

Pacific Life NAIC Climate Risk Survey Draft Response

As of October 10, 2022

Table of Contents

Governance.....	1
Open-ended Response	2
Closed-ended Response	3
Strategy.....	4
Open-ended Response	5
Closed-ended Response	7
Risk Management.....	7
Open-ended Response	8
Closed-ended Response	9
Metrics and Targets.....	10
Open-ended Response	11
Closed-ended Response	12

Governance

- Open-ended questions
 - Disclose the insurer's governance around climate-related risks and opportunities. In disclosing the insurer's governance around climate-related risks and opportunities insurers should consider including the following:
 - Identify and include any publicly stated goals on climate-related risks and opportunities.
 - Describe where climate-related disclosure is handled within the insurer's structure, e.g., at a group level, entity level, or a combination. If handled at the group level, describe what activities are undertaken at the company level.
 - Describe the board and/or committee responsible for the oversight of climate-related risks and opportunities.
 - In describing the position on the board and/or committee responsible for the oversight of managing the climate-related financial risks, insurers should consider including the following:
 - Describe the position on the board and/or committee responsible for the oversight of managing the climate-related financial risks.
 - Describe management's role in assessing and managing climate-related risks and opportunities
- Closed-ended questions
 - Does the insurer have publicly stated goals on climate-related risks and opportunities? (Y/N)
 - Does your board have a member, members, a committee, or committees responsible for the oversight of managing the climate-related financial risk? (Y/N)

- Does management have a role in assessing climate-related risks and opportunities?
(Y/N)
- Does management have a role in managing climate-related risks and opportunities?
(Y/N)

Open-ended Response

Pacific Life has a strong system of governance over climate-related issues, with engagement from both the Board of Directors and upper-level management. Climate-related governance is handled at a group level for Pacific Life. This governance is proportionate to the nature, scale, and complexity of the operations across Pacific Life. It allows the Board, management committee, and senior management to integrate climate-related risks and opportunities into strategy, decision-making, and business processes.

Board Oversight

The Pacific Mutual Holding Company Board's responsibility is consistent with the oversight roles of responsible business, risk management, and stewardship. The Board convenes at least five times per year, but unscheduled meetings may be called at any time to address specific needs of Pacific Life. Additionally, a yearly strategy meeting occurs where climate-related risks and opportunities may be part of the discussion. Committee structures are created to facilitate and assist in the execution of the Board's responsibilities. At each regular meeting of the Board, the committees are required to report significant matters reviewed by the committee and matters considered and acted upon. Climate-related risks are considered by the Audit Committee, Investment and Finance Committee, and Governance and Nominating Committee. Specific responsibilities are described below:

- Audit Committee
 - Discuss overall policies concerning the company's risk assessment and risk management framework, which may include climate-related risks
 - Review and discuss with management specific insurance and operational risks facing the organization as delegated to the Committee by the Board, and the steps management has taken to monitor and control these risks
 - Direct reports from management sub-committees that may include climate-related risks such as the Enterprise Risk Committee, Emerging Risk Committee, and Model Risk Committee on a periodic basis
- Investment and Finance Committee
 - Review and advise investment policies, investment transactions, financial risk management, and corporate capital transactions, including policies related to responsible investment and financial risk management related to climate risks
 - Discuss with management financial market and economic risks, including risks which may be climate-related, and the steps management has taken to manage these risks
 - Review the Own Risk and Solvency Assessment and Enterprise Risk Report required to be submitted by applicable state insurance regulators, which may include climate-related risk information
- Governance and Nominating Committee
 - Carry out duties and responsibilities related to the management of risk, including climate-related risks, as may from time to time be required by applicable law or other applicable governing documents, or delegated or requested by the Board

- Review and advise the Corporate Social Responsibility team and ensure broader ESG discussions occur with the Board twice per year. The Corporate Social Responsibility team leads efforts in drafting the annual CSR report and manages climate initiatives such as emissions reduction actions and efficiency projects including solar, wind, renewable natural gas, geothermal, and hydro.

Management Oversight

Management groups or sub-committees also have responsibility for identifying and assessing climate-related risks and reporting potential exposures to their respective standing committees. The responsibilities of these groups and sub-committees are described below.

- Enterprise Risk Committee
 - Responsible for all risks across the company, including emerging risks. Management has currently placed climate risk in the emerging risk category within their risk taxonomy, which is defined as a risk that could impact the company within five years.
 - The Emerging Risk Committee, which is a subcommittee, monitors and assesses new risks and evaluates if they have a material impact on Pacific Life. The committee then assesses which management entity should own the risk which will then be integrated into the Business Impact Assessment (BIA) process.
 - Reports to the Audit committee of the Board
- Management Investment Committee
 - Responsible for identifying and assessing climate-related financial risks in the investment portfolio
 - Recently, the committee sponsored a project to estimate the impacts of climate risk on the investment portfolio. Findings from this project are anticipated to be presented to the Board in 2023.
 - Reports to the Investment and Finance Committee of the Board
- Corporate Social Responsibility team
 - Updates the full Board once per year on relevant developments to people, communities, customers, and the environment
 - One update is given through the Governance and Nominating Committee and includes a deeper dive into full Pacific Life strategy

Closed-ended Response

- Does the insurer have publicly stated goals on climate-related risks and opportunities?
 - No
- Does your board have a member, members, a committee, or committees responsible for the oversight of managing the climate-related financial risk?
 - Yes
- Does management have a role in assessing climate-related risks and opportunities?
 - Yes
- Does management have a role in managing climate-related risks and opportunities?
 - Yes

Strategy

- Open-ended questions
 - Disclose the actual and potential impacts of climate-related risks and opportunities on the insurer's businesses, strategy, and financial planning where such information is material. In disclosing the actual and potential impacts of climate-related risks and opportunities on the insurer's businesses, strategy and financial planning, insurers should consider including the following:
 - Describe the steps the insurer has taken to engage key constituencies on the topic of climate risk and resiliency.
 - Describe the insurer's plan to assess, reduce, or mitigate its greenhouse gas emissions in its operations or organizations.
 - Describe the climate-related risks and opportunities the insurer has identified over the short, medium, and long term.
 - In describing the climate-related risks and opportunities the insurer has identified over the short, medium, and longer term, insurers should consider including the following:
 - (1) Define short, medium, and long-term, if different than 1-5years as short term, 5-10years as medium term, and 10-30years as long term.
 - Describe the impact of climate-related risks and opportunities on the insurer's business, strategy, and financial planning.
 - In describing the impact of climate-related risks and opportunities on the insurer's business, strategy, and financial planning, insurers should consider including the following:
 - (1) Discuss if and how the insurer provides products or services to support the transition to a low carbon economy or helps customers adapt to climate-related risk.
 - (2) Discuss if and how the insurer makes investments to support the transition to a low carbon economy.
 - Describe the resilience of the insurer's strategy, taking into consideration different climate-related scenarios, including a 2 degree Celsius or lower scenario.
- Closed-ended questions
 - Has the insurer taken steps to engage key constituencies on the topic of climate risk and resiliency? (Y/N)
 - Does the insurer provide products or services to support the transition to a low carbon economy or help customers adapt to climate risk? (Y/N)
 - Does the insurer make investments to support the transition to a low carbon economy? (Y/N)
 - Does the insurer have a plan to assess, reduce or mitigate its greenhouse gas emissions in its operations or organizations? (Y/N)

Open-ended Response

Through Pacific Life's risk identification process and prioritization structure, current strategies are monitored and adapted to mitigate the exposure to climate risks for all processes within the business. Pacific life defines short-term risks as 1-5 years, medium-term risks as 5-30 years, and long-term risks as beyond 30 years. While climate-related risks are closely monitored (see the 'Risk Management' section response for further explanation on how the company identifies, assesses, and manages climate-related risks), at this time, Pacific Life has not deemed any climate-related risks or opportunities to be material in the short-, medium-, or long-term time horizons due to the nature of the life insurance business Pacific Life participates in, but this will continue to be evaluated over time. To come to this conclusion, Pacific Life has engaged various stakeholders and business functions throughout the organization, including Board and management committees (see the 'Governance' section response), Enterprise Risk Management (ERM) and Business Continuity (see the 'Risk Management' section response), Investment, Actuarial, and Corporate Affairs. Below is additional information on the work done within each business area regarding climate-related risks and opportunities.

Investment

Climate-related risks which may pose a risk to the investment portfolio, though not currently deemed to be material, have been an area of focus for Pacific Life. This focus led to initiatives such as the creation of Pacific Life's Principles for Responsible Investing, which was initially published and adapted by Pacific Life in 2019. These principles, which are continuing to be refined, outline Pacific Life's desire to achieve sustainable, long-term returns in a balanced and responsible manner by acknowledging the evolving materiality of environmental, social, and governance (ESG) factors and increasingly integrating them into the investment portfolio.

Pacific Life has also developed a roadmap which outlines development plans to enhance the company's ESG investment strategy over the next 3-years. This plan aims to allow Pacific Life to deliver consistent risk-adjusted returns to policyholders in a responsible manner through the integration of ESG factors into the investment decision making process, and it will allow for continued mitigation of climate-related transition risks within Pacific Life's investment portfolio.

Additionally, Pacific Life's Management Investment Committee is in the process of determining investment portfolio resilience, testing credit risk of the portfolio using scenario analysis that includes 4°C and 1.5°C warming scenarios. Various impact pathways are identified to assess how changing corporate bonds and commercial loans will affect the portfolio. Effects driven from the climate scenarios can result in losses due to default which is then used to calculate projected actual loss value over an 80-year time horizon. The analysis is affecting strategies for credit decisions in various aspects of the investment portfolio. Divestments and investment opportunities are being analyzed for new types of financial investments that are more resilient to climate risk under each scenario.

Lastly, Pacific Life has taken steps to take advantage of climate-related opportunities through the creation of the Sustainable Bond Framework. The framework was created to help improve the quality

of life of individuals and families, and the social responsibility programs focus on doing this in the communities where Pacific Life employees live and work. Pacific Life will not provide funding through its Sustainable Bond Framework and sustainable note offerings if the borrower is associated with the following climate-related risks: activities related to the exploration, production, or transportation of fossil fuels (e.g., coal, oil, and gas); consumption of fossil fuels for power generation; large hydroelectric power generation (e.g., plants with a capacity of greater than 20 megawatts or dams with a height greater than ten meters); and nuclear energy. Through the transition to a low carbon economy, Pacific Life is seeing more opportunities to invest in projects that use renewable energy such as solar and wind power, liquefied natural gas, and battery technology. This bond framework, and subsequent note issuances, highlight the investment Pacific Life is making to support the transition to a low carbon economy.

Actuarial

Assessing and understanding climate-related risk is important for proper underwriting and accurate identification of new risks that may impact policyholders or operations. Volatility in frequency and severity of weather events are expected to make certain geographic locations more prone to climate risk. To monitor this risk, geographical concentration risks assessments of Pacific Life's insurance portfolio are done regularly to understand what areas are policy-dense and how these areas may be impacted by future changes in weather events.

Research has also been done into the ways climate-related risks may impact mortality in the future. To quantify these impacts, excess mortality stress testing is performed on the underwriting portfolio to understand how the stressed mortality may impact the business. Results of this stress testing have been immaterial thus far, but Pacific Life plans to continue to test and integrate climate risk assumptions and factors into pricing and valuation models as appropriate.

Corporate Affairs

Pacific Life's Corporate Social Responsibility team sits within the Corporate Affairs team and is responsible for climate-related disclosures and company-wide environmental initiatives aimed at reducing emissions and promoting sustainability programs. Scope 1 and 2 greenhouse gas emissions were calculated for the first time in 2022 and emissions targets may be set in the future. Current company and employee efforts to limit emissions include:

- Providing the option for policyholders to receive electronic account statements and e-delivery of required mailings
- Increased use of digital files in lieu of paper files
- Office buildings that incorporate green concepts and technology, including smart thermostats, efficient reflective roofs, high energy efficiency lighting, systems, as well as sustainable materials
- Proactive electronic waste, bottle & can recycling, and trash recycling programs
- Landscaping with drought-tolerant plants to reduce water consumption
- Completed work with Southern California Edison Electric company to reduce energy usage and still meet business needs
- Changes to kitchen equipment and air conditioning optimization to reduce gas consumption.
- Energy-efficient LED lighting in office buildings' common areas
- Data center optimization to reduce energy usage and increase efficiency
- Purchase of hardware certified to be energy efficient including Energy Star

Closed-ended Response

- Has the insurer taken steps to engage key constituencies on the topic of climate risk and resiliency?
 - Yes
- Does the insurer provide products or services to support the transition to a low carbon economy or help customers adapt to climate risk?
 - No
- Does the insurer make investments to support the transition to a low carbon economy?
 - Yes
- Does the insurer have a plan to assess, reduce or mitigate its greenhouse gas emissions in its operations or organizations?
 - Yes

Risk Management

- Open-ended questions
 - Disclose how the insurer identifies, assesses, and manages climate-related risks. In disclosing how the insurer identifies, assesses, and manages climate-related risks, insurers should consider including the following:
 - Describe how the insurer considers the impact of climate related risks on its underwriting portfolio, and how the company is managing its underwriting exposure with respect to physical, transition and liability risk.
 - Describe any steps the insurer has taken to encourage policyholders to manage their potential physical and transition climate related risks, if applicable.
 - Describe how the insurer has considered the impact of climate-related risks on its investment portfolio, including what investment classes have been considered.
 - Describe the insurers' processes for identifying and assessing climate-related risks. In describing the insurers' processes for identifying and assessing climate-related risks, insurers should consider including the following:
 - Discuss whether the process includes an assessment of financial implications and how frequently the process is completed.
 - Describe the insurer's processes for managing climate-related risks.
 - Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the insurer's overall risk management. In describing how processes for identifying, assessing, and managing climate-related risks are integrated into the insurer's overall risk management, insurers should consider including the following:
 - Discuss whether climate-related risks are addressed through the insurer's general enterprise-risk management process or a separate process and how frequently the process is completed.

- Discuss the climate scenarios utilized by the insurer to analyze its underwriting risks, including which risk factors the scenarios consider, what types of scenarios are used, and what timeframes are considered.
 - Discuss the climate scenarios utilized by the insurer to analyze risks on its investments, including which risk factors are utilized, what types of scenarios are used, and what timeframes are considered.
- Closed-ended questions
 - Does the insurer have a process for identifying climate-related risks? (Y/N)
 - If yes, are climate-related risks addressed through the insurer's general enterprise-risk management process? (Y/N)
 - Does the insurer have a process for assessing climate-related risks? (Y/N)
 - If yes, does the process include an assessment of financial implications? (Y/N)
 - Does the insurer have a process for managing climate-related risks? (Y/N)
 - Has the insurer considered the impact of climate-related risks on its underwriting portfolio? (Y/N/Not Applicable)
 - Has the insurer taken steps to encourage policyholders to manage their potential climate-related risks? (Y/N)
 - Has the insurer considered the impact of climate-related risks on its investment portfolio? (Y/N)
 - Has the insurer utilized climate scenarios to analyze their underwriting risk? (Y/N)
 - Has the insurer utilized climate scenarios to analyze their investment risk? (Y/N)

Open-ended Response

Pacific Life identifies, assesses, manages, and discloses the risks to which the business is, or could be, exposed to, including climate-related risks. Climate risks are integrated within the broader risk management framework. Some potential risks are identified through the Business Continuity Management (BCM) group. BCM administers annual Business Impact Assessments (BIAs) to identify risks at the process level, such as processes in the accounting department that may identify miscalculation as a risk. The BIA is annually completed by the manager of a process and derives Process criticality, Recovery Time Objectives (RTO) and required dependencies. BCM may open formal risk issues when gaps in recovery capability do not meet the recovery requirement.. This system allows process-level identification of risks that the Emerging Risk Committee and Enterprise Risk Committee may not be able to detect from a management level. Risks identified are then assessed based on the BCMs four tier Process Criticality ranking derived from the BIAs with mission-critical priority being the most important out of four prioritization tiers.

BCM and the BIA process help inform risks that are considered by Enterprise Risk Management (ERM). ERM is responsible for identifying, assessing, and working to mitigate risks. Management committees are also used to assess risks on a group level which can be directly integrated into ERM. The Enterprise Risk Committee is responsible for overseeing all risks present to the company including people, processes, and systems. The Emerging Risk Committee is a sub-committee of the Enterprise Risk Committee responsible for monitoring and assessing new risks and evaluating if they have a material impact on Pacific Life. The committee then assesses which management entity should own the risk, and when risks are fully managed by an entity, they are removed from the

emerging risk list. Climate risk is considered an emerging risk that is regularly monitored for material impact to Pacific Life.

Operational Risk Management

Climate change may result in increased frequency and more severe weather-related events such as hurricanes, tidal waves, sea level changes, wildfires, heatwaves, drought and tornados. With operations in Southern California, Omaha and Lynchburg, the company has exposure to business disruption and operational risk associated with these events. There is a BCP plan in place to ensure the availability, recoverability and integrity of critical business and technology-driven processes with minimal impact to normal operations.

Underwriting Portfolio Risk Management

Extreme weather events could result in higher than anticipated mortality experience. Given a well-balanced portfolio of life and annuity products - with offsetting mortality exposures, the net financial effect for Pacific Life is expected to be manageable. Additionally, the risk management team handles excess mortality stress tests within the economic capital models, which is linked to climate-related risk. The models look at a wide range of scenarios and what impact pathways may occur. Drivers by region are also considered. For example, floods, wildfires, insect-borne flu, heatwaves, cold fronts, and air quality impact different regions in different ways. Thus far, the mortality testing results have been immaterial but will continue to be monitored to identify potential risks. Geographic concentration analysis of the insurance portfolio is done to monitor the number of policyholders per region. There are not currently any parameters influenced by climate risk in pricing or valuation models, but evolving underwriting practices and modeling methodologies may lead to future assumption changes.

Investment Portfolio Risk Management

Pacific Life's investment team has made significant progress in identifying climate risk in the portfolio and in incorporating climate risk assessments into the underwriting process within the last year. To help prepare the investment portfolio for transition risks, Pacific Life created a 3-year roadmap that outlines a process to better measure and manage these risks. Significant resources have also been invested to estimate the financial impact of climate risk on the portfolio in different climate scenarios with an aim to chart the next set of tangible actions at the conclusion of the analysis. This includes analysis on investments such as real estate, integrating operational risk assessment as well. In early 2023, Pacific Life plans to present the findings to the Board.

Closed-ended Response

- Does the insurer have a process for identifying climate-related risks?
 - Yes
 - If yes, are climate-related risks addressed through the insurer's general enterprise-risk management process?
 - Yes
- Does the insurer have a process for assessing climate-related risks?
 - Yes
 - If yes, does the process include an assessment of financial implications?
 - Yes
- Does the insurer have a process for managing climate-related risks?

- Yes
- Has the insurer considered the impact of climate-related risks on its underwriting portfolio?
 - Yes
- Has the insurer taken steps to encourage policyholders to manage their potential climate-related risks?
 - No
- Has the insurer considered the impact of climate-related risks on its investment portfolio?
 - Yes
- Has the insurer utilized climate scenarios to analyze their underwriting risk?
 - No
- Has the insurer utilized climate scenarios to analyze their investment risk?
 - Yes

Metrics and Targets

- Open-ended questions
 - Disclose the metrics and targets used to assess and manage relevant collateralized risks and opportunities where such information is material. In disclosing the metrics and targets used to assess and manage relevant collateralized risks and opportunities where such information is material, insurers should consider including the following:
 - Discuss how the insurer uses catastrophe modeling to manage the climate-related risks to your business. Please specify for which climate-related risks the insurer uses catastrophe models to assess, if any.
 - Disclose the metrics used by the insurer to assess climate-related risks and opportunities in line with its strategy and risk management process. In disclosing the metrics used by the insurer to assess climate-related risks and opportunities in line with its strategy and risk management process, insurers should consider including the following:
 - In describing the metrics used by the insurer to assess and monitor climate risks, consider the amount of exposure to business lines, sectors, and geographies vulnerable to climate-related physical risks [answer in absolute amounts and percentages if possible], alignment with climate scenarios, [1 in 100 years probable maximum loss, Climate VaR, carbon intensity], and the amount of financed or underwritten carbon emissions)
 - Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
 - Describe the targets used by the insurer to manage climate-related risks and opportunities and performance against targets.
- Closed-ended questions
 - Does the insurer use catastrophe modeling to manage your climate-related risks? (Y/N)
 - Does the insurer use metrics to assess and monitor climate-related risks? (Y/N)
 - Does the insurer have targets to manage climate-related risks and opportunities? (Y/N)
 - Does the insurer have targets to manage climate-related performance? (Y/N)

Open-ended Response

Pacific Life uses a variety of metrics and tools to manage the potential financial impact of climate-related risks and opportunities on the business. These include metrics related to insurance, investments, and emissions.

Insurance

Pacific life monitors geographic concentration risk of the underwriting portfolio, which aids in the analysis of how exposure to physical risks may impact the insurance portfolio. Catastrophe modeling is not used to assess climate-related risks at this time, and is not incorporated into underwriting assumptions or factors given climate change events are not yet expected to be material to business operations.

Investment

To better plan for the transition to a low carbon economy, Pacific Life is incorporating investment criteria, metrics, and targets into portfolio management. The Sustainability Bond Framework aims to finance green and social projects that align with Pacific Life's sustainability priorities. The framework encourages issuers to structure and administer their issuances of green bonds, social bonds and sustainability bonds in alignment with the Green Bond Principles, the Social Bond Principles and the Sustainability Bond Guidelines, respectively. The Principles are intended to promote integrity in the Sustainable Bond market through recommendations relating to transparency, disclosure and reporting. Pacific Life's Sustainable Bond issuances will target 90% eligible green investments and the remainder eligible social investments, metrics which will be regularly tracked. Examples of eligible projects include green buildings, renewable energy, energy efficiency, and clean transportation.

Pacific Life updates investors annually regarding the allocation of net proceeds from issued Sustainable Bonds, until such time Bonds are fully allocated. Where feasible, the allocation reporting includes qualitative and quantitative key performance indicators including:

- Green Building
 - Green building certifications
 - Total number of buildings certified
 - Total square feet certified
 - Percentage of overall company square feet certified
- Renewable Energy
 - Renewable energy capacity sourced and developed (MW)
 - Renewable energy procured and produced from the capacity above (MWh)
 - Emissions (including metric tons of CO₂e) avoided or reduced
 - Annual renewable energy procured and produced as a % of annual global electricity consumption
- Energy Efficiency
 - Energy savings (MWh)
 - Emissions (including metric tons of CO₂e) avoided or reduced
 - Office energy consumption/square foot
 - Office energy consumption/employee
 - Data center Power Usage Effectiveness
- Clean Transportation

- Commuter carbon emissions (including metric tons of CO₂e) avoided or reduced

Credit risk Scenario analysis is being performed by the Investment Committee using a 4°C and a 1.5°C climate scenario, which provides metrics for tracking climate-related risks within Pacific Life's investment portfolio. Corporate bonds and commercial loans are assessed through an 80 year time horizon with carbon prices being a key input. Through the analysis, information pathways are identified and used in other models and management decisions. Outcomes of the testing may affect strategies for credit decisions in various aspects of the investment portfolio, and potential opportunities may be analyzed for new types of financial investments.

Emissions

Greenhouse Gas (GHG) emission disclosures inform investors of Pacific Life's carbon footprint and track progress as society transitions to a low carbon economy. Scope 1 and Scope 2 emissions were calculated for the first time in 2022 using emission quantification methodologies drawn from the Greenhouse Gas Protocol developed by the World Resources Institute and World Business Council for Sustainable Development (GHG Protocol). The emission manual is reviewed and updated at least annually based on developments in data collection, calculation, and data quality review process in future years. Emissions are calculated in Metric Tons of Carbon Dioxide emissions, or MTCO₂e. Scope 1 emissions are 979.09, and Scope 2 emissions are 6072.10. Pacific Life defines its GHG emissions inventory organizational boundaries using the Operational Control Approach. Offices over which Pacific Life has operational control are included in the GHG emissions inventory including owned and leased properties, globally with the exception of the following: 1) Field offices and 2) Any office that is smaller than 500 sq.ft. Progress will be monitored year over year with the goal of setting emission reduction targets in the future. Scope 3 emissions are not yet calculated, but are planned to be assessed in the future.

Closed-ended Response

- Does the insurer use catastrophe modeling to manage your climate-related risks?
 - No
- Does the insurer use metrics to assess and monitor climate-related risks?
 - Yes
- Does the insurer have targets to manage climate-related risks and opportunities?
 - No
- Does the insurer have targets to manage climate-related performance?
 - No