incorporate environmental, social and governance considerations in both underwriting and investment decisions through frameworks and approaches including but not limited to our Sustainable Business Risk Framework and Responsible Investment approach. We would like to clarify/comment on the following: 1) For reinsurers (applicable to Swiss Re Asia Pte Ltd, 'SRAL'), the "customer" in the proposed guidelines refers to insurance companies given reinsurers do not deal with direct customers

		2) Treatment for companies adopting the policy framework from the Group:. Re/insurance entities in Singapore should be allowed to rely on their Group framework, similar to MAS Notice 126 on Reliance on group's Enterprise Risk Management framework where it states in paragraph 11 that an insurer may adopt the ERM framework of the [Group], as long as the ERM framework fulfils the mandatory requirements spelt out in [the] Notice. 3) Treatment for overseas branches (applicable to SRAL branches)– our view is that the proposed MAS guidelines should not apply to overseas branches and offshore business, as they fall under local regulatory guidance/expectations on environmental risk management, which are subjected to varying political and economic environment, regulatory capacity, data availability, as well as level of maturity on the topic of environmental risk and sustainability. Swiss Re continues to engage with external stakeholders to support a progressive and structured shift towards a more sustainable and low carbon economy. We also encourage MAS to continue engaging other regulators on this topic through regional and international bodies 4) We agree that long-term horizon of decades (30 years) should be considered when assessing impact of environmental risks and opportunities. This long time horizon has a significant impact on the way environmental risk might materialize as financial, underwriting, operational, reputational or liquidity risks. Given the long time horizon, there are many uncertainties at play when developing certain factors for scenario analysis – therefore, qualitative approaches in environmental risk management are more useful than strictly quantitative approaches, and a less prescriptive approach is important to allow room for change and adaptation over time. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** We agree that the Board should have oversight in environmental risk management. At Swiss Re, the Board is responsible for overseeing the development and adoption of the company's sustainability strategy and related

		policies. Board committees are formed and assigned detailed tasks to monitor and review progress on the company's sustainability strategy, review the company's asset management and related responsible investing activities, and define the Group policy on risk, including those with a sustainability dimension. We would like to emphasize that the Board's oversight responsibility should be performed at the Group level, given the systemic and global impact of environmental, especially climate-related, risks, the multitude of sources of environmental risks, and the global nature of our business. On the point in 3.2 regarding integration of environmental risk into enterprise risk management framework, we are of the view that a practical and balanced approach is necessary. As a suggestion, this can be done through qualitative assessment to first understand the mechanisms of risk transmissions to have a better view of the exposures. More detailed and quantitative assessment should only be done for exposures identified as material during the qualitative assessment. This is in line with 3.3(b) except that we do not feel that risk limits work for environmental risk due to the multitude of sources from which they originate and lack of data to allow an informed limit setting and monitoring. Risk limits can be useful, such as for natural catastrophe covers, but this is subject to a very specific area with a well-defined scope and data availability. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** We agree with the principle that there is a need for board-level governance to be cascaded down into the organization through sufficiently senior governance committees and individuals, subject to the firm’s legal and corporate governance structure.

		We believe that the senior management can perform those roles and responsibilities set out in 3.4 without a specific standalone environmental risk management framework - for example, the consideration of the financial risks from environmental risk and climate change can be embedded within a company's governance framework, integrated in a company's sustainability framework or any other structures deemed suitable for the company. Firms should be allowed flexibility to tailor how they identify, assess, manage and disclose environmental risk based on the materiality of the risks to their business over different time horizons. We would also emphasize that consideration for sustainability risk, including environmental risk, should be shared across functions at the senior management level – for example, in Swiss Re, the Group Sustainability Council chaired by our Group Chief Risk Officer includes senior members heading the company's business units and group functions (such as investment, finance and underwriting). **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** While we agree with the importance of ensuring oversight of environmental risk at a sufficiently senior level (i.e. Board and senior management) to ensure sufficient consideration of environmental risks in our business activities and operations, we suggest replacing the word "should" with "may" in section 3.2 specifically on designating a senior management member or a committee to oversee environmental risk. The management of environmental risk should be allocated at a company's discretion to the most expert appropriate function depending on the activity required, e.g. underwriting, asset management, risk management etc. This will ensure the activity is managed as effectively as possible. Designating a person or a committee to oversee environmental risk may promote the idea that environmental risk is the responsibility of a specific individual or team, while other functions, such as other risk managers and those responsible for P&L, are not responsible for environmental issue. We believe that ultimately whether a senior

		management member or a committee should be designated for environmental risk oversight depends on the materiality of the risk (which is factored in the proposed guidelines) as well as the maturity of the risk management processes in the risk categories to deal with this risk in the company, where higher maturity should come with lower necessity. Therefore, a more flexible wording of the requirement is appropriate, leaving the discretion with the company to structure the oversight of such risk as it deems fit. We recognize that risk appetite is a central tool for insurers, but the way it is monitored, such as which functions are involved, may vary from company to company. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** Our company policies and solutions are designed in a way to support a transition towards sustainable business practices. For example, our Group Thermal Coal Policy entails engaging in dialogues with cedents/brokers/corporate clients as a first step, leading up to the implementation of an exit strategy by 2023. On the investment side, we are an early adopter of responsible investing. For internally managed portfolios, we influence by exercising voting or other participation rights, as well as engaging on topics through board member representation where applicable; for externally managed portfolios, we work with the relevant external investment managers to execute our proxy votes and conduct regular calls with the investment managers to discuss relevant engagement activities on assets held on our behalf. Swiss Re also has a formal process called Systematic Observation of Notions Associated with Risk (SONAR) to identify emerging risks, including those related to sustainability issues, using external and internal sources and involving subject matter experts from different business areas. SONAR reports are published and used to engage

		those in and outside of the re/insurance industry on emerging environmental risk. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** Current proposed guidelines are sufficient to promote consideration for and management of environmental risk. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** Currently, Swiss Re has the Sustainable Business Risk Framework which identifies, mitigates and eliminates social, environmental and ethical reputation risks. The Framework is implemented in both underwriting and investing using the Sustainable Business Risk (SBR) tool which includes an online assessment and a referral mechanism to assess business transactions. The Framework consists of policies on human rights and environmental protection, and specific guidelines on sensitive sectors or issues. These policies and guidelines contain criteria and qualitative standards that define precisely when a transaction may present a sustainability risk. Through the Sustainable Business Risk Framework, underwriters can identify and assess the potential impact of their proposed transactions on human rights and the environment. Each proposal for transaction will go through sustainability check via the SBR tool, with transactions assessed as most critical referred to sustainability experts who make decisions in the form of a binding recommendation. If there is disagreement about the recommendation, the case is escalated to the next management level, ultimately to the Group's highest level of management committee. Compliance with the Sustainable Business Risk Framework is regularly

		audited. Non-compliance outside of audit cycle is raised through operational risk management process. We want to highlight that under 5.1 on integrating environmental issues, the proposed guidelines stated that underwriters should be provided with the means to check the potential impact of the proposed transaction on the environment from both publicly available and proprietary sources, and work with external experts to enhance the quality of data collected to better understand a customer's environmental risk profile. We would suggest replacing the word "should" with "may". We do not think underwriters should be required to work with external experts. There may be internal expertise and capabilities available and companies should have the discretion to use internal experts to support the underwriters. In Swiss Re, our internal sustainability experts who support the underwriters also engage with external experts regularly. We propose that escalation and monitoring in relation to the underwriting process should be done at the transaction rather than customer level, given one customer can have many different policies. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** We generally agree with the proposed guidelines but would like to note that there are certain challenges in obtaining the needed underlying data for scenario analysis and stress testing, especially under the consideration of the forward-looking aspect, which are not yet available in the needed quality and breadth. We therefore recommend to MAS to provide companies flexibility in how they go about implementing scenario analysis and stress testing, factoring in data reliability and potential materiality. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.**

		Swiss Re is an active member of the FSB's TCFD, and we began implementing the recommended TCFD disclosures in our 2016 Group Financial Report. We have significantly expanded them in our financial reports thereafter by disclosing certain investment-related figures on climate change, such as the carbon footprint, over time. For us as a multinational company, it is important to have global standards to avoid information replication due to different regulatory requirements. We therefore support the adoption of the TCFD recommendations and ongoing refinements to these recommendations to make them more decision-useful for stakeholders, in particular for investors. However, we are of the view that disclosures should be voluntary as recommendations are still evolving and not yet standardized or completely decision-useful for investors and other stakeholders. We will support mandatory disclosures after this has been achieved and best-practice learnings / experience from the industry have become more established. We also feel that climate-related financial disclosures should be aligned across different regulatory jurisdictions to reduce the operational burden on global firms and enhance the transparency and comparability between firms operating across different geographies. If any further guidance is planned by MAS regarding disclosure of specific data, we recommend that MAS collaborate with other jurisdictions to move towards global standards. References and recommendations to TCFD are welcomed. We understand that Group-level disclosure is sufficient in meeting the expectation set out by the proposed guidelines. We propose that location level entities have the discretion on if and what they want to additionally disclosure if the Group level already meets the disclosure requirements. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.**

		Scenario analysis and stress testing – we think it's important to first understand where scenario analysis and stress testing is useful and where it is not, and what the purpose is. We think it is useful to do scenario analysis and stress testing for transition risks but not for longer-term climate change in general. Swiss Re supports the development of scenarios for the financial management of environmental risks but we believe that 1) such scenarios should be considered on a qualitative basis given impact of climate change is uncertain and dependent on a range of drivers such as future GHG emissions leading to a wide range of potential outcomes. The range of scenarios should also reflect the underlying uncertainties with the emergence of climate change risks and the impacts of other factors that could amplify or distort the risks, such as increased urbanization, economic growth etc., 2) there should not be any scenarios prescribed by the MAS. Rather, re/insurers should be allowed the discretion based on their experience and business model, while referring to resources such as the IPCC, IEA and others that can provide context and basis for company, industry or sector scenarios. A collaborative industry-wide approach to define consistent scenarios and best practice guidance is more useful at this stage. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** As above for examples on Swiss Re's sustainability governance, Sustainable Business Risk Framework, Sensitive Business Risk tool and Group Thermal Coal Policies. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** The length (12 months) seems reasonable, with phased approach preferred and focus first on the identification and qualitative assessment of environmental risk (only proceed to quantitative if material exposure is identified based on the qualitative assessment).

		We would suggest that an industry survey on companies' progress in identification and qualitative assessment of environmental risk is done before moving on to the next phase, to understand and appreciate any implementation challenges and adjust the transition period accordingly to take into account learnings from the survey.
13	Tokio Marine Life Insurance Singapore Ltd	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** We would like to seek clarification with MAS on the following areas: • Whether the Guidelines will be applicable to overseas subsidiaries and branches of insurers. • The extent of application of the Guidelines to corporate solutions/group insurance client companies and general business partners. We would like to suggest limiting it to areas such as business relationships with external parties that may be exposed to material environmental risk. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No further comments as this is similar to the approach that MAS has taken for other regulations. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** No further comments as this is similar to the approach that MAS has taken for other regulations. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.**

		We would like to seek clarification on whether the "committee to oversee environmental risk" as mentioned in point 4.2 needs to be a Board level committee, or a senior management level committee will suffice. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** To help insurers implement this, we hope that MAS can take the lead and share with the industry good practices (e.g. via Information Papers, other publications, etc) that has been observed over the course of interaction with the various FIs. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** As the development of environmental risk management stress testing is an evolving one, we would appreciate it if MAS can share with the industry relevant resources, databases or tools which may be beneficial for insurers (e.g. WWF initiative), in addition to the developments from the Task Force on Climate-related Financial Disclosures that was mentioned in the paper. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** To allow a consistent approach in evaluating environment risk for different industries, we would suggest that MAS or industry bodies/associations develop guidelines for the minimum expectation on underwriting for insurers. Insurers can then leverage on this for assessment on specific industry and/or company. In addition, a MAS

		or industry driven initiative to develop a rating system (similar to a Credit Rating) or develop a database for Environmental Risk Assessment (similar to an AML system) will help to facilitate better consistency in assessment practices within the industry. However, on a portfolio basis, we agree with the consultation paper that individual companies should determine their risk appetite and introduce practices that commensurate with this risk appetite. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** In this area, would like to provide the following comments and suggestions • As issuers move towards globally recognised frameworks and best practices, for the area of green bonds, it will good if we could see more conformity in definitions, as it is our understanding that there is no universally accepted legal and commercial definition of what constitutes a “green bond”. Adopting this could pave the way for better protection for green bondholders, for example, if there are non-compliance on the use of proceeds. • With limited issuers in the market, there may be a potential gravitation of institutional monies towards specific sectors and companies, which may present concentration risk for institutional investors. MAS may want to consider mitigating actions to reduce this risk. • For locally listed securities, environmental risk reporting standards which are part of sustainability reporting required by the SGX have existed since 2016. We would suggest for similar reporting requirements for companies issuing debt, including those that are unrated and/or unlisted companies. This will help investors practice uniform treatment across both their equities and fixed income portfolios. • For investments outside of Singapore, we would like to seek further guidance from MAS on how an investor should adjust their environmental risk requirements for different countries or regions that are in different stages of their economic development cycle.

		• MAS may want to consider some form of capital relief to incentivise the investment community to ESG investing. However, as noted in the point above, we are mindful that this might lead to crowding tendencies if there are limited issuers. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We agree with MAS' proposal for declaration to be done on an annual basis, and that an insurer's disclosure may be consolidated at the group or head office level. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** We would like to propose that the transition period be lengthened to 24 months instead. This is because: 1) A re-balancing of portfolio (to a large extent) may be required to meet the environmental risk management guidelines, with potential downstream impact such as solvency ratio and alpha returns of portfolio. The prices of assets may be inflated with a sudden surge in demand for these assets. 2) Given the current economic situation, it may not be beneficial to our policyholders if such actions are taken within a shorter period. 3) A lengthened period will give companies more time to plan their business strategies for the longer term. This will help to ensure that the implementation of Environment Risk Management practices will

		be done in consideration of the overall strategic initiatives of the company.
14	Transamerica Life (Bermuda) Ltd. (Singapore Branch)	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** For life insurance companies that offer insurance products for individual life, would customers under this business model be considered in scope of this guideline? Risks posed by the retail customer segment for life insurer are generally covered in mortality assumption setting and has low direct relevance to environmental and sustainability. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** No comment. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** No comment. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.**

		Per the question to #1. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** No comment. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** No comment. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** No comment. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** TLBS considers annual disclosure would be sufficient. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** No comment. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.**

		No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** No comment.
15	WWF Singapore	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** The proposed scope of entities, and the modalities of application (commensurate with the size and nature of insurers' activities as well as their risk profile) is satisfactory. The modalities of application to business activities (underwriting and investment activities), as well as "to other activities that expose it to material environmental risk" is also satisfactory and in line with good practices. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** The proposed responsibilities of the Board, as outlined in section 3.3 of the proposed ERM Guidelines (points a. to d.) are satisfactory and in line with good practices, such as the NGFS Guide for Supervisors published in May 2020 (in particular, recommendation #4 on setting supervisory expectations), as well as with the TCFD recommendations. It is indeed crucial that the Board provides a clear direction (tone from the top) and ensures that adequate resources are made available throughout the relevant teams. WWF Singapore supports article 3.1's highlighting of the Board's role in approving the environmental risk management framework and policies, as well as the expectation of article 3.3. for the Board to periodically review the adequacy and effectiveness of the environmental risk management framework.

		Where the Board designates a senior management member or a committee to oversee environmental risk, as described in article 3.2, WWF Singapore recommends to set a clear expectation for the Board to establish communication procedures between the Board and the designated senior management member or committee, including through regular reporting to the Board. Notwithstanding these arrangements, the Board and senior management should remain responsible for their respective duties, as set out in section 3.3 and 3.4 of the Guidelines. A critical success factor for the successful implementation of the ERM Guidelines (and the proper management of climate and environmental risks in general), is to ensure that key staff are equipped with the adequate knowledge and understanding of the issues at stake and how they can be addressed in an insurance context. This is particularly important for key decision-makers in the insurance company (Board and senior management). While training and capacity building are explicitly addressed in the proposed ERM Guidelines (notably in section 4.11), WWF Singapore recommends to clarify and strengthen the following paragraph: *"3.3 The Board [...] is responsible for: d. ensuring adequate Board and senior management expertise and resources for managing environmental risk, including through training and capacity building".* In addition, for the Board members to be able to fully carry out their oversight responsibility we believe it is necessary to require insurance firms to: ● Formally include sustainability considerations in the Board charter / terms of reference; ● Include sustainability-related criteria in the appraisal and remuneration policy for Board members. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.**

		The proposed responsibilities of the senior management, as outlined in section 3.4 of the proposed ERM Guidelines (points a. to e.) are satisfactory and in line with good practices, such as the NGFS Guide for Supervisors published in May 2020 (in particular, recommendation #4 on setting supervisory expectations). It is particularly important that the senior management is tasked with ensuring a proper implementation of an insurer's strategy, that it provides regular updates to the Board, and that it allocates resources and ensures appropriate expertise is available. WWF Singapore fully supports the clear setting of responsibilities not only for the Board but also for senior management. As for the Board members, we believe it is necessary to require insurance firms to: ● Provide regular training to senior management members on sustainability issues (hence specifying article 3.4.d to include an explicit reference to senior management, refer to response to question 2); and ● Include sustainability-related criteria in the appraisal and remuneration policy for senior management. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** WWF Singapore fully supports the need to promote clarity in accountability over environmental risk management and recognises flexibility can be given to insurers on implementing the accountability mechanisms – a designated senior management member or a committee. However, we do believe that environmental risks such as climate change – defined as an existential challenge and national priority for Singapore – should be considered as material across a broad range of sectors. Given the lack of standardized definition of “materiality”, and given the extensive use of this materiality qualifier throughout the Guidelines, WWF Singapore recommends that during the supervision process, insurers are expected to provide MAS with details on the qualitative and/or quantitative analysis performed to determine which risks are material to their activities and which are

		not. MAS would then be able to discuss, and potentially challenge, the insurance firm in order to refine the analysis over time (taking into account new developments, tools, data availability, etc.). Please also refer to the further comments on materiality in the answer to question 10. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** WWF Singapore fully supports the need to identify, assess, mitigate and monitor material environmental risk at the customer level and believes that engagement with customers over their environmental risk profile is a key aspect of mitigating environmental risk. It is positive to see the reference to "internationally recognised sustainability standards and certification schemes", that should be taken into account "where possible" by insurers in the development of their sector-specific policies (Risk Identification and Assessment section, paragraph 4.3). WWF further recommends that the reference to such standards and certification schemes is kept in the Risk Management and Monitoring section. More specifically, in paragraph 4.6: "4.6 The insurer should engage each customer that poses higher environmental risk, to improve the customer’s environmental risk profile and support its transition towards sustainable business practices over time, in line with internationally recognised sustainability standards and certification schemes, while maintaining the insurer’s risk management standards". **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** WWF Singapore fully supports MAS’ inclusion of scenario analysis in the ERM Guidelines as we believe this is a key tool to evaluate portfolio resilience and measure exposure to climate-related and

		other environmental risks. We would recommend that MAS provides further guidance on the scenarios that insurers should use as reference in their analysis - specifying the mention of "conservative and regularly reviewed assumptions" used in article 5.3, and in line with the recent reports and guidance issued by the NGFS. This would ensure consistency across the Singaporean insurance industry. Insurers should also include a scenario that addresses a higher level of warming such as 3C or 4C, whilst recognising the limitation of existing climate scenarios. For example, as noted in the recent NGFS guidance report on climate scenarios, most climate models do not take into account tipping points in the climate system such as the loss of important ecosystems such as coral reefs, meaning that they could be an underestimate of the true impacts of climate change. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** In paragraph 5.3, WWF Singapore recommends that the specific provisions related to customers that have a higher environmental risk or those that do not manage such risk adequately (developing a time-bound action plan, applying limits to the exposure, etc.), should also be applicable to customers that do not comply with the applicable sector-specific policies set by the insurer. WWF Singapore fully supports MAS' expectation for insurers to monitor and manage their underwriting exposures to environmental risk using the escalation and monitoring frameworks set out by the Guidelines. WWF Singapore fully supports MAS' expectation for insurers to measure and manage the underwriting exposures to environmental risk, and recommend insurers to: ● Use science-based and forward-looking tools. These tools should focus on climate change related impacts such as the PACTA tool

		(developed by 2Dii), as well as environmental issues beyond climate such as water or deforestation. The tools, leveraging geospatial technology and data, are developing rapidly and include platforms such as the Water Risk Filter (developed by WWF) or Global Forest Watch (developed by WRI). ● Set science-based targets. The Science Based Targets initiative (SBTi) is currently finalising the carbon target setting methodology for financial institutions. Science-based targets provide companies and financial institutions with a clear and Paris-aligned pathway to reduce their greenhouse gas emissions. As mentioned by SBTi, financial institutions are the vital link in enabling system-wide change as their lending and investing decisions have the power to redirect capital to technologies and solutions compatible with a net-zero economy. WWF Singapore would like to point to a number of useful resources that are available, such as the Aligning Finance For One Planet framework (and associated reports accessible through this webpage) as well as a recent report commissioned by the French Ministry for the Ecological and Inclusive Transition and WWF France that provides a comparative assessment of various portfolio-alignment methodologies (The Alignment Cookbook) ● Understand the dependencies of industry sectors on natural capital and ecosystem services, using tools such as ENCORE. The analysis generated by these different tools, complemented by insights from direct engagement with customers, can be compiled in internal dashboards that offer a comprehensive view of an insurer's exposure to certain environmental risks, that can also be broken down by industry sectors and/or geographies. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Please refer to our response to question 7, as well as our feedback to the ERM Guidelines for Asset Managers.

		In addition, WWF Singapore supports the recommendation for insurers to not only engage with companies in the promotion of responsible business behaviours, but also with its internal and external asset managers. To this end, it is important for insurers to factor in all of an asset managers' environmental risk management capabilities when awarding investment mandates, and MAS' guidelines for asset managers will improve the ability of insurers to do this by providing a basis for assessment. We believe this is an important facet of managing risk in insurers' investment portfolios that could be better elaborated upon in paragraph 6.8. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** WWF Singapore fully supports the need for insurers to disclose their approach to managing environmental risks and the potential impact of material environmental risk on the insurer, including quantitative metrics. It is also encouraging to see clear expectations for insurers to use the TCFD recommendations as the reference for their climate-related disclosures. The number of institutions supporting the TCFD recommendations is continuously growing and there are increasing calls to make TCFD reporting mandatory, especially as countries strengthen their climate commitments ahead of COP26. WWF Singapore recommends that insurers are expected to disclose their sector-specific policies, as well as the sectors or activities that they do not support (exclusionary principles). **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** Defining materiality Throughout the Guidelines terminology such as "where relevant" or "where material" is used. Hence, WWF Singapore recommends that the Guidelines include a definition of materiality and guide insurers to carry out robust materiality analysis (alternatively, such guidance can be provided separately). During the supervision process, MAS can

		also consider requiring insurers to provide details on the qualitative and/or quantitative analysis performed to determine which risks are material to their investment activities and which are not. MAS would then be able to discuss, and potentially challenge, the insurance firm in order to refine the analysis over time (taking into account new developments, tools, data availability, etc.). WWF Singapore would recommend referring to the double materiality perspective highlighted in the EU Non-Financial Reporting Directive (mentioned in these guidelines from the European Commission, starting p6), looking both at the material impacts of environmental risks on the insurer, and at the material impacts of the insurer on the environment (e.g. through its customers and investments). In particular, it is important to note the following text: *"the two risk perspectives already overlap in some cases and are increasingly likely to do so in the future. As markets and public policies evolve in response to climate change, the positive and/or negative impacts of a company on the climate will increasingly translate into business opportunities and/or risks that are financially material."* Therefore, both perspectives on risk and materiality are important to consider for robust environmental risk management and insurers should be encouraged to consider both. Further resource on materially include: ● the SASB Materiality Map ® which identifies *"sustainability issues that are likely to affect the financial condition or operating performance of companies within an industry"*, or ● GRI Universal Standards (GRI 101: Foundation) which defines material topics that reflects an *"organization's significant economic, environmental and social impacts; or that substantively influences the assessments and decisions of stakeholders."* The report published by the Climate Disclosure Standards Board on *Materiality and climate-related financial disclosures.* Throughout the Guidelines, terminology such as "where relevant" or "where material" are used. Hence, we recommend that the Guidelines include a definition of materiality and guide insurers to carry out robust materiality analysis.

		<u>*Implementation of the guidelines*</u> WWF Singapore recommends adding a description of how MAS will ensure the proper implementation of the Guidelines by the insurers. Additionally, WWF Singapore believes that in any case where insurers consider the Guidelines not to be applicable or feasible, they should be required to provide a justification. While we understand the increased supervisory workload this would entail, such a measure would help MAS to better understand the extent to which the Guidelines are being adopted, and any implementation challenge faced by the industry. <u>*Suggested wording changes when defining environmental risks*</u> For clarity purposes, WWF Singapore recommends making the following changes in the 2. Scope section of the Guidelines. For paragraph 2.1 (current wording): *"Environmental risk arises from the potential adverse impact of changes in the environment on economic activities and human well-being."* Suggested wording: *"Environmental risk refers to the potential adverse impact of environmental issues on insurers and their customers."* For paragraph 2.2 (current wording): *"Environmental risk poses potential financial and reputational impact to insurers (refer to Diagram A for an illustration). The financial impact on insurers' portfolios and activities can arise through physical and transition risk channels."* Suggested wording: *"Environmental risk translates into potential financial and reputational impact to insurers, through various transmission mechanisms (refer to Diagram A for an illustration). Environmental risks are typically classified as either physical risks or transition risks."* <u>*Diagram A*</u> To clarify the risk transmission channels, WWF Singapore would recommend replacing Diagram A by more detailed figures 1 &2 in the NGFS Guide for Supervisors (May 2020, p.13).

		<u>*Social risk management*</u> As a next step, WWF Singapore strongly recommends that MAS develops and implements similar guidelines / supervisory expectations for the management of social risks. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** WWF Singapore welcomes the participation of leading insurers in the Principles for Sustainable Insurance and suggests that insurers should be encouraged to sign up to these Principles. In high risk sectors such as coal, leading insurers such as AXA have announced they will not insure coal plants, and the number of insurers withdrawing cover for coal has more than doubled in 2019. Asia is a particularly vulnerable region to the impacts of climate change and thus action on high-risk sectors such as coal that contribute to climate change should become all the more important. For example, in 2018, Asia accounted for US$18.4 billion (from a total US$80 billion) of natural catastrophe insured losses. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** WWF Singapore believes that a 12-month period is a reasonable and realistic transition period, given that: ● Singaporean insurers are increasingly pledging support for global standards on sustainable insurance such as the Principles for Sustainable Insurance; ● International insurance firms with offices in Singapore have already been able to develop robust E&S risk management policies in place; and ● The COVID-19 crisis has largely highlighted the impacts of systemic environmental risks and increases the need for robust risk management policies.

		WWF Singapore and its knowledge partners under the Asia Sustainable Finance Initiative stand ready to provide further support to MAS and insurers based in Singapore in the implementation of these Guidelines and related sustainable finance topics.
16	XL Insurance Company SE - Singapore Branch	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** The scope is good as (re)insurers main revenue source are from Underwriting and investment. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** MAS may wish to clarify if local branch can place reliance or leverage on business strategies, frameworks and policies available at Head Office/Group level with local specificities and risk appetite being addressed accordingly. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** On the expectation in terms of adequate resources to manage environment risk, is a branch of a foreign (re)insurer able to rely on the resources placed on Head Office/Group level with oversight remit over the Singapore office? **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** No comment.

		Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices. MAS may wish to clarify on the definition of "sectors/transactions with higher environmental risk" (or to provide guidance). **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** It is evident for the insurance industry to progress towards having improved capabilities to assess the impact of such risk as seen in the beneficial developments made in the financial industry globally. However, this is not without challenges for the insurance industry where the traditional insurance mechanism and the limited information available greatly affects the capability of an insurer to perform such analysis. There is clearly a need for careful information sharing practices and guidance on a consistent approach. MAS may consider providing support in the following: 1. Providing guidance/clarity on what insurer can or cannot underwrite. 2. Collecting data from the industry (e.g. via ORX consortium) and to develop a methodology together with all insurers/financial institutions on how to manage this risk (this is an initiative that requires support from the Authority and cannot be achieved individually by 1 company). **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** Please refer comments provided in Question 5 above.

		Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio. Will the MAS look to penalise (re)insurers who have invested/support investments in companies that are involved in industries that poses high environmental risks (e.g. coal, mining) MAS may wish to provide guidance on how to identify the inherent risk in the investment portfolio considering that it is a transitioning risk. Also, to provide clarity on the 'companies' referred to in the highlighted statement above. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We recommend that disclosure should be done on an annual basis. MAS should share further details on the objective of the proposed form as insurers may already be disclosing its environmental risk management information on its website or annual report as per MAS 124 notice. The MAS should also provide clarity on the expectation of the reporting for foreign branches in Singapore as the Head office/ Parent company may already be subjected to similar disclosures, e.g. Disclosures are already in place at AXA Group level as required by the French regulator. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** We would like the MAS to provide insights on 1) If an insurer's environmental risk management practices will be taken into consideration/factored into the annual CRAFT assessment and 2) Potential risk diversification benefits from the risk capital framework to promote such initiatives in the industry. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.**

		Green indicator reporting is in place and financials are provided by local Branch to AXA Group, being a listed company in France. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** No comment.
17	Respondent A	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** We generally consider the proposal reasonable. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** We generally consider the proposal reasonable. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** We generally consider the proposal reasonable. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** We generally consider the proposal reasonable. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to**

		improve its risk profile and support its transition towards sustainable business practices. We seek MAS to remove the expectation for insurers to improve customers risk profile and support the customers' transition towards sustainable business practices. Our engagement with customers are on a case by case basis and the expectation on the improvement and support may well not be within the insurers' control. Detailed assessment is undertaken on every single individual risk which poses higher environmental risk. Environmental risks are measured against the degree they are mitigated either by appropriate external party action as well as the customer's environmental management systems. The acceptance of such customer would be based on the detailed assessment, in addition of the risk dialogues with customers. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** The environmental risk management policies and processes should commensurate with the size and nature of each insurers' risk profile. Therefore, it should be determined by the insurers' themselves. Nevertheless, we welcome MAS' transparency on environmental risk tolerance for us as insurers to be aligned accordingly. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** We generally consider the proposal reasonable.

		Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio. We generally agree with the proposal on monitoring and mitigating the environmental risk in the investment portfolio. Similar to Question 5, we seek MAS to remove the expectation where insurers should consider engaging with companies individually and asset managers, as appropriate, to shape the corporate behavior of investee companies. Insurers would have its own indicators to monitor environmental impacts from investment portfolio which would already allow the insurers to make adjustment to the composition should the need arise. The decisions and course of actions would need to depend on circumstances (e.g. market liquidity, portfolio constraints, attractive risk/reward). **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** We generally agree with the proposal and would agree that insurer's disclosure may be consolidated at the group or head office level. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** We seek to clarify on the expectation on stress scenarios. In addition, this depends on the materiality of such environmental risk and with significant assumption based approach. Typically, being part of a wider/large group, stress scenarios would make more sense on a group wide perspective rather than assessing on individual insurers. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** Environmental risk is generally assessed in combination with Social and Governance Risk ("ESG") as the overall subset of reputational

		risks in the risk management framework. We would like to seek MAS' expectation in relation to "Social" and "Governance Risk". **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** We generally agree with the proposal.
18	Respondent B	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** a) We agree with the approach to apply the scope of the guidelines to investment and underwriting activities, coupled with additional activities that expose it to material environmental risk. b) In Respondent B, a global approach is considered to apply this to operations that includes procurement and properties. This aims to deliver operational efficiencies with reduced emission footprint against target. c) Please clarify how intermediaries (such as brokers) are engaged as part of this consultation and implementation process. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** Kindly note that (a), (b) and (c) also apply to qns 3 and 4: a) Please clarify if there are any particular environmental risks which MAS deems to be material. b) If an insurer does not have any material environmental risks, we are of the view that Board oversight through an update provided at quarterly Board/Board committee meetings will be sufficient for the Board to oversee this risk. c) The proposed Guidelines state that the Board and senior management are expected to "periodically review the adequacy and

		effectiveness of the insurer's environmental risk management framework". Please clarify MAS' expectations of what sufficiently constitutes as a "periodic review", e.g., annually or biannually? d) We note the proposal relating to a combination of qualitative and quantitative risk appetite, such developments will be formulated and aligned with the global Respondent B approach. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** The proposed guidelines are similar to what has been done in the US and we support these measures. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** The proposed guidelines are similar to what has been done in the UK and we support these measures. We would like to clarify if there is a MAS expectation if the senior management oversight role is expected to be performed by a first line or a second line. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** a) Can Environmental Risk Assessment be more clearly defined? There is a mention of an example of proposed 6 high risk sectors as a start. Would there be a consistent high-risk sector listing that applies across the SG industry for assessment? This would allow for a consistent level assessment and playing field approach.

		b) For Respondent B, we do consider "Stranded Assets" a key risk exposure area to manage in many of our clients in the Oil & Gas, Power or Mining sectors c) As part of the customer analysis, we would request that MAS provides more guidance in relation to the environmental risk assessment methodology. d) In the implementation of this requirement, we do note that there will be significant cost incurred with additional training, resource, time etc to implement such measure which would ultimately mean potentially increased premiums so as to comply with the new MAS requirements, once effected. e) We would like to clarify MAS expectations with regards to the SME space, even if they operate in a higher risk sector. Given the high volume nature, would it be acceptable to focus on the larger corporates from an Underwriting standpoint, and carve out the SME sector or defer that for a later implementation stage, if required by MAS. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** No comment. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** a) The consultation paper states that "Where the insurer has an existing relationship with a customer who does not manage the environmental risk adequately, the insurer should consider various options such as pricing in the additional risk, applying specific limits on underwriting exposure, and re-assessing the relationship with the

		customer, which may include exiting the relationship." Does MAS has any expectations of how insurers should record such decisions internally? What will the supervisory team look out for during inspections to determine if an insurer has fulfilled its obligations under the Guidelines adequately? How will the MAS treat customer complaints in this regard if the insurer decides to exit the relationship? In para 5.3, we note the range of proposed underwriting actions to undertake which includes limit management, re-assessing the relationship, declining future transactions and exiting the relationship. Given that insurers would be applying a range of underwriting actions, how would MAS envisage that this is being applied consistently across the industry? Take for instance, the same account may be presented to 2 different insurers for consideration. Depending on each insurer's risk appetite on environmental risk, one may choose to continue if some elements of improvements are demonstrated whilst another may decide that those actions are not good enough and decline future business. How would we level the playing field within the industry such that the assessment is done in a consistent manner? b) Further clarity is needed regarding what constitutes a "higher risk customer" in the context of guideline 4.7: o What are the thresholds and criteria for a "higher environmental risk customer"? o Will engagement with higher risk customers need to be evidenced to MAS? o What are the repercussions if engagement does not take place (either because as an insurer we feel it does not rise to the level of being high risk or because the customer refuses to dialogue)? o Potential for resource challenges regarding the due diligence and dashboard of metrics for "higher risk customer", depending on how broadly defined a "higher risk customer" is. c) Further clarity is needed in relation to the para "adequately managing their environmental risk" given that this can be fairly subjective. Context - unless as above the Environmental Risk is well

		defined and appropriate for each Industry sector. All industries should be improving, however their starting points are relative d) Will MAS mandate which environmental considerations need to be taken into consideration. To a certain degree we already incorporate this in our underwriting by understanding our client's sustainability plans for the future. Especially those who are transitioning their Business mix from Fossil Fuels to Cleaner fuel sources. e) Will the MAS be requiring Insurers to submit metrics on their portfolios? Which metrics will be expected to be tracked? f) Close collaboration is required with the Industry themselves – Insurers risk is that which is transferred from clients to Insurers, so alignment with broader Industry and Government Regulation is required g) In the implementation of this requirement, we do note that there will be significant cost incurred with additional training, resource, time etc to implement such measure which would ultimately mean potentially increased premiums so as to comply with the new MAS requirements, once effected. h) In Respondent B, we presently underwrite Environmental Impairment Liability insurance which essentially covers businesses for their liability should they cause an environmental damage. Can we clarify if MAS is referring to a more broader approach to this type of coverage or if there are any expectations towards in this space? **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** In Respondent B UK, there is an approach defined in relation to the investment process which has been outlined below. We seek comments from MAS in relation to this approach and plans to adopt a similar process, at a later stage.

		Investment Process Portfolio Managers use the outputs from the credit assessment processes to define investment strategies and target/avoid particular issuers or sectors relating to their exposure to Climate Change risk, amongst other factors. Credits that are not perceived as providing a sufficient environmental risk premium are avoided, while those issuers who are considered to be better positioned to transition towards a lower carbon environment and are better able to manage climate change risks are given additional focus within the portfolio. Risk Profile Credit Research Analysts assess the credit fundamentals of sectors and issuers by modelling company financials to forecast relevant metrics. The team uses tools developed internally, as well as external data provided by rating agencies to support their assessments. Relative value opportunities are identified and communicated to Portfolio Managers for consideration as potential investments. As part of this process, sector trends and issuers' business profiles are identified and assessed to help manage portfolio risk. Top-Down Assessment Credit Analysts assign an 'Environmental Risk Score' for each sector they cover. This score articulates the nature of the risk of the sector to Respondent B, the most impacted sub-sectors or credits and any potentially mitigating factors. The following factors are measured to support the 'Environmental Risk Score' for the sector: • Risk Description o e.g. a sector may be vulnerable to costs associated with carbon emissions • Impact o e.g. costs may increase if required to comply with carbon emission regulations • Mitigating Factors o e.g. businesses are in the process of developing more energy-efficient products • Higher Risk Issuers

		o e.g. carbon fuel reliant utilities companies Bottom-Up Assessment Credit Analysts and Portfolio Managers review individual, vulnerable credits (those perceived as more exposed to current or future environmental risks) on a case-by-case basis. Portfolio risk management processes are used to monitor credits with elevated environmental risks. Analysts also update and document their view on the materiality of environmental risk on a semi/annual basis, depending on credit rating. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** Respondent B is supportive of the proposed form and frequency of disclosure of environmental risks. We recognize the value of climate-related corporate disclosures and believe it is important that companies align with the TCFD framework, as recommended by the MAS, to ease comparability and assist financial market participants in digesting the information. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** We would like to propose that MAS could consider a harmonization of the Stress Testing requirements and provide a set of risk factors to apply for physical and transition risk, as an extension of the climate change scenario which relates to severe flooding. Specifically, as an example, UK stress testing document prescribed by PRA is applied across the industry and such harmonized approach to stress testing would be beneficial. https://www.bankofengland.co.uk/prudential-regulation/letter/2019/insurance-stress-test-2019 Recognizing MAS aspirations for Singapore to continue to grow as a regional financial center, it is critical to carefully balance the need for

		prescriptive regulations and competitiveness. Excessive regulations could have negative effects on innovation, agility to respond to emerging risk and overall industry development. The OECD has published several articles (2000 and 2002) discussing the evolving role of regulations and its effects on businesses and the industry. We are grateful for MAS' consultative approach to regulations and look forward to the continued efforts. In addition, we encourage MAS to continue to align with regional regulators through multilateral forums such as the Network for Greening the Financial Sector and global standard setting institutions to develop a harmonized approach. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** SHORT-TO MEDIUM-TERM RISKS: PHYSICAL RISKS Natural Catastrophe Risk By the nature of our business, our company is exposed to various potential catastrophic events in which multiple losses can occur and affect multiple lines of business in any given calendar year. Natural disasters such as hurricanes, earthquakes and other catastrophes have the potential to adversely affect our operating results. Respondent B has a broad diversity in business lines which helps us to limit the relative economic impact of any single insured event. Respondent B's Risk Appetite Framework establishes and maintains appropriate limits on the material risks identified for our core businesses. Following an extensive review, we have substantially reduced our gross and net limits, particularly in Property and Casualty insurance, which has subsequently lowered our risk of exposure to natural disasters. Our notable progress on risk management and underwriting in the last year was also critical to a revised reinsurance strategy. In 2018, we reconfigured our reinsurance policies to reduce the net risk in our portfolio, which provided meaningful recoveries in the second half of the year. We will continue to adjust our use of reinsurance to balance our portfolio, manage volatility and protect against extreme events.

		LONGER-TERM RISKS: Transitioning to a low-carbon economy often entails extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Respondent B is identifying these longer-term transition risks through our ongoing emerging risk assessment program. In particular, Respondent B has established an Emerging Risk Forum which conducts horizon scanning to identify longer-term emerging risks and opportunities— including climate change—to our business to catalyze risk management action and/or new product development. Investment opportunities In addition to renewable power, Respondent B is a leading investor in green energy projects, such as waste-to-energy, transmission and distributed generation. Respondent B also invests in infrastructure assets that improve energy efficiency, grid connectivity and reliability. We are also investing in innovative transportation networks that improve mobility and use less energy. Many of these investments are characterized as “Green Bonds.” Operational Efficiencies Respondent B is committed to implementing practices that reduce the environmental impact of our business. Efforts include encouraging the company’s suppliers to improve the sustainability of products and services, increasing the efficiencies of internal company operations and physical assets under the company’s control, and reducing energy usage. Globally, Respondent B has continued to reduce office footprints through consolidation, densification, and work from home strategies, delivering material impacts which will result in future long-term reductions to our overall GHG emissions. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** We would like to request for an extension for a longer transition time the 12 months transition timing, especially given the underwriting needs to be worked though the renewals.

19	Respondent C	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** Respondent C welcomes the upcoming implementation of the proposed guidelines on environmental risk management for insurers. We are supportive of the content proposed but nevertheless wanted to share our preliminary feedback with regard to our specific exposure to this risk: Environmental risk management is in the agenda of all industries caring for sustainable growth. Within the insurance industry seems easy to realize that reinsurers and non-life insurers present a higher degree of exposure to environmental risk. In turn, within the life insurance business, investment linked products show a certainly lower exposure to underwriting and investment risks. This, significantly and surely mitigates the impact of environmental risk faced by the investment link business in comparison with participating and non-participating life insurance. As of today, Respondent C only markets investment link products where the investment risk is borne by the policyholder. At the same time, the scope of the guidelines proposed by MAS is limited to underwriting and investment activities. As a result: • On the one hand, the nature of our business brings the outcome that environmental risk is not deemed material to our business. • On the other hand, Respondent C does not ignore the major challenge represented by environmental sustainability. With this regard, our company and plans to act as a “force for good” in the transition towards a sustainable economy by including environmental risk as a key element to judge reputational threats and is implementing Group-wide applicable environmental guidelines.

		Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework. This proposal is fine for Respondent C. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** This proposal is fine for Respondent C. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** This proposal is fine for Respondent C, whenever a life insurance undertaking judges environmental risk as material. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** This proposal is fine for Respondent C. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** This current proposal of guidelines seems complete at this stage. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for**

		insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted. This current proposal of guidelines seems complete at this stage. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** This current proposal of guidelines seems complete at this stage. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** This proposal is fine for Respondent C. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** This current proposal of guidelines seems complete at this stage. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** It would be convenient to refer to the particular (and less exposed to environment risk) nature of investment link insurance within the final version of the guidelines. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** This proposal is fine for Respondent C.
20	Respondent D	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.**

		• Does the scope of "insurers" include insurance intermediaries or does it apply only to insurers, who are the ultimate risk bearers of the policies? • Does the scope include business in all types of insurance policies, or is there a specific scope of insurance policies, e.g. Property and Casualty (P&C) that an insurer will need to consider in scope for EnRM? **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** Senior leadership support is critical to the development of environmental risk management governance and subsequent implementation. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** Senior leadership support is critical to the development of environmental risk management governance and subsequent implementation. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** There may be a need for the Company to set up an Environmental Risk Management team or integrate as part of our ERM process. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to**

		improve its risk profile and support its transition towards sustainable business practices. Assessing each customer will be difficult as only some listed companies have environmental impact/actions in their annual reports. SME striving to survive will put environmental issues at the backseat. To segmentize SME into high/medium/low risks may be challenging. Further, experts are needed to understand environmental impact assessment on diversified industries. Full and complete disclosure of environmental efforts and practices is paramount and intermediaries and customers must play an active role in disclosing such information to insurers before tender exercises/placement of businesses. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** Increased regulatory framework and control in relation to environmental risk management for defined industries with a high environmental footprint or sectors that are highly associated with environmental risks and impact. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** Developing tools that are accessible to customers and insurers and ensuring transparency in disclosure. Applying more favourable terms to - o vehicles that comply with emission standards; o property that comply with the legislation on Environmental Sustainability for Buildings;

		o companies that demonstrates high standards of construction excellence in Singapore. For customers who are unable to provide their Environmental Impact Analysis/Report, insurer may consider not to issue policies that may adversely impact the Insurer's risk profile/management: 1. Directors' and Officers' Liability Insurance 2. Environmental Impairment Liability Insurance 3. Environmental Risk Insurance 4. Environmental Pollution Insurance 5. Fixed-site Pollution Liability 6. Contractor's Pollution Liability Insurance. Escalation allows a more balanced view but it is critical that the escalation due to diligence process should not be overwhelming and should facilitate a quick turnover time for business. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** No comment. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** No comment. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** Regarding Para 3.3 of Proposed Guidelines, is there an option for a Financial Institution which is small in size, to manage the Environmental Risk with its ERM Framework and subject it to the regular exercise of determining its materiality? Regarding Para 4.5 of Proposed Guidelines, it would be helpful if MAS could construct this as one of the scenarios within the Industry-Wide

		Stress Testing Exercise so that the participants can learn how it is to be conducted. Regarding Para 4.11 of Proposed Guidelines, can MAS specify the type of qualifications and institutions that the Company can send its staff for training? Regarding Para 4.7 of Proposed Guidelines, (a) Is there a standardised risk quantification tool to be used across all Financial Institutions in Singapore? (b) What is the frequency of this monitoring and the escalation requirements? **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** Can MAS consider giving different transition periods to different Financial Institutions based on size? A longer transition period may be required. It is challenging to review all customers and gather sufficient statistics / information for stress testing and disclosure in 12 months. Generally, Policies have a period of 12 months incepting in a year and expiring throughout one year. To obtain information, we would need at least 12 months + 12 months to review and collate the information during renewals.
21	Respondent E	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** No comment.

		Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework. No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** No comment. **Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material.** No comment. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** Respondent E would like to seek clarification on whether the environmental risk management guidelines would be applicable to individual life customers, or would the proposed guidelines be applied more appropriately to only the enterprise business / group life customers. Respondent E would like to seek clarification on whether a list of high-risk companies or industries would be collated or published, or whether such classification would be at the discretion of the Company. Respondent E would like to seek clarification whether there will be an industry standardisation of the tools and metrics that are used.

		Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance. Respondent E would like to seek clarification on whether there will be industry wide stress scenarios, as it will aid in ensuring consistency and comparability across the life insurance industry. Furthermore, Respondent E would like to enquire whether there will a standardized taxonomy to establish a defined set of terms to be used for measurement across the financial industry. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** No comment. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Respondent E would like to seek further clarification on whether there is an intention for the Authority to prescribe minimum standards. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** Respondent E is supportive of the annual disclosure requirement, and the Company is intending to report against the TCFD in the near future. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.**

		Respondent E would like to highlight that a rigorous environmental risk management framework may add on to the costs of operating, leading to additional expenses potentially being passed to customers. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** Respondent E would recommend a longer implementation timeframe.
22	Respondent F	**Question 1. MAS seeks comments on the entities and business activities that are in the proposed scope of the Guidelines.** No comment. **Question 2. MAS seeks comments on the proposed responsibilities of the Board in overseeing environmental risk management, including its role in ensuring that environmental risk, where material, is addressed in the insurer's risk appetite framework.** No comment. **Question 3. MAS seeks comments on the proposed responsibilities of senior management in overseeing environmental risk management, including its role in developing an environmental risk management framework and policies, regularly reviewing their effectiveness, and allocating adequate resources to manage environmental risk.** No comment.

		Question 4. MAS seeks comments on the proposal for insurers to designate a senior management member or a committee to oversee environmental risk, where such risk is material. No comment. **Question 5. MAS seeks comments on the expectation for insurers to engage each customer that poses higher environmental risk to improve its risk profile and support its transition towards sustainable business practices.** No comment. **Question 6. MAS seeks comments on whether there are specific aspects of environmental risk management policies and processes that would benefit from further supervisory guidance.** External reporting and screening of transactions on ESG issues can be included in MAS' recommendations, such as the third-party assessments or even audits on their environmental risk management processes and performance in order to enhance credibility. **Question 7. MAS seeks feedback on the insurers' escalation and monitoring frameworks in relation to the underwriting process in considering environmental risk, as well as the expectation for insurers to develop tools and metrics to monitor the insurers' underwriting exposures to environmental risk, and examples of the aforementioned tools and metrics that may be adopted.** No comment. **Question 8. MAS seeks comments on the proposed and any additional measures that can be used to help the insurer monitor and mitigate the environmental risk inherent in the investment portfolio.** Insurers could also consider implementing a bottom-up approach where more flexibility and discretion can be given to the staff along with additional training and knowledge exchange opportunities with

		insurance associations. It is recommended to make the best practice that environmental specialists are to be hired to manage environmental and ESG risks, as suggested or even mandatory measure. **Question 9. MAS seeks comments on the proposed form and frequency of disclosure of environmental risk by an insurer.** No comment. **Question 10. MAS seeks comments on any aspects of the Guidelines that have not been covered in earlier questions.** Besides providing environmental risks and ESG training to existing employees, new recruits and employees should also be made aware of insurance firm's environmental and ESG policies including in key areas like risk management, underwriting, claims management and investment strategies. Integrating environmental issues into recruitment and orientation would greatly help insurers to bridge the knowledge gap of recruits and establish a positive brand image in the eyes of the next generation of employees. **Question 11. MAS requests for examples of sound risk management practices currently implemented by insurers, which would meet the expectations in the Guidelines.** No comment. **Question 12. MAS seeks comments on the proposed implementation approach, including the proposed transition period of 12 months.** No comment.

Monetary Authority of Singapore